

**Thinking wide and narrow:
A ‘cultural creative cognition’ approach to possibility thinking**

Vlad P. Glăveanu
Webster University Geneva, Switzerland
Bergen University, Norway

Abstract. This chapter postulates the existence of two distinct yet, in practice, often blended modes of thought called possibility and actuality thinking and examines primarily the characteristics of the former. While a popular notion in education and, to some extent, in the psychology of creativity, ‘possibility thinking’ is reformulated here as a system of thought in its own right, focused on explorations of ‘what could be’, ‘what is to come’, ‘what could have been’ and ‘what is not / will never be’. This proposition reflects a broader concern for the eminently human ability to engage with the possible, an issue reflected upon in a variety of fields of study, from narrative and play to creativity and wonder. In this chapter, a ‘cultural creative cognition’ lens is used to discuss possibility thinking as underpinned by four inter-related processes: pretence, anticipation, counterfactual and utopian thinking. Conclusions are drawn concerning the distinction between ‘wide’ and ‘narrow’ thought as modes that complement the more traditional division between ‘fast’ and ‘slow’ thinking and add an important new dimension to our understanding of creative cognition in particular and of cognition in general: the capacity to build on while, at the same time, go beyond the experience of ‘what is’.

Keywords: possibility thinking, actuality thinking, play, narrative, wonder, creativity, pretence, anticipation, counterfactuals, utopia, cultural creative cognition.

It is a common and relatable occurrence being caught up in daydreaming at exactly the time when our attention should focus on the task at hand. Whether we disconnect out of boredom, because it’s more exciting to think about something else, or simply because we can’t keep concentrating any longer, the result is similar: we are transported from an experience of the ‘here and now’ to one of the ‘then and there’, from what is actual and immediate to what is possible, probable and even impossible. In other words, we bracket the world ‘as is’ in order to indulge, for a shorter or longer while, in fantasies about how things could, might or will never be (Singer, 2014). But this is no indulgence in the negative sense of the word. Grasping for experiences that lie beyond one’s current situation is a fundamentally human attribute, closely related to our capacity to use signs and symbols as a way of placing a certain distance between sensorial inputs and mental representations, between reflex and deliberate actions, between the world as is and the world as imagined (Valsiner, 2007). Key to understanding this propensity, however, is the fact that reality and imagination are

not disconnected from each other but rather stand in close union (Vygotsky, 2004). To return to the example of daydreaming, the triggers, contents and outputs of this phenomenon all point back to ‘the real world’. And yet, phenomenologically, episodes of reverie mark a distinct kind of experience akin to a widening of our mental horizon, to enjoying a certain degree of freedom and open-endedness dissimilar to any narrow focus on what is the case. In other words, while this chapter focuses primarily on PT, it needs to be emphasized that most human thoughts is ‘hybrid’ or non-binary in nature, revealing actuality and possibility as two sides of the same coin.

This chapter is dedicated to the exploration of precisely this qualitatively different mode of thought that I tentatively call ‘possibility thinking’ (PT). This notion, used in the past to capture a set of education-focused skills and practices (Craft, 2003; Craft, Cremin, Burnard & Chappell, 2008), is reformulated here as a broader principle organising our (creative) cognition and, with it, our relation to ourselves, to others and to the shared world we inhabit. In order to distinguish exactly what makes possibility thinking different from other modes of thought, we need to contrast it with its complement (not opposite), which is ‘actuality thinking’ (AT). The latter focuses our attention on what is the case and keeps us within the boundaries of what we remember to have happened, what we consider to exist or be true, and what is likely to happen next. The former doesn’t deny these constraints on our thinking and action but expands them into the sphere or what could be or could have been the case, what is improbable or could never happen. Daydreaming is one example of PT being placed in the foreground and AT in the background. And it is also a good illustration of how these processes of fore- and backgrounding can occur in quick succession (leading to blended experiences of actuality and possibility) or, at times, how they generate shifts of longer duration (e.g., lengthy episodes of daydreaming interrupted only by outside events). My focus here, independent of duration, is to examine how foregrounding the possible transforms our experience of and relation to what is actual and why its processes – e.g., pretend, anticipatory, counterfactual and utopian thinking – are deeply interconnected. What I do not intend, however, is to reify the dichotomy between PT and AT as independent modes of thought. As the foregrounding / backgrounding metaphor suggests, there is always actuality in our exploration of the possible and there are new possibilities to be found when paying attention to what is. The ‘then and there’ of PT is experienced in AT’s ‘here and now’ and the latter both grounds and lifts the former.

