

The Four C Model of Creativity: Culture and context

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The Four C Model of Creativity: Culture and context

There has been a broad consensus on the definition of creativity for more than 60 years, with most researchers agreeing that creativity represents to some degree of a combination of two core elements (Barron, 1955; Guilford, 1950, 1967). The first is newness, novelty or originality. The second is task-appropriateness, usefulness or meaningfulness. In more recent years, these two elements have been defined within a particular sociocultural and historical context (Beghetto, 2013; Glăveanu, 2013; Plucker, Beghetto, Dow, 2004). This context is not separate from other aspects of creativity, such as task-appropriateness and novelty; rather, context establishes the criteria for what counts as original and task appropriate. This interdependent relationship among originality, task appropriateness, and context has been represented in the following notation (Beghetto & Kaufman, 2014):

$$C = [O \times TA]_{\text{Context}}$$

As illustrated in the above formulation, creativity requires both originality and task appropriateness as defined within a particular context. Something that is deemed as original in one context (e.g., primary school science fair) may, for instance, be judged as quite mundane in a different setting (e.g., university science lab). In this way, judgments of creativity are determined by a particular sociocultural and historical context. Creativity and context are inseparable.

Theoretical explorations of creativity have continued in many different directions since these initial definitions. The particular framework that will be explored in this chapter is the Four-C model of creativity (Beghetto & Kaufman, 2007; 2013; Kaufman & Beghetto, 2009; 2013). There are, of course, many other notable theories that could form the basis for a discussion of creativity, ranging from the Four P's (Rhodes, 1961) or the 5 A's (Glăveanu, 2013)

to the Investment Model of Creativity (Sternberg & Lubart, 1996) and the Componential Model of Creativity (Amabile, 1996).

This chapter will also take a cultural perspective on creativity, which opens discussion immensely for talking about creativity on all levels (Glăveanu, 2011). Furthermore, as Glăveanu notes, creativity is a social, cultural, and psychological process, meaning that we create on multiple dimensions at once and all of those influences need to be considered.

Expanding Conceptions of Creativity

Creativity research has traditionally focused on two major types of creative expression: Big-C and little-c creativity. The first type, “Big-C creativity,” describes eminent creativity. Comprising groundbreaking artists, scientists, and world leaders, Big-C creativity is likely what most people think of when it comes to creativity (see Simonton, 2009, for a review of many of these studies) with research topics such as exploring creative genius and how a creative work becomes legendary (e.g., Simonton, 1994). Membership into such an elite group of creators may be dependent on tangible achievements, such as Nobel Prizes or Academy Awards, or on less noticeable accomplishments, such as Stephen Sondheim’s influence in the shifting style of musical theatre or how Ernest Hemingway’s curt, utilitarian voice affected writing as a whole. Visionaries of this magnitude are remembered for years after their works have been released. For instance, almost every child in America has read a book by Charles Dickens or seen a high school production of *Oklahoma* or *West Side Story*. Big-C creators usually spend ten or more years of intense study to reach just the point of professionalism required to contribute influential works (Ericsson, Roring, & Nandagopal, 2007; Simonton, 1997). Researchers typically

formulate these studies by analyzing the lives of creative geniuses, either through direct interviews or through analysis of biographical materials.

The second type of creativity, labeled “little-c creativity,” addresses less prominent creative acts (Richards, 2007), namely the creativity exhibited in everyday life (e.g., decorating a dorm room, finding efficient ways to pack for a trip, or combining articles of clothing into a brand new outfit). In education, this type of creativity translates to making addition fun for elementary students or offering an original analysis of a classic Shakespeare play. Creativity experts know that these relatively small contributions, albeit not illustrious, are highly creative and deserve as much recognition as Picasso or Elton John (e.g., Richards, 2007; Richards, Kinney, Benet, & Merzel, 1988). Participating in creativity unlocks knowledge about oneself, others, and the world around them, providing an immense benefit to even those who do not consider themselves creative (Silvia, Beaty, Nusbaum, Eddington, Levin-Apenson, & Kwapil, 2014). Such research can also include observation of the layperson’s perception of creativity (e.g., Kaufman & Beghetto, 2013) and experiments using students of all ages. Even people who do not consider themselves creative experience creative moments. Indeed, those in traditionally non-creative professions experienced little-c creative acts nearly 1/5 of the time, as recorded by Silvia et al. (2014). These smaller bursts of creativity were linked significantly to positive emotions, openness to experience, and conscientiousness, all of which can help one’s pursuit of life goals and personal fulfillment.

