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## Creative Development



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### Abstract

Creative development is the process of individual and collective growth in new, effective, and meaningful ideas, skills, thinking, and production. The creative growth of individuals can happen within a specific domain, like science, and also develop generally in skills and dispositions that are transferrable across domains. As a sociocultural process, creative development of one individual builds from and contributes to the creativity of others. Creative development across the life span relates to how a person adapts to the changing circumstances of life with agency, a resilient and growth-oriented attitude, and a sense of possibility for themselves and their world.

### Keywords

Creativity · Development · Agency · Adolescence · Participatory

## Introduction

Creative development is the process of individual and collective growth in new, effective, and meaningful ideas, skills, thinking, and production. The creative growth of individuals can happen within

a specific domain, like science, and also develop generally in skills and dispositions that are transferrable across domains. As individuals take risks to contribute new ideas and solutions, they carry our collective potential for creative development further, often changing how we think about the world in profound ways. Therefore, it is optimal to conceptualize creative development through a number of approaches that relate to the possible – possible pasts, selves, worlds, and futures.

First, a multidimensional approach to an individual's creative resources creates an expansive set of possible *self* compositions that a person may bring to a task or challenge. Many of those resources are malleable with focused effort. Specific domains will draw on specific resources in different ways, and a person's possibilities for creative development will evolve with practice, developing the skill, strategy, and metacognition to enhance the process and output. Second, from a developmental perspective across key stages of human growth and the life span as a whole, there are domain-general creative resources that may be transferrable and adaptive to a range of contexts and domains. How a person reflects on themselves in the past as agents of their world and how they imagine themselves and the world they inhabit will play a role in their development. The possible identities explored in a lifetime converge in several meaningful ways with creative development. Third, from participatory, societal, and cultural perspectives on creativity, creative development does not occur within an individual. Rather,

creative development is interactive between a creator and an audience and between the creator in the present and any contributors to the evolution of that idea. Often, those breakthroughs and pronouncements aim at transformation in the world and an individual's role in its reconstruction.

This entry links different perspectives on creative development to different dimensions of the possible with the aim of identifying potential pathways for future research, grounded in the possible as a field of inquiry (Glăveanu 2018). Throughout this entry, I will draw on a specific and key period of human development, adolescence, to help anchor the ideas presented. In light of the intense identity exploration underway during adolescence and its consequential nature for an individual's later development, this period can provide insight into the links between creative development and the possible.

### Creative Development Within Domains

An individual's person-level creative resources include a variety of thinking skills, attitudinal orientations and beliefs, and behaviors (Lubart et al. 2013). Some of those resources, such as openness, imagination, and tolerance for ambiguity, are directly related to states that engage with the possible. Thinking about creative development as the composition and growth of creative resources provides a helpful multidimensional way of considering how an individual may approach a task or experience development in a domain. Though not exhaustive, Table 1 presents some general creative resources that research has identified as important to creative development and creative contributions. The debate about the domain generality and domain specificity of creativity (Baer 2015, 2016) has provided contrasting but complementary perspectives, reaching some consensus that specific creative resources are necessary within domains and that general creative resources will support an individual's creative development and contributions across domains.

For instance, Root-Bernstein (2003) documented the existence of polymathy, or creative achievement in multiple domains, to suggest

a universality to the creative process of innovation and highlight the relationship between seemingly disparate fields, such as science and the arts. If we start at the narrowest framing of creative development, we can work to understand how the possible takes shape for an individual within a specific domain of activity, discipline, or pursuit and how that development can support the individual's creative development and potential contributions, more generally. For example, an adolescent who has developed creative behaviors specific to guitar playing, such as routine practice, songwriting, and rhythm, will be more likely to experience greater creative development if they are more curious about the mood that different chords make when juxtaposed in a composition and more willing to take risks to play with possible, but unconventional combinations. That adolescent may be driven to find a possible musical, acoustic representation of a new complex emotional experience.

The development of creative resources within a domain can also support an individual's healthy identity development – the discovery of possible selves is a key developmental task during adolescence. To make a commitment to a creative domain in life, such as learning an instrument and eventually joining a band, links creative development to healthy identity formation during this key stage (Barbot and Heuser 2017). Though commitment to a creative domain may seem self-limiting, in reality, those commitments are necessary to expand the possible contributions that the individual can make to the world. That deeper commitment also broadens their sense of possibility and confidence to achieve an imagined future, such as playing live for an audience. The creative act of imagining a possible future for oneself, constructing a possible self, and working toward that self-actualization can itself be thought of as *life creativity* (Zittoun and de Saint-Laurent 2015).