I approach all the issues above from the standpoint of creativity research and, in particular, ‘cultural creative cognition’ (CCC), a subfield based on the assumption that creative thinking is as much a psychological as it is a social, cultural and material / embodied phenomenon (for intersections between creativity and culture, see Glăveanu, 2014, 2016). This particular theoretical lens stands in contrast to traditional ‘creative cognition’ (CC) approaches (e.g., Finke, Ward & Smith, 1992; Ward, Smith & Finke, 1999) – although there are some overlaps between the two, key among them being a recognition of the role played by cognition in creative expression – in which the inputs, processing and outputs of creativity are all intra-psychological. Social and material interactions as well as cultural contexts are traditionally considered in CC as external influences that come to shape mental processes of generating and exploring ideas. CCC reframes this dynamic by recognizing creative ideation as an embodied act which plays out in specific social and material

settings and is framed by broader institutions, values and practices. In this way, what appear as universal, person-bound processes in CC become conceptualized in local and distributed terms within CCC, and what is neatly categorised as person, process and product in the former becomes a holistic study of experience in the latter (e.g., Dewey, 1934).

How is this relevant for possibility thinking? First of all, while not all episodes of PT lead to creative outcomes and there is a clear and important part to be played by AT in creativity (Cropley, 2006), it is the case that all PT shares, more or less explicitly, the basic qualities of a creative experience which are open-endedness or a lack of predetermined goals, pluri-perspectivism or the ability to bring in multiple perspectives, non-linearity, describing the ups and downs of creative work, and orientation towards the future, and especially towards multiple, open futures (Glăveanu & Beghetto, 2020). Second, the creative nature of PT, at a cognitive level, is explained here in transactional, not intra-individual terms, pointing to the how the possible emerges in our lives as a consequence of our embodied, social and cultural existence rather than despite of it. Last but not least, expressions of PT (as well as AT) are all viewed as contextual in nature depending, at once, on person and environment and especially on their co-evolution. In fact, while this is not the focus of the present chapter, a CCC approach can be useful for theorizing AT as much as it is for examining PT in the sense that a focus on the actual can be – and often is – creatively productive (consider, for example, moments of creative flow).

The chapter will proceed by analysing cases in which PT has been theorised as a distinct mode of thought – in narratives, play and wonder-based explorations of the world. Then it will propose a concrete typology of PT built on four pillars (pretence, anticipation, counterfactuals and utopia) and argue why they are distinct yet interdependent phenomena in neurological, evolutionary and developmental terms. A brief review of research for each of the four instances of PT will be offered. In the end, the discussion will return to the relation between PT and AT and their connection to other, more popular distinctions, such as that between automatic or System 1 and controlled or System 2 thinking. Conclusions will be drawn concerning the expansion of CCC into a broader theory concerning the role, mechanisms and value of thinking both ‘wide’ and ‘narrow’.

A different kind of thought

There are multiple strands of scholarship, in the history of psychology and philosophy, that speak to the difference between what I call here possibility and actuality thinking and, in particular, to the special status of the former for mundane thought and action. In his well-known book ‘Actual Minds, Possible Worlds’, Bruner (1985, p. 97) advanced a bold argument about the existence of “two irreducible modes of cognitive functioning” that help us organise our experience, filter perception and construct reality. These are the paradigmatic (logico-scientific) mode and narrative mode. The first is based on the categorisation and conceptualisation of the actual, as well as on establishing logical relations between these categories and conceptions, for example, following the principles of consistency and noncontradiction. It is a type of thinking that anchors us firmly into ‘what is’ and tries to describe it in objective terms. While some might argue that one can never

achieve such a ‘view from nowhere’ (Nagel, 1989), the strength of paradigmatic thought lies in the fact that it neatly structures the world around us. Conversely, narrative thinking embraces the messiness and non-linearity of human existence and organises it on entirely different principles. Instead of cause-and-effect relations, the logic of narrative is that of the temporal unfolding of meaningful action. To think in terms of stories rather than pre-existing categories is thus more ‘freeing’ and more adapted to everyday interactions and communication between people.