The difference between Big-C and little-c allows researchers to identify truly groundbreaking luminaries in comparison to the lesser, though still vital, gains of everyday creative contributors. These types of creativity are distinct from one another and Big-little classifications prevent psychologists from lumping all creativity into one amorphous construct.

However, such a dichotomy can discourage studies of the intricacies of creativity on all levels. For instance, elsewhere Kaufman and Beghetto (2009) have argued that the Big-C/little-c distinction used in creativity research has impeded studies aimed at examining the more intrapersonal (and developmental) nature of creativity. Additionally, although both creative categories are equally important, Big-C contributions draw the spotlight and can discourage little-c discoveries.

The Big-little distinctions seen in creativity are hardly rare in society, regardless of the field. If you watch the nightly news, for example, you will see two kinds of stories. Half of the broadcast spends time on the mundane events and notable people of the town who may hold little importance elsewhere. Consider stories about a superintendent who implements a new teaching model, a mayor who officiates the opening of a new hospital, or a young man who saves a girl who fell in a pond. The other half of the news presents stories of national or international relevance, featuring eminent figures such as the current president attending an international summit or Katy Perry at the Super Bowl halftime show. This half of the broadcast holds relevance everywhere and to everyone.

Even within these two broad categories, researchers overlook many details of an individual's creative contributions. How would we catalog the creative interpretations made by students or employees as they learn something new? What if these insights are only innovative for the individual? Should those discoveries still be considered creative? Such simple dichotomies can be seen at the larger level of culture – think of the split between “high brow” and “low brow” entertainment. It is easy to fall into a “museums vs wrestling” mindset, which is unfair to both consumers and practitioners (Tu, Dilley, & Kaufman, in press).

Four-C Model of Creativity

How about individuals with highly creative achievements that do not reach eminence? Should we label them as “little-c” creators simply because they are not legends? If we place all of these types of creativity into one large category, none have proper identification and distinction; the little-c title becomes inclusive to the point of becoming useless. Big-c and little-c are too wide to cover all the nuances of the creative process and how we assess creative value. This gap was a driving force behind the Four-C Model of Creativity (Kaufman & Beghetto, 2009, 2013a, 2013b; Beghetto & Kaufman, 2007, 2013), which proposed two additional categories: “Pro-c” and “mini-c.”

Mini-c Creativity

Mini-c construct refers to new and personally meaningful interpretations, ideas, and insights (Beghetto & Kaufman, 2007). Mini-c highlights the “personal” (Runco, 1996, 2004), “internal” (Stein, 1953), “expressive” (Taylor, 1959), and “developmental” (Cohen, 1989) aspects of creativity. Mini-c creativity emphasizes the subjective and introspective side of creativity, featuring the personally meaningful way that individuals grow. The novelty of this form lies in the detraction of emphasis from the creative product. Instead, the focus is on the process, which does not require outside judgment. Such creativity need not even be shared or acknowledged by anyone but the creator. This type of creativity can be observed most easily within education, where students constantly expose themselves to new material and make personally meaningful advances, although anyone can experience mini-c creative thought. These might include a child learning how to draw 3-D shapes in his art class and using the skill to

create drawings of buildings in new ways or a student who discovers that he can use his love of history books to improve her vocabulary on tests.

Their inclusion of mini-c in the creativity model helps eliminate the problem of lumping less original forms of creativity into the little-c category. For example, the traditional Big-C/little-c dichotomy would classify into little-c both an eighth grade art student (who learned a new and personally meaningful use for a particular shadowing technique, albeit one that may already be well-known in the art world) with a more accomplished amateur artist (who has won a local competition for her improving existing shadowing techniques to create pieces of art that advance the field). The construct of mini-c is useful for recognizing and distinguishing between the genesis of creative expression (mini-c) and the more readily recognizable expressions of creativity (little-c).

Related to mini-c creativity are students' self-assessments of creative abilities and teacher perceptions of creativity. With respect to self-assessments, students' judgments about their ability to generate ideas and willingness to take intellectual risks play a role in determining whether students will share and develop their mini-c ideas into little-c contributions (Beghetto, 2013; Beghetto, in press). In this way, ability alone is not sufficient for creative performance. One must have the confidence and willingness to express and develop their creative ideas. Of course, self-assessments are prone to over and under-estimation (see Kaufman, Beghetto, & Watson, 2015; Kruger & Dunning, 1999; and discussion of creative metacognition below).