Importantly, opportunities to engage in a creative commitment in life are not equitably available to people. The creative commitments that are possible for an individual, young or old, are embedded in and constrained by the individual's life course and historical time (Elder 1998). That life course of individuals is bound by the social,

**Creative Development, Table 1** Creative resources components

Creative behaviors	Creative thinking	Creative attitudes and beliefs
Skillful, committed, persevering, collaborative, experimental, embodied, adaptive . . .	Curious, imaginative, divergent thinking, associative and metaphorical, integrative and synthesizing, mental flexibility, humorous . . .	Openness, intrinsically driven, tolerance for ambiguity, boundary-breaking, growth mindset, risk-taking, self-efficacy . . .

economic, and cultural factors at play that either open or close opportunities for creative exploration, development, innovation, and contributions. Certainly, a tension exists between the accessibility of opportunities for an individual and the agency of the individual to seek out, choose to act on, and pursue opportunities for creative development. For instance, research about creative polymaths illustrates how creative development in one domain, such as the arts, can feed insights and development in a completely distinct domain, such as science. Root-Bernstein (2003) provided the example of Santiago Ramon y Cajal, one of the first Nobel Prize winners in Physiology or Medicine, who attributed much of his renowned success in neuroanatomy to his avocations in photography and the visual arts. It is possible that Ramon y Cajal's choice to pursue his artistic development was just as important as his pursuits in science. In terms of creative development, though individuals may excel in a single domain, it is more often the case that their creative process develops, expands, and refines through activity in multiple domains, even if they don't reach the same levels of achievement across them.

### General Creative Development Across the Life Span

Creative development across the life span relates to how a person adapts to the changing circumstances of life with a resilient, open, and growth-oriented attitude and with a sense of possibility for themselves and their world (Carson and Runco 1999). A person's general creative development can be conceptualized as the emergence of strategic engagement of knowledge and creative resources related to the creative process. Using perspectives on lifelong learning, creative

development can fit into a novice-to-expert continuum (Dreyfus and Dreyfus 1980), where individuals can be starting at the beginning stage of development, based on experience and exposure, not on years of life. From a developmental perspective, the general creative thinking process has been conceptualized with specific pieces: (a) problem finding and construction, (b) idea generation, (c) tolerance for ambiguity and risk-taking, (d) seeing failure as opportunity, and (e) being metacognitive about strengths, limitations, and strategy (Lench et al. 2015). An individual could be naturally gifted or developing at different rates and levels within each of those components of the creative process.

From that perspective, development to a point of expertise indicates a high level of both intuition and metacognitive capacities but should not be considered a static end – possibilities continue to abound because every context and domain requires different combinations of creative resources. In fact, the merging of disciplines and domains – a *transdisciplinary* perspective about the world – would mean that the possible “disciplines” to master are limitless. From a developmental stance, behaviors often begin by watching others, with ample exploration and trial and error, learning from setbacks and failures. With practice and deliberate investigation, learners reflect and develop the metacognition (Flavell 1979) about what works, when it works, and how to adapt it to new situations. Recent research suggests that creative metacognition plays a key role in how an individual will transform their creative potential into agentic and creative action (Anderson and Haney *in press*). As with any other set of knowledge, skills, and dispositions, becoming strategic with creative thinking, attitude, and behaviors depends on cumulative experiences in a variety of contexts

as well as a mindset that with effort growth is possible, even when a challenge is quite difficult. The developmental framework for creativity (Lench et al. 2015) places the most advanced level of creative development at a point of emerging expertise, suggesting the possibilities for how that high level of intuition, insight, and adaptability depend on a continued belief in one's potential to grow and adapt – expertise continues to be a means rather than an end.