Most of all, the narrative mode of thought opens up our cognition to a wider range of possible worlds (outside of those that are statistically or logically likely) and infuses them with actors, storylines, and consequences. It introduces us to the realm of what could happen or could have happened, without having truth or truthfulness as a primary concern. Which is not to say that narrative thinking is fanciful or deceitful. The stories we construct with its help are judged based on whether they are believable or not, whether they are consistent with other narrative accounts, and whether they are generative of deeper and essentially different understandings of the world ‘as is’. Moreover, all stories are open to a variety of different interpretations, which is not the case (or, at least, not intended to be) of paradigmatic outcomes. It is not surprising, then, to discover that narratives are a primary carrier of PT as they stand in close connection with the imagination (for a discussion of notion of narrative imagination, see Hardy, 1975; Brockmeier, 2009; Andrews, 2014).

Stories are also an integral part of play episodes, from an early age, and their main role is to both organise and solidify a certain experience (e.g., that of doctor and patient) while, at the same time, keeping it flexible, ambiguous, open to a multitude of endings (as anyone who has witnessed children at play can testify). Playfulness is, in this context, a state of mind that individuals of all ages adopt when they allow themselves to consider the world different than it is. This makes playful approaches to reality another expression of PT (Craft, McConnon, & Matthews, 2012). What makes this thinking stand out compared to non-play situations? Its capacity to essentially accelerate development. In his work on play, Vygotsky (1978, p. 102) made this observation:

“Play creates a zone of proximal development of the child. In play a child always behaves beyond his average age, above his daily behaviour; in play, it is as though he were a head taller than himself. As in the focus of a magnifying glass play contains all developmental tendencies in a condensed form and is itself a major source of development”.

There is considerable empirical evidence that Vygotsky’s intuition was, in fact, correct: when faced with the same kind of situation or task, children do demonstrate more sophisticated ways of thinking and acting in play than they do outside of it (see Bodrova & Leong, 2015). The question is, why do we notice such a powerful transformation? To understand this, we need to return to the notion of PT and its assumed capacity to reveal the world as malleable and pluri-perspectival. When relating to the world in this manner, children adopt, practice and exchange different positions, expand their repertoire of knowledge and skills and practice their agency (Gillespie, 2006). Play offers also opportunities to not only learn about but deconstruct everyday life and question the

processes and outcomes of AT. This kind of de-familiarisation of the familiar is specific for yet another phenomenon situated at the heart of PT – the experience of wonder.

Wondering is a mundane occurrence, even if we often undergo ‘milder’ versions of it, in which we question some, not all of our understandings. To experience wonder means, in this context, to become – more or less suddenly – aware of a wider field of possibility and motivated to explore it not for the sake of gaining knowledge that is certain and final, but provisional and ready for re-interpretation (Glăveanu, 2020a). This capacity to withstand uncertainty and doubt and consider them productive states of mind is yet another defining feature of PT (see also Beghetto, 2017). It is what Heidegger poetically called ‘dwelling in the unknown’ (Heidegger, 1962), accepting not knowing as an opportunity to engage with the openness of being that describes each human existence. This fundamental openness is, itself, something we come to recognise when we are faced with both macro or micro ruptures in our understanding of the world and our sense of self. Therefore, our propensity to wonder doesn’t make PT a more enjoyable thinking system, but it certainly contributes to it being highly rewarding for our intellectual life. This is why, in Antiquity, Socrates famously placed this phenomenon at the origin of philosophy or the love of wisdom (Plato (1973 / ca. 369 B.C.). Just like wondering, PT doesn’t result in the certainties specific for AT, but what it does as a mode of thought is keep us alert, curious and, above all, humble.