With respect to teacher conceptions of creativity, such beliefs tend to veer away from explicit, research-based definitions to the point of including misinformation. Notable misconceptions include the ideas that creativity is solely novel and not germane, that creativity is rare, that it only applies to certain subjects, and that it has little relevance to academic

performance (Zhou, Shen, Wang, Neber, & Johji, 2013). Indeed, such beliefs were consistent across cultures in three diverse countries (China, Japan, and Germany), despite being incorrect. Additionally, each culture had specific nuances in their views of creativity. For example, Japanese teachers had the lowest value of the plasticity of creativity, Chinese teachers had the highest scores of valuing divergent thinking, and German teachers scored the lowest on relating creativity to intelligence. Furthermore, Chinese teachers highly valued promoting critical thinking and inquiry whereas German teachers valued independence and general encouragement.

Pro-c Creativity

Even with the addition of mini-c, there remains a gap. Individuals who are professional creators but not eminent creators or “household names” would be classified along with the amateur or everyday creator. For example, within the field of baseball managing, Big-C would include standouts such as Tony LaRussa and Connie Mack whereas your little league coach, despite being inspiring and hardworking, would end up as little-c. But what of managers like Dave Miley, Baseball America’s 2012 Manager of the Year and a professional coach for almost 30 years? He is likely not accomplished enough to garner the distinction of Big-c, but nonetheless coaches professionally at the minor league level. Miley represents an incremental step above someone coaching a basic little league squad, yet is also a notch below the all-time greats. The concept of Pro-c creativity fills this void and rounds out the Four-C model.

Pro-c creativity focuses on individuals who are successful, but have not reached a level of prominence that would lead to immortality (Kaufman & Beghetto, 2009). Dave Miley would be a Pro-c manager. Pro-c creators put in hard work to develop their skills and have far surpassed little-c, but have not reached and may never achieve the lasting fame of Big-C. Not all working

professionals have attained Pro-c status, as many people can do a fine job but not necessarily innovate (a contractor may build and paint a house skillfully, yet always creates the same basic house with little change). However, most individuals working with a professional level of knowledge of their field can be classified as Pro-c. On the other side of the spectrum, many creatively talented individuals just don't choose to pursue their passion as a means of making money or may not make enough to focus on their passion alone. These "amateur" creators have the potential to be more creative than some of their "professional" counterparts and shouldn't be frowned up simply because their creative outlet isn't their main source of income.

To offer another example for those who are not baseball junkies, consider historians. Little-c historians would read lots of books and bring historical tidbits up to their friends in conversation, connecting the current political situation to those of the past, for example, but won't make much of a contribution outside of that. Big-C historians, like Robert Caro or Arthur Schlesinger, win awards and release highly popular historical research. Mini-c historians, like an 8th grader learning American history for the first time, make contributions on a personal level. The Pro-c historian, different from all three, would have numerous papers published and be well versed in his or her field of study, but without a level of eminence that would be associated with immortality. Most academics are Pro-c.

In looking at Pro-c creative professions a trend unearths: women are consistently underrepresented (and consistently underpaid). The societal issue of gender inequality is equally true for creative contributions. In a notable longitudinal study, Lubinski, Benbow, & Kell (2014) observed the differences of life achievements and values between males and females who scored exceptionally on a test of mathematical skill at age 13. Interviewing participants 40 years later, a few trends emerge. First, women in the study made significantly less than their male

counterparts. For those participants actively working fulltime, the difference between males and females ranged from 42% to 50%, depending on the cohort, which translated to a difference of at least \$42,000 in annual income. Furthermore, despite nearly identical educational backgrounds, males occupied more tenured professorships, more CEO positions, and were awarded more grants and patents than their female counterparts. These trends continue cross-culturally, as in a study of women in advertising in both the United States and Spain (Grow, Roca, & Broyles, 2012). The women of this study reported that men's ideas are prioritized in advertising teams and that the best advertising assignments (beer and cars) are rarely given to women. Women, the study found, are streamlined into advertising female-oriented products, where less accolades are given and where many advertisers' careers end. Even in graduate schools, the faculty are predominantly male. These factors make it difficult for women to succeed in advertising, despite the large creative contribution they could achieve. Such discrepancies have been noted in Big-C accomplishments as well (Helson, 1990; Piirto, 1991).