**Creative development as agentic.** Recent research supports a model of creative behavior as agentic action, where the self-beliefs (e.g., creative self-efficacy) and values (e.g., nonconformity) that an individual carries into a task will dictate their creative effort, achievement, and development (Anderson and Haney *in press*; Karwowski and Beghetto 2018). Developmentally, if the individual has limited experience and knowledge in a task or domain, they may not feel a high agency to be creative in that task or domain unless they have been successful in something related. From a social cognitive perspective, a person's development in life is not just dependent on the level of their personal agency – their *proxy* agency is influenced by others and the environment around them (Bandura 1986, 2018). Whereas personal agency is made up of the prospective belief of success (or self-efficacy), the sense of control in the process, and the personal value of the endeavor, proxy agency includes the modeling and observations experienced vicariously through others. Theoretically, in one's creative development, these aspects of agency should matter enormously. Someone is unlikely to develop creatively if they lack the self-belief they can be successful and the value that it is worth their time and effort. They will also be limited without access and exposure to others who model that creative growth is possible and important. Agency in the risk-taking and openness that precludes creative development sets the stage for the possible. Without agency, the ideas of a possible creative self are unlikely to emerge, and sustained creative development toward that actualization remains *impossible*.

If individuals begin from a perspective that there are many possible organizations and

reconstructions of the past, depending on one's perspective and framing of experiences, even (or especially) personal histories of difficulty, challenge, and failure can be seen as empowering and agency-building. This sense of the possible emerging from reflections on the past can be a powerful mechanism to shift general beliefs about the potential for creative development. For instance, in a recent study, educators learned about the malleability and breadth of creative resources and completed hours of reflection and practice in basic creative thinking routines. Upon completing 28 h of training, teachers demonstrated very large decreases in their fixed mindset beliefs about creativity – the perception that creative capacity is trait-like and unchangeable in themselves and students (Anderson et al. 2020). Reflections on the possible in the past will influence the possible for one's creative development into the future. If past failure, for instance, is seen as diagnostic of one's limitations and hopelessness, then the risk-taking needed for creative growth will likely be limited. As early adolescent students have shared, when mistakes are seen as expressions of the unique interpretations of the individual (imagined possibilities), creative development has room to grow in the young person, especially in a social setting filled with judgment and pressure, both perceived and experienced (Anderson et al. 2019). The value placed on one's own potential for uniqueness and creative growth is deeply linked to the role of agency in what is perceived as possible in personal creative development.

**Creative development in adolescence.** To dig deeper into general creative development during a specific and important period of human growth, adolescence provides an opportune grounding. Research indicates that different fluctuations in creative development likely exist during the adolescent years (Barbot et al. 2016) – a period marked by highly dynamic biological and social growth (Dahl et al. 2018; Eccles and Roeser 2011). Healthy identity exploration and commitment are important and difficult developmental tasks during adolescence, and creative development can support that identity formation through at least three pathways (Barbot and Heuser 2017).

Learners can solidify their identity through the creative commitments they make, such as joining a band. Adolescent learners can use creative activities as opportunities for adaptive self-expression, such as jamming on the drums to express the common feeling of teenage angst. Creative thinking processes, including divergent idea production, may enhance the identity exploration and formation process by expanding what is perceived as possible and by being strategic about actualizing those possibilities in the present reality (Sica et al. 2017).

When looking at the development of one of the most ubiquitous domain-general skills studied in the creativity field during the tumultuous and consequential developmental period of early adolescence, this developmental approach comes into view. A recent study modeled the different groups of trajectories of divergent thinking originality that emerged from a sample of 1300 US middle school students from Grade 6 to Grade 8 (Anderson 2019). Across five measured time points, 72% of students demonstrated a low and declining development of originality. Among the other four groups, two rose and declined, one group showed no change, and a third group of 5% of the sample demonstrated consistent growth across the three pivotal early adolescent years of middle school. Compared to the normative downward trend of 72% of the sample, when the growth group began Grade 6, they showed higher levels of growth mindset about their abilities. In other words, they strongly believed in the possibility of their growth and development. Moreover, they valued social conformity less than the normative group, believing that being different than what others expected – holding firm to the possible in their own diversity – was more important than getting others to like them (Anderson 2019). Those two beliefs were key predictors of adaptive creative development, and that development contributed to students being more prepared for high school than most of their peers – higher academic, agentic, and creative outcomes at Grade 8.

Those findings resonate with other research, which indicate that a creative mindset is key to creative development (see entry on ► [“Creative Mindset”](#); Karwowski 2014), and

unconventionality of a person has a strong link to their capacity for original ideas (Andreas et al. 2016). Put another way, two ingredients appear to be key: (a) the willingness to make mistakes and, possibly (or likely), fail and interpret that failure as latent with growth potential and (b) the commitment to follow one’s own path, instinct, and unique expression, even when it may be unconventional in the face of others’ expectations. It is likely these strengths require just as much proxy agency as personal agency to develop in a context like school.