A final observation about the cases of narratives, play and wonder is that they colour the experience of individuals and yet depend on a wider social, material and cultural context. Most of all, they are culture-enabled in the sense that, without the signs and tools made available by living in a shared, human society, it would be impossible to link events to each other into a storyline, to pretend that things are not what they are, or to question the very nature of reality. All of these actions are creative or, at the very least, potentially creative. They result in novel and meaningful ideas about oneself, others, and society, and still, the cognitive processes underlying them cannot be reduced to the operation of individual minds; their understanding requires a consideration of mind, body and world, together. It requires grounding Possibility (and Actuality) Thinking within Cultural Creative Cognition rather than Creative Cognition alone.

Possibility and actuality thinking

It is a bold conceptual move to formulate – yet another – binary system of thinking. Some key characteristics of PT have already been outlined above, but a much more systematic description of it is required and, at the same time, a more consistent reflection on the meaning and value of AT (which is not, simply, everything that PT is not). To substantiate PT and AT as modes of thought and, more specifically, as distinct modes of thought, the following claims should be evidenced:

1. Widespread manifestation of PT and AT associated processes in the general population, including across cultures;
2. Differentiated level of achievement in the case of both thinking systems;

3. Neurological differences in the way information associated with possibility and actuality is processed, including distinct pathways for each;
4. Clear yet differentiated evolutionary roles for PT and AT;
5. Early onset in development as well as distinct pathways of development;
6. Specific sets of operations and mechanisms – cognitive, affective-motivational, and behavioural – that are associated with specific antecedents and consequences;
7. The capacity to prime or otherwise scaffold PT and AT modes of thought.

Some of these criteria are easier to address than others, especially since evidence is still accumulating, mainly concerning neurological, developmental and evolutionary data. Other types of information are intrinsically difficult to gather, for instance, how widespread the types of thinking referred to here actually are; in this regard, estimates can be based on the definition of PT and AT. And this brings us to the core issue of operations and mechanisms – as long as these begin to be clarified, the other types of evidence can be gathered in a more systematic manner. The remainder of this chapter will be dedicated, primarily, to uncovering these underlying processes, particularly in relation to PT, and reviewing theories and research associated with them.

Concretely, PT is discussed here in terms of four main sub-processes or pillars (see also Table 1). These refer to thinking about ‘what could be’, ‘what is to come’, ‘what could have been’ and ‘what is not or can never be’. For each, we can distinguish a main temporal focus, a core psychological phenomenon, a process of thinking (in lay terms) and a corresponding facet of creative experience (as outlined in Glăveanu & Beghetto, 2020). For example, thinking about ‘what could be’ focuses the person on the present and, specifically, on developing alternatives to it. This is the essence of pretence or our capacity to imagine reality different than it is – an exercise in ‘as-if thinking’. Finally, as a creative experience, ‘what could be’ foregrounds pluri-perspectivism by revealing the world as multiple, malleable and open to be re-imagined. ‘What is to come’ refers, as the name suggests, to thinking about the future – not what is likely to happen in the next moment, but various scenarios for the short, medium and long term. The psychological process at the heart of this is anticipation, the capacity to ask ‘what-if’ this or that came to be. Naturally, the dimension of creative experience highlighted here is future orientation. ‘What could have been’, in contrast, focuses not on the past, but on the past as it never was. This is the domain of counterfactual thinking or of conceiving alternatives for past events; metaphorically, ‘as-else thinking’ helps us relate to what was as if it were something else. Last but not least, ‘what is not’ or ‘never can be’ reveals imaginations of things that are absent or altogether impossible. It reflects utopian or ‘what-else’ thinking, in which the task is to represent the world in ways that are explicitly unrealistic, yet productive or interesting. The dominant creative experience feature is open-endedness, given the fact that what is not and cannot be is, by definition, more indeterminate than what is.