Gender aside, the struggle of attaining Pro-c is difficult for everyone. Pro-c creativity takes time to develop. The creator must become competent in his field in order to make a groundbreaking contribution and even then what appears creative at that time may turn out to be merely average in the context of history. It takes approximately ten years to excel in a given field (e.g., Gardner, 1993; Hayes, 1989; Kaufman & Kaufman 2007; Martindale, 1990; Simonton, 2000). This accomplishment alone, however, does not place a creator at the level of Big-C. This intermediate level, which requires training (usually formal) and some substantial achievement (the performance of a play or a published book or research study) can occur for many individuals in a field. To name it, this level constitutes Pro-c creative genius. Given the sheer time and effort

it takes a creator to reach just Pro-c, it's nearly impossible to conduct a living study of creative genius.

Furthermore, Big-C genius is incredibly difficult to predict. Creations that are highly popular and critically acclaimed for one generation may simply be forgotten by the next. For example, although Tony Award-winning musical *The Music Man* is performed to this day in high schools across America, few people, aside from die-hard fans, will recognize even the names of fellow nominees *New Girl in Town* or *Jamaica*. Due to these variables, Big-C is measured posthumously in most cases, making it a less useful measure in the present-day evaluation of creative talent. Pro-c thrives on this hole in research and allows us to label successful creators as such in their own time. Not knowing who will ascend to immortality or become a footnote, we can safely say that these individuals created at a professional, Pro-c level while they lived.

This idea of categorizing creativity along different dimensions is common in many theoretical perspectives. Ideas present in the Four-C model also surface in other theories. For example, Doyle's *Dimensions of a Creative Episode* (2011) acknowledge that a creative contribution ranges in recognition (from the Nobel Prize in Physics to a mini-c realization about Newton's laws), the degree of transformation (from shifting an entire domain to simply a change of perspective or mental structure in a mini-c innovator), motivation (how intrinsically motivated a creative action is), contribution to the person's identity, the back-and-forth between creative "flow" and reflection, and the multiple processes that stem from a larger creative idea (labeled "subepisodes"). Doyle argues that a creative episode functions on multiple levels and that every creative episode has importance, regardless of whether the creator is a seasoned veteran or a novice simply exploring. Furthermore, Doyle emphasizes the importance of viewing the unique

traits of each creative episode and recognizing them as creative across all levels of creative contribution.

Another example of a theory that supports the idea of a “creative spectrum” including Pro-c is the Propulsion Theory of Creative Contributions (Sternberg, Kaufman, & Pretz, 2002, 2004), which examines how creative acts affect their respective fields. This theory outlines eight possible types of creative contributions. The first four focus on what a domain already is and what its contribution already looks like. Replication, the first and likely most common contribution, copies and regurgitates past work. A reboot of a movie like *Dawn of the Dead* or *King Kong* which recreates but doesn’t reinvent its predecessor, would classify as replication. The second contribution, redefinition, turns the idea of a domain on its head. Redefinitive contributions don’t advance a field but simply offer a new perspective of it (e.g., a new staging of a Shakespeare play). A third contribution, forward incrementation, moves the domain marginally forward but results in prompt successes for the creators. Usually these contributions keep a field moving in the same direction it was already headed and aren’t earth-shattering (e.g., the teenage literary work of authors like James Dashner and Veronica Roth built off of Suzanne Collins’ *The Hunger Games*). The last of the creations that work with the existing structures is advance forward incrementation. These creators move the industry further forward than in forward incrementation but still don’t radically change the domain. Think of this as taking two steps versus one. These creative products feature works too new for their time period and appreciated long after their creation (e.g., the works of Franz Kafka were not fully recognized for their brilliance until after his death).

The other set of four contributions attempt to reject the current domain and reshape it completely. Redirection moves the domain in a new direction (e.g., a researcher suggesting a

new methodology for studying a topic). Unlike most of these changes which create a new domain, reconstruction rewinds to a past paradigm. Reconstructive changes place a field at a point in the past so it can rebuild from there, dismissing the direction that the domain took (consider many retro movements, from fashion to music, which take old ideas or trends and reimagine them in the present day with current values). Reinitiation, the most radical of the paradigm-destructive changes, advances to an undiscovered starting point and lets the field take off from there (any completely new approach, such as the first use of CGI instead of models for special effects). Finally, in integration two different domains fuse into a new domain (e.g., the combination of quality restaurants and entertainment into dinner theater or restaurants like Ellen's Stardust Diner).