Though more research is needed about the conditions that support creative growth during adolescence and beyond, evidence of declines have prompted a range of explanations. Documented downward trends of divergent thinking during adolescence may be an interaction between the neurological, physiological, and social development underway, the opportunities provided in the environment, and the task used in measurement (Barbot et al. 2016). Explanations for an apparent Grade 4 slump appear through sociocultural perspectives, including (a) the effects of critical grade-to-grade transitions in school (He and Wong 2015), (b) normative effects of more strict classroom environments (Torrance 1968), (c) cultural differences, such as early emphasis on college entrance exams in China (Yi et al. 2013), and (d) socioeconomic characteristics of the students’ school and the different educational experiences those characteristics afford (Dai et al. 2012). Explanations also appear through affective and cognitive perspectives. Temporal gaps in socioemotional and cognitive control systems during adolescent development could explain different slumps in creative ideation development (Barbot and Hunter 2012). A common theme across those explanations is that they focus on the environmental and sociocultural conditions and biological growth underway. However, as articulated earlier, an alternative perspective that has begun to gain traction focuses on the social cognitive theory framing of agency, where the social, cognitive, and affective experience of self-belief – related to imagined possible selves – interact with opportunities provided in the environment. Though adolescence is unique

as a developmental stage, because it sets up patterns and identity beliefs into adulthood, the research and theory discussed here likely plays a role in creative development later in life.

## Participatory and Societal Creative Development

Up to this point, this entry has focused on how the individual experiences creative development within a specific domain or, more generally, in their potential for creative thinking and behaviors. However, more recent work has begun to shift the gaze of creativity research from the individual in isolation toward the individual engaged with others and the world around them. These ideas relate to how we imagine our interactions with others and the environment in the possible worlds and futures – the social and cultural landscape of myths (Castoriadis 1987) that dictate our experiences and which we can each play a role in shaping (Glăveanu 2018). Clapp (2016) drew our attention to the evolution of an idea, in our collective development, and away from the supposed lone creator, who likely receives recognition, and sometimes fame, for having discovered and pursued the idea to the point of expression valued most societally and culturally. Often, deeply embedded collaborators may receive much less acknowledgment than the individual at the head of the idea (Glăveanu 2011). A postmortem dissection of an idea or discovery to understand the many contributing minds that produced the idea rarely happens; however, some research has looked at how an idea evolves in interdisciplinary groups, proposing a six phase process, each phase a *room for opportunity* of the possible (Ness and Søreide 2014). For instance, Ness and Søreide (2014) found that the third phase, called *polyphony*, included effort to understand and blend diverse perspectives from the different disciplines within a group, producing friction and an opening to new possibilities and learning.

The process of theatrical improvisation provides another snapshot of the collaborative process in a creative endeavor. Launched by a “golden premise,” individuals build off of an

idea in the moment, using intuition, possibility thinking, and random acts, to sculpt something new together. An improvisational piece is made up of a rapid succession of interpretations and contributions that are unique to each individual. Though often drawn out over years or generations, the passing of an idea through unique individuals, until it evolves into something demonstrably creative, is a participatory and co-generative process. If creativity is really about the evolution and passage of an idea through a cultural milieu from one person or one group to another, then creative development should not be thought of so intensely in isolation of the individual. Such a narrowing limits the possible in terms of our conception of creative development – both how we study and pursue it.

Creative development societally often begins with disruption and possibly a paradigm shift (Kuhn 1962). That revolution can happen through multiple pathways, including scientific discovery, irrational enthusiasm, disaster, or social and cultural movements, for instance. Creative development of individuals and a group, as a whole, can occur through greater means for exchange of ideas and information and cross-disciplinary collaboration (Ness and Søreide 2014). Technological advances have created a participatory culture online, where anyone with a connected device can create and contribute new content. These advances may be advantageous for one specific pathway for social and cultural creative development – specifically, the creative and artistic activism, or *artivism* (see entries on ► “Social Change” and ► “Activism”), of an individual or group aimed at shifting perception and consciousness about issues in the world around them (Glăveanu 2017).