Relation to what is	Main temporal focus	Psychological phenomenon	Type of thinking	Facet of creative experience
What could be	Present	Pretence	As-if thinking	Pluri-perspectivism

What is to come	Future	Anticipation	What-if thinking	Future orientation
What could have been	Past	Counterfactuals	As-else thinking	Nonlinearity
What is not / never can be	Cross-temporal	Utopia	What-else thinking	Open-endedness

Table 1. Dimensions of possibility thinking

Possibility thinking is not a new term. In fact, it has been widely popularised in the psychology of creativity and education by Anna Craft and her collaborators. The earliest operationalisations of this notion relate it to question-posing, play, immersion, innovation, risk-taking, being imaginative and able to self-determination (Burnard, Craft, Cremin, Duffy, Hanson, Keene, Haynes & Burns, 2006). Typologies of children's questions were later proposed (Chappell, Craft, Burnard & Cremin, 2008), including a focus on both question posing and question responding, and evidence of peer collaboration in PT found (Craft, Cremin, Burnard, Dragovic & Chappell, 2012). Considerable research within this tradition focused on pedagogical strategies that can enhance PT, such as provoking possibilities, allowing time and space, being in the moment, making interventions and mentoring in partnership (Craft, Mcconnon & Matthews, 2012). As we can notice from the brief description above, some of the key elements discussed at the beginning of this paper – storytelling, playfulness and question-triggered wonder – are all found in educational studies of PT, including a strong emphasis on the social and cultural nature of child–child and child–adult interactions. However, the focus remains on childhood and education. The present chapter builds on these understandings and tries to articulate them into a broader frame.

This frame necessarily includes thinking about 'actuality' (AT). As noted from the start, possibility and actuality are not opposites: in fact, the possible builds on, connects us to and transforms our relationship with the real (Glăveanu, 2020b). At the same time, AT constitutes its own distinct mode of thought, vis a vis PT, that is marked by a focus on 'what is the case' (as compared to 'what could be'), 'what will happen next' (as compared to 'what is to come'), 'what has happened' (as compared to 'what could have been') and 'what is real' (as compared to 'what is not / never can be'). In practice, these distinctions often collapse in the enactment of thought. AT shares characteristics with Bruner's paradigmatic thinking (Bruner, 1985), Piaget's concrete thought (Piaget, 1926) and thinking about what is true (Schroyens, 2010). Which is not to say that logical thought is exclusively the domain of AT. Observing a child or adult dealing with a practical problem shows the necessary involvement of PT and AT just as being creative is based on both divergent and convergent thinking and their integration (de Vries & Lubart, 2019).

Last but not least, if PT and its complement, AT, are to be established as modes of thoughts, then their different pillars or facets should be internally consistent. Given the special focus on PT in this chapter, this means that we should have grounds to expect that pretence, anticipation, counterfactual and utopian thinking are intrinsically related to each other. The main supposition is

that thinking about what is possible, in the past, present and/or future, is what substantiates the four pillars of PT. There is indeed evidence that pretence and anticipation co-occur in play episodes (Hunleth, 2019), that there we can anticipate counterfactuals (Hetts, Boninger, Armor, Gleicher & Nathanson, 2000), that counterfactual forms of worldmaking are close to utopia (Hillgren, Light & Strange, 2020) and that anticipation meets utopian thinking (e.g., in ‘real utopias’; Wright, 2010). To understand whether the mechanisms specific for pretence, anticipation, counterfactual and utopian thinking converge on the notion of possibility we need, however, to examine them closer and analytically separate from each other, the kind of exercise we engage in next.

What could be

One of the most direct expressions of PT has to do with conceiving alternatives to the real. This enables us not only to take some (symbolic) distance from ‘what is’ (Valsiner, 2007) but also to develop a more flexible relationship to it, one in which reality itself becomes multiple and malleable. More than this, PT as a mode of thought allows us to temporarily suspend ‘what is’ in favour of ‘what could be’. This is the essential feature of pretence or the capacity to relate to aspects of reality as if they were different than they are. It is an evolved capacity that appears relatively early in human development, within pretend play (Weisberg, 2015), and continues throughout the life course whenever we use get immersed into fictional worlds (Frigg, 2010), engage in role play (Landreth, 2012) or even use irony as a way of mocking something or someone (Currie, 2006). These acts of make-believe or ‘as-if thinking’ free us from the constraints of actuality without denying or forgetting the latter. When children pretend play, they are not confused as to what objects ‘really are’ or how causality works (Harris, 2000); on the contrary, they reimagine certain natural relations while leaving other causal links intact. This is why even the freest episodes of play are themselves rule-bound, yet these rules are the product of ‘as-if’ rather than ‘as-is’ thought. AT is not displaced by PT but built upon and expanded to a wider view of the world.