The Influence of Culture

It is important to note at this point that the work discussed so far has been rooted in the Western perceptions of creativity, emphasizing the benefits of novelty and bringing a new direction to a domain. Indeed, the levels of the Propulsion Theory depend on the newness of the contribution. Some scholars take issue with the creativity models that have been proposed thus far, stating that there is a focus on Western values and trying to apply these values to the world overall (Westwood & Low, 2003). Simply put, these scholars argue that Western conceptions of creativity are taken as the only conceptions, inadvertently excluding other, equally valid creative ideas. Consequently, growing theoretical and empirical work has challenged Western individualist conceptions of creativity (Hennessey, in press), highlighted the benefits of bicultural experiences (Viki & Willims, 2013), and even worked toward establishing a cultural psychology of creativity (Glaveanu, in press).

Some of the earliest and most extensive work exploring cultural differences has focused on Eastern versus Western conceptions of creativity. Scholars exploring such differences have examined both implicit (e.g., Tang, Baer, & Kaufman, 2014) and more explicit conceptions of creativity (Niu & Sternberg, 2006). Eastern culture, for instance, considers appropriate creativity to build upon past work and not to be completely novel (Niu & Sternberg, 2006; Kozbelt & Durmysheva, 2007). Additionally, many Eastern value systems such as Taoism and Confucianism believe in a singular truth that makes up the universe (Niu & Kaufman, 2013). This “*dao*” or nature of being makes up people and environment alike and to create one must tap into both. Thus, all creative expression is not entirely new but comes from tradition. Westwood and Low argue that, due to this mindset, creativity is viewed as unearthing the truth that has already been discovered. Western conceptions of creativity, on the other hand, emphasize novelty and encourage a clear departure from tradition. Furthermore, Western creativity tends to value the creative product more than the creative process, whereas Eastern creativity focuses on the process, personal fulfillment, and enlightenment. Additionally, although both perspectives started historically with a belief in goodness as a quality of creativity, only Eastern culture still values morality as a part of the process. These perspectives offer different definitions of creativity and, therefore, there is no “one-size-fits-all” model for measuring creativity.

Out of these concerns have come expanded theories of creativity that account for both Eastern and Western values. For example, acknowledging the differences between cultures and their perceptions of creativity, a recent study based off of Hofstede’s Dimensions of Culture (1983) explored the relationship between a nation’s values and structure and creativity (Rinne, Steel, & Fairweather, 2013). After analyzing the different traits of countries through the lens of Hofstede’s research, Rinne et al. found that the only significant dimension of the Dimensions of

Culture was individualism. They argued that a country needs to value the ideas of “learning how to learn” (p. 134), autonomy, and freedom to unleash its potential creativity. It would be interesting, however, to see how researchers in Eastern cultures might tackle the same question.

Another theory rooted in cross-cultural issues is the Four-Criterion Construct of Creativity (Kharkhurin, 2014). This theory argues that Western conceptions of creativity, such as complete breaks with tradition, should be complemented by Eastern conceptions of creativity, such as ideas of authenticity and morality. Building off of the traditional standards of novelty and degree of applicability to the task, Kharkhurin adds aesthetics and authenticity, hallmarks of Eastern creativity. This theory goes on to address major divides between the two worldviews, acknowledging the moral aspect that Eastern culture brings to creativity (a requirement that creative contributions help someone or some group). Kharkhurin’s theory also recognizes the focus on fitting into the existing paradigm that pervades Eastern culture as opposed to the desire for radical change in the West.

Another theory built off of the important differences in the perception of creativity is Glăveanu’s Five A’s Framework (2013). Glăveanu highlights what he believes to be a major hole in the Four P’s model of creativity (Rhodes, 1961): its dimensions (person, process, product, and press) neglect the cultural impact upon creativity. These factors, due to no fault of the creator, are often viewed through the lens of the individual. Glăveanu argues that creativity should be viewed within the context of culture and redefines the strains of creativity as such: Actor, Action, Artifact, Audience, and Affordances. Replacing the person, viewed as a lone creator with little outside influence, is the actor who has personal traits which are shaped by social conventions and cultural traditions. The actor is just as important as every other part of the creative entity, but not more important, a view which a “person-first” perspective can sometimes