Distinguished by the element of surprise, novelty, and potency, artistic and creative activism can seed new ideas about the world in the audience and boost the sense of possibility and purpose for the creator(s), emboldening individuals or groups with the possibility of liberation from oppressive or dominating views or conditions. When individuals or groups take creative risks (often these risks can include the risk of arrest or more), those examples are experienced

vicariously by others and can boost the sense of agency in others within their own creative development and contributions. These constructed moments can shift individual or collective views about the ingrained myths of social and political institutions, thereby releasing minds into the possibility of different worlds and futures. This socially and culturally engaged perspective on creative development expands conceptions of creative development as a phenomenon experienced in isolation by individuals into realms of interdependency, participation, and possibility.

## Conclusion

Creative development and the possible are inextricably linked. At the individual and personal levels, a sense of agency and belief in growth undergirds what can be imagined in our own unique creative development. That sense of agency can act reciprocally in the collective with others by establishing new narratives about what is possible and how to seek out and actualize those possible selves, worlds, and futures in the current lives we lead.

## Cross-References

- ▶ [Activism](#)
- ▶ [Adolescence](#)
- ▶ [Agency](#)
- ▶ [Artivism](#)
- ▶ [Collaboration](#)
- ▶ [Creative Mindset](#)
- ▶ [Empowerment](#)
- ▶ [Improvisation](#)
- ▶ [Social Change](#)

## References

- Anderson, R. C. (2019). *Becoming creative agents: Trajectories of creative development during the turbulence of early adolescence*. Dissertation, University of Oregon, Eugene.
- Anderson, R. C., & Haney, M. (in press). Reflection in the creative process of early adolescents: The mediating roles of creative metacognition, self-efficacy, and self-concept. *Psychology of the Aesthetics, Creativity, and the Arts*.
- Anderson, R. C., Haney, M., Pitts, C., Porter, L., & Boussetot, T. (2019). "Mistakes can be beautiful": Creative engagement in arts integration for early adolescent learners. *Journal of Creative Behavior*. <https://doi.org/10.1002/jocb.401>.
- Andreas, S. F. K., Zech, S., Coyle, T. R., Rindermann, H., Andreas, S. F. K., Zech, S., et al. (2016). Unconventionality and originality: Does self-assessed unconventionality increase original achievement? *Creativity Research Journal*, 28(2), 198–206. <https://doi.org/10.1080/10400419.2016.1162556>.
- Anderson, R. C., Katz-Buoincontro, J., Boussetot, T., & Land, J. (2020, August). How am I creative? Development of creative resources for teaching. *Paper presented at the annual convention of American Psychological Association (APA)*. Washington D.C.
- Baer, J. (2015). The importance of domain-specific expertise in creativity. *Roeper Review*, 37(3), 165–178. <https://doi.org/10.1080/02783193.2015.1047480>.
- Baer, J. (2016). Creativity doesn't develop in a vacuum. *New Directions for Child and Adolescent Development*, 2016(151), 9–20. <https://doi.org/10.1002/cad.20151>.
- Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs: Prentice Hall.
- Bandura, A. (2018). Toward a psychology of human agency: Pathways and reflections. *Perspectives on Psychological Science*, 13(2), 130–136. <https://doi.org/10.1177/1745691617699280>.
- Barbot, B., & Heuser, B. (2017). Creativity and identity formation in adolescence: A developmental perspective. In M. Karwowski & J. Kaufman (Eds.), *The creative self: Effect of beliefs, self-efficacy, mindset, and identity* (pp. 87–98). London: Academic.
- Barbot, B., & Hunter, S. R. (2012). Developmental changes in adolescence and risks for delinquency. In *Handbook of juvenile forensic psychology and psychiatry* (pp. 11–34). New York: Springer.
- Barbot, B., Lubart, T. I., & Besancon, M. (2016). Peaks, slumps, and bumps: Individual differences in the development of creativity in children and adolescents. *New Directions for Child and Adolescent Development*, 2016(151), 33–45. <https://doi.org/10.1002/cad.20152>.
- Carson, D. K., & Runco, M. A. (1999). Creative problem solving and problem finding in young adults: Interconnections with stress, hassles, and coping abilities. *The Journal of Creative Behavior*, 33(3), 167–188.
- Castoriadis, C. (1987). *The imaginary institution of society*. Cambridge, MA: Polity Press.
- Clapp, E. (2016). *Participatory research: Introducing access and equity to the creative classroom*. New York: Routledge.
- Dahl, R. E., Allen, N. B., Wilbrecht, L., & Suleiman, A. B. (2018). Importance of investing in adolescence from a developmental science perspective. *Nature*, 554(7693), 441–450. <https://doi.org/10.1038/nature25770>.