obscure. Glăveanu changes process to action, noting that “process” usually denotes the internal workings of a creator, whereas his “action” incorporates this inner view of creativity with the external manifestation of behavior and the different factors that each individual brings into a scenario. Instead of product, which is usually analyzed separately from the environment, the process, and even the creator, Glăveanu proposes the concept of artifact. An artifact, he argues, must be viewed in the context of all other creative ideas and realizations and that the meaning of an artifact in reference to action, actor, and environment is just as important as the artifact itself. Finally, replacing the idea of press comes audience and affordances. The “press,” both social and material, imply a forcing of ideas and limitations on creators, when in fact they contribute to and collaborate with the creator herself. In place of the social press is “audience,” recognizing the importance of reception to any creative act. Every creation is shaped by the people who receive it and their ideals and cultural backgrounds, making the audience vital to creativity. Further, every artist is influenced by the other artists working in his domain, making the role of an audience member an important part of every creator’s creative action. To replace the material side of press, Glăveanu argues for affordances, the resources offered by the environment to creators (Gibson, 1986). This view looks at the full influence of the environment on the actor, especially the ways in which creators locate and utilize the affordances of their environment. The Five A’s model accounts for the effect of culture in all aspects of creativity, providing a new path for research to follow, one that readily acknowledges the importance of context in creative theories.

Such views about the link between culture and creativity have also been expressed by novice creators, such as high school students. In a study of adolescent perceptions of creativity, participants from selective high schools in Australia articulated that all creative work is founded on the work that comes before it, much as Eastern cultures believe; they also acknowledged the

huge role that culture plays in all creation (Lassig, 2013). Further, the four types of creations that the students identified all featured the combination of existing ideas. They also identified that different levels of creativity existed in each type of creation, as we will discuss later.

It is reasonable to argue that the best that researchers can do is accurately describe and measure their own culture's creativity with the awareness that other cultures may have different values. The factors that apply to one culture's creative thought may or may not apply to all cultures. The Four-C model presents a broad developmental trajectory that is present in multiple cultures. Such concepts as the learning inherent in the creativity process or having a hierarchy of valued creative ideas may not be universal but are certainly represented in a wide variety of cultures. Indeed, the Four-C Model has been applied as part of an educational intervention in Korea (Cho, Chung, Choi, Seo, & Baek, 2013).

That said, one of the future goals of the Four-C model can be to better integrate cultural perspectives. How would more Eastern values such as social harmony, collaboration, and adaption (e.g., Niu & Kaufman, 2013) be woven into the theory? Can a group of people working together be said to have reached Big-C? If someone perfects a physical manifestation of someone else's idea, who gets "credit" for the Big-C contribution? These are all issues to be explored further.

The Developmental Trajectory of the Four Cs

The Four-C model provides a developmental framework to illustrate how creative thinkers progress and grow (Beghetto & Kaufman, 2014). Creators pass through each "c" or stage as is fit for their individual path to success and growth. This theory provides a basis for the study of creativity on multiple dimensions and an outline for creative growth over the course of our lifespan.

Consider that as children, individuals explore their world and discover new things, leading to mini-c developments. Most people will have mini-c discoveries early in life, although these contributions can be made at any time in our life. Mini-c can be fostered by teachers, parents, and mentors to help kids think divergently by giving them freedom to create new ideas, encourage them to engage in imaginative thought and play, and emphasizing the benefits of the creative process (Beghetto, Kaufman, Hegarty, Hammond, & Wilcox-Herzog, 2012). As creators grow up and discover new interests, they will experience mini-c creative development aligning with their new passions. With healthy doses of curiosity, learning, feedback, and encouragement, individuals could move to the level of little-c creativity (Beghetto & Kaufman, 2007, 2014). One prime area for future research is how culture intersects with this transition. Do different cultures respond differently to feedback? Are there different “best practices” to helping a Western child grow into little-c versus an Eastern child?

Some creators choose to stay at the little-c level for the duration of their lives whereas others continue to strive for the upper echelons of creative contribution in subjects of interest to them (e.g., a brilliant manager who becomes a Pro-c creative businessman, but remains a little-c chef for his husband and family). At the stage of little-c, experiencing creativity on an everyday level, creators may fall in love with certain fields and wish to make larger strides in this passion.

With advanced training, mentorship, practice, and hard work, the creator can move to the Pro-c creative level. The individual will still have smaller creative insights and learnings about her field, but the creator can focus on larger issues surrounding her field as a whole. The Pro-c expert will continue to produce quality work at this stage and, possibly, after time has judged their contributions, they may be deemed contributors on a Big-C level, garnering praise, prizes, and more. Again, this journey needs to be studied within a cultural perspective. For many

domains in the Western world, Pro-c growth is only possible in specific paths. So, for example, a budding physicist is virtually required to go to school and earn a Ph.D. (and spend more years doing postdoctoral work) if she wants to be Pro-c. What would this trajectory look like across the world? In the United States, an aspiring filmmaker may go to college as much to make connections as to learn. Is the same networking system present everywhere?

Within creative growth, the Four-c model also highlights transitional periods that occur as part of the developmental trajectory of creativity (Beghetto & Kaufman, 2014; Kaufman & Beghetto, 2009).

Mini-c Transitions

Everyone starts at “square one” with mini-c creativity. At this stage, the creator will benefit from honest and supportive feedback from teachers, coaches, and mentors (Beghetto & Kaufman, 2007). The creator will also need to use two vital abilities to make the jump from mini-c to little-c: creative self-efficacy and creative metacognition. Creative self-efficacy refers to the confidence that people have in their ability to generate new and meaningful ideas (Beghetto, 2006; Tierney & Farmer, 2002). Creative self-efficacy is an extension of Bandura’s concept of self-efficacy (Bandura, 1997) and highlights the importance of developing the confidence and willingness to express one’s ideas and engage in creative behaviors. In order to move from mini-c ideas to little-c contributions, people need to be willing to share and receive feedback on their personally meaningful insights and ideas (Beghetto, 2007; Beghetto & Kaufman, 2007).

Along these same lines, people need to know when and when not to be creative. Creative metacognition (CMC) refers to this knowledge. More specifically, CMC refers to having the self and contextual knowledge necessary to know when, where, and why creativity might be

beneficial, strategies on how to be creativity in specific contexts, and knowledge about oneself (to recognize the creative strengths and weaknesses one has), in addition to the classic traits of metacognition such as self-reflection, self-regulation, and self-monitoring (Kaufman & Beghetto, 2013). Finally, creative metacognition comes with the benefit of possible application to both domain-specific and domain-general theories (Baer & Kaufman, 2005; Plucker & Beghetto, 2004).

Creative metacognition also includes recognition of the risks and constraints that accompany higher levels of creativity. In other words, creative works that affect more people and have higher stakes (a major motion picture produced by a large studio, for example) are less likely to have creative freedom. Creative contributions that affect less people and have lower stakes, on the other hand (a self-financed independent film with a small crew and cast), have more room to be creative. There are potential dangers that come with disrupting the norm (e.g., Mueller, Melwani, & Goncalo, 2012), and creators need to know when it is best to conform and when it is best to express innovation. Without having a foundation of knowledge about the best times to be creative, it can be difficult to judge. Students need these skills developed by their teachers. Good bosses should look to enhance these skills in their employees. Recognizing when a situation is prime for creative expression can optimize the odds of getting reinforcing feedback from an audience.

It may be easiest to teach CMC within the realm of mini-c, however, creative metacognition impacts creation at all levels of creativity. At the Big-C level, for example, there must be a high level of CMC to avoid creators wasting valuable time and resources on longshot projects (e.g., Sternberg & Lubart, 1996). Kozbelt (2007) shows that Mozart had a high level of self-awareness in judging his own work. Even simpler, creative geniuses who excel in multiple

fields or genres know where to pursue work and where to step away. Marie Curie, for all her advances in physics and chemistry, never tried to pen a novel or epic poem.

Pro-C creators should display a similar development of CMC. A good musician knows which venues are pushing the envelope and which ones simply aren't a good match. Skilled scientists know that a research study can only encompass so many topics and points to be coherent and direct. Kozbelt (2008) found that artists rated as more creative spent more time editing, erasing, and revising their work than did their less creative counterparts. Zeng, Proctor, and Salvendy (2011) found evidence for CMC in engineering and technology; metacognitive processing was significantly related to creative contributions.

At the little-c and mini-c levels, creators are still developing CMC. They may have the basic knowledge of what they can do within their field (e.g., a poet knows to not use a grocery list as a topic unless the goal is to be avant-garde), but they lack self-assessment skills. In order to become higher-level innovators, they must learn how to use their creativity to the most effective outcomes.

Through an understanding of CMC, educators, bosses, students, and workers can all emphasize the positive side of creativity and reap as much benefit as possible. CMC can be boosted by constructive criticism from mentors that can help students or workers identify their true creative strengths and weaknesses. Furthermore, teachers and bosses can help cultivate CMC by giving feedback about which contexts facilitate creativity and which do not. This response requires both defining these limits and explaining why they are in place (e.g., "I am asking you to write the essay in this format so you can understand the basic construction of persuasive writing. Later, once you have mastered this format, we will explore other outlines that you can use. The best way to demonstrate creativity is in how you structure your argument").