- Dai, D. Y., Tan, X., Marathe, D., Valtcheva, A., Pruzek, R. M., & Shen, J. (2012). Influences of social and educational environments on creativity during adolescence: Does SES matter? *Creativity Research Journal*, *24*(2–3), 191–199. <https://doi.org/10.1080/10400419.2012.677338>.
- Dreyfus, S. E., & Dreyfus, H. L. (1980). *A five-stage model of the mental activities involved in directed skill acquisition* (No. ORC-80-2). Berkeley, CA: University of California Operations Research Center.
- Eccles, J. S., & Roeser, R. W. (2011). Schools as developmental contexts during adolescence. *Journal of Research on Adolescence*, *21*(1), 225–241. <https://doi.org/10.1111/j.1532-7795.2010.00725.x>.
- Elder, G. (1998). The life course as developmental theory. *Child Development*, *69*(1), 1–12.
- Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry. *American Psychologist*, *34*(10), 906–911.
- Glăveanu, V. P. (2011). How are we creative together? Comparing sociocognitive and sociocultural answers. *Theory & Psychology*, *21*(4), 473–492. <https://doi.org/10.1177/0959354310372152>.
- Glăveanu, V. P. (2017). Art and social change: The role of creativity and wonder. In S. Awad & B. Wagoner (Eds.), *Street art of resistance* (pp. 19–37). New York: Palgrave Macmillan.
- Glăveanu, V. P. (2018). The possible as a field of inquiry. *Europe's Journal of Psychology*, *14*(3), 519–530.
- He, W., & Wong, W. (2015). Creativity slump and school transition stress: A sequential study from the perspective of the cognitive-relational theory of stress. *Learning and Individual Differences*, *43*, 185–190. <https://doi.org/10.1016/j.lindif.2015.08.034>.
- Karwowski, M. (2014). Creative mindsets: Measurement, correlates, consequences. *Psychology of Aesthetics, Creativity, and the Arts*, *8*(1), 62–70. <https://doi.org/10.1037/a0034898>.
- Karwowski, M., & Beghetto, R. A. (2018). Creative behavior as agentic action. *Psychology of Aesthetics, Creativity, and the Arts*. <https://doi.org/10.1037/aca000190>.
- Kuhn, T. (1962). *The structure of scientific revolution*. Chicago: University of Chicago Press.
- Lench, S., Fukuda, E., & Anderson, R. C. (2015). *Essential skills and dispositions: Developmental frameworks for collaboration, communication, creativity, and self-direction*. Lexington. Retrieved from <https://www.inflexion.org/essential-skills-and-dispositions-development-frameworks/>
- Lubart, T., Zenasni, F., & Barbot, B. (2013). Creative potential and its measurement. *International Journal for Talent Development and Creativity*, *1*(2), 41–50.
- Ness, I., & Søreide, G. E. (2014). The room of opportunity: Understanding phases of creative knowledge processes in innovation. *Journal of Workplace Learning*, *26*(8), 545–560.
- Root-Bernstein, R. (2003). The art of innovation: Polymaths and universality of the creative process. In L. Shavinina (Ed.), *The international handbook on innovation* (pp. 267–278). Oxford, UK: Elsevier. <https://doi.org/10.1016/B978-008044198-6/50018-8>.
- Sica, L. S., Ragozini, G., Di Palma, T., & Aleni Sestito, L. (2017). Creativity as identity skill? Late adolescents' management of identity, complexity and risk-taking. *Journal of Creative Behavior*, 1–15. <https://doi.org/10.1002/jocb.221>.
- Torrance, E. P. (1968). A longitudinal examination of the fourth grade slump in creativity. *Gifted Child Quarterly*, *12*(4), 195–199.
- Yi, X., Hu, W., Plucker, J. A., & McWilliams, J. (2013). Is there a developmental slump in creativity in China? The relationship between organizational climate and creativity development in Chinese adolescents. *Journal of Creative Behavior*, *47*(1), 22–40. <https://doi.org/10.1002/jocb.21>.
- Zittoun, T., & de Saint-Laurent, C. (2015). Life-creativity: Imagining one's life. In V. P. Glăveanu, A. Gillespie, & J. Valsiner (Eds.), *Rethinking creativity: Contributions from social and cultural psychology* (pp. 58–75). London: Routledge. <https://doi.org/10.4324/9781315866949>.