It is also important to note that although many people need to be given the tools to discover and express their creativity, others do not. Some people need to learn restraint. Everyone knows a child with a boundless vault of energy accompanied by endless original ideas who may not be able to focus on the task at hand. CMC can be essential in these cases. Without direction and instruction, such young creators may simply distract, blinding others to the benefits of their creative prowess. But with strong CMC, they can identify the line between a creative contribution and an unwanted disruption and contribute in a way that their individuality gets fully expressed and appreciated without dominating or draining the people around them. Once a creator has acquired CMC, she can move from mini-c into little-c, prepared to utilize her creativity in the most efficient ways.

Larger-c transitions

In the subsequent journey from little-c to Pro-c, most creators will experience a transitional period. *Formal* and *informal apprenticeships* often take the form of a graduate degree or on-the-job training (although, as we have discussed, other pathways may be more common in other cultures). Other methods include *tinkering*, in which the creator develops his skills by exploring on his own, trying new things, and trial and error. Another possibility is that a creator may choose to stay at the little-c level and engage in *reflection*. Not everyone decides that their creative passion should be the focus of their work life. Many creators use their talent to sort through feelings or simply express themselves in their spare time, an equally valid use of creative energy.

The Pro-c individual is again presented with distinct paths. Some creators will continue to invent and test the limits of their creativity for the length of their lives. The especially creative geniuses that take this path are greeted with the ultimate reward: *greatness* and the designation of

Big-C for generations to come. True luminaries continue to contribute and break the mold. On the other side of the spectrum, some Pro-c contributors may not continue to grow and, thus, become stagnant in their work. For instance, legendary authors like J. D. Salinger and Harper Lee abruptly stopped writing books and, barring heretofore undiscovered great work, they entered *g stasis*.

Finally, a Big-C creative genius can reach the pinnacle of her craft, known as a household name and becoming synonymous with the domain itself. She becomes legendary. Consider, for example, Vice President William R. King or Attorney General John Berrien. They are still remembered today and would be considered Big-C, but they are footnotes. Henry Clay and John Calhoun are still celebrated by political science scholars and, even higher, someone like Abraham Lincoln is a prototype for the idea of a creative genius in the field of politics.

Concluding Thoughts

Creativity and culture are inextricably connected. Creativity is defined within particular cultural contexts and, in turn, contributes to those contexts. Traditional conceptions of creativity obscured this relationship by representing creativity in an overly narrow, either/or dichotomy. Prior to the four-c model, creativity tended to be categorized as either the legendary accomplishments of creative geniuses (Big-C) or the mundane creative contributions of everyone else (little-c). Such conceptions failed to provide a way of understanding whether and how these different manifestations might be connected and how they could emerge within and across cultural contexts.

The four-c model has helped to bridge this gap. The addition of mini-c and Pro-c, for instance, helps to situate creativity in a cultural context and clarify the developmental trajectory of creativity. This conceptualization can help connect what otherwise seems like disconnected

programs of research (e.g., exploring everyday vs. eminent creativity). The depth offered by this four-pronged approach to creativity allows more questions to be asked and answered, shedding new light on many different potential debates in the field (see Kaufman & Beghetto, 2009, for more examples).

Finally, work guided by the four-c model can complement research that has examined and started documenting the benefits of multiculturalism in creative thought. Indeed, such work has grown exponentially with increasing globalization. Cultural proficiency can lead to increased creativity across all levels. Evidence is mounting that demonstrates how exposure to other cultures can increase creativity (Leung, Maddux, Galinsky, & Chiu, 2008). Traveling abroad can also increase creativity (Lee, Therriault, & Linderholm, 2012), and complete immersion in another culture seems particularly beneficial (Leung & Chiu, 2010; Maddux & Galinsky, 2009). Most of these studies have been conducted on college students, or those at the little-c level. We would love to see an analysis of the benefit of multicultural knowledge, travel, and life experiences across all levels of the Four-Cs. It is possible that learning from other cultures may enhance CMC and provide other stepping stones to helping people best explore their creative potential. As technology allows cross-cultural communication, friendships, and collaborations to be easier to maintain, the true impact of culture on all levels of creativity may not be felt for generations to come.

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Abstract

In this chapter, we highlight the Four C Model of Creativity, which traces creative development from mini-c (personal creativity) to little-c (everyday creativity) to Pro-c (expert creativity) to Big-C (genius creativity). We highlight the role of culture at each stage of the Four Cs and pay particular attention to the transitions between each level of the model. We highlight such concepts as creative metacognition and feedback.

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