An interesting attempt at explaining how exactly we widen our horizon of possibility through pretend play is found in Vygotsky’s work (see Vygotsky, 1967). He postulated that, during preschool years, in episodes of play the ‘field of vision’ is gradually placed under the control of the ‘field of meaning’. In other words, the child goes from acting on the physical properties of objects, as perceived, to acting based on interpretations of what these objects could become. In his well-known example, a stick becomes a horse and, even while visually perceived as a stick, the child is happy to ride it and experience the emotions he or she would if the stick was a real horse. Vygotsky also helpfully argued against a more Piagetian view of play in which this is a transitional stage in our development whose main purpose is to be superseded by formal intelligence (Sutton-Smith, 1966). Conceiving of possibilities and enacting them is a constant of the human intellect for as whimsical as these possibilities might be. And, in fact, there is large body of accumulated evidence when it comes to the benefits of pretence that range from its close ties with creativity (Carruthers, 2002) and the acquisition of knowledge (Sutherland & Friedman, 2012) to organisational success (Hjorth, Strati, Drakopoulou Dodd & Weik, 2018) and the success of therapeutic practices

(Schaefer & Drewes, 2011). These different contexts all testify to the power of PT to transform our experience of what is real and infuse it with alternatives, hope, and playful re-creations.

Building on Vygotskian ideas, it becomes clear that the dimension of creative experience best captured by pretence, ‘as-if thinking’ is pluri-perspectivism. Indeed, to think about what could be involves the development of new perspectives on what is (Glăveanu, 2020b). These perspectives are not merely mental schemas or simulations (Goldman, 2002), they are born out of and inform our actions with objects in a shared social and cultural world. As such, adopting more than one perspective on the world means being able to think and act in more ways than one. Pretence and, more broadly, PT expand our repertoire of action-relations to our environment and, in doing so, help us make the familiar unfamiliar and question taken-for-granted assumptions about ourselves, other people and our surroundings. This dynamic is situated primarily in the present moment, even if it engages past knowledge and can construct visions of the future. In the end, pretence shares a fundamental connection with anticipation, inasmuch as it orients us towards what is to come, with counterfactuals, given that it proposes a counterfactual reading of ‘what is’, and to utopian thinking through its power to critique reality and, sometimes, reconstruct it for us anew.

What is to come

The future is one of the most common ‘domains’ of PT, as expected. And yet, not every way of thinking about the future qualifies as possibility enhancing. As mentioned before, a focus on what is likely to happen (i.e., what will ‘realistically’ happen) anchors our thought more in AT than PT. It is primarily anticipating multiple rather than singular futures that characterises the latter. This follows, in many ways, the distinction between forecast and foresight (Van Lente, 2012), with the former usually based on quantitative estimations while the latter engaging abductive inferences. This distinction is fundamental for anticipation studies (Poli, 2017), an emerging interdisciplinary field concerned with the way in which we construct action-based imaginations of the future.

This pillar of PT corresponds, in the model proposed here, to thinking about ‘what is to come’ and, more broadly, to ‘what-if’ types of thought directed towards the future. This is an important observation given that ‘what-if’ questions can be asked also in relation to the present (connecting it to the ‘as-if’ of pretence) and the past (relating it to counterfactuals and ‘as-else’ thinking). In this case, the focus is on imagining ‘what if scenario X or Y were to happen’ and, in this way, on generating alternatives and picturing their consequences. There are certainly many benefits associated with being able to anticipate, key among them the fact that we can adapt better to complex and ever-changing environments (Krogh, 2018). Second, this process makes PT an important system for planning and decision making (Williams & Ward, 2007). More broadly, anticipation substantiates agentic and creative action (Hastrup, 2005). Last but not least, the capacity to anticipate contributes to our well-being and to psychological health (Luo, Chen, Qi, You & Huang, 2018) through building expectations about positive future events. Anticipations are not always positive or uplifting, however, and they can sometimes fill the person with dread rather than hope. But, even in those cases, it is the possibility of anticipating multiple courses of action that

matters. Being certain about what will come, positive or negative, constrains possibilities rather than extends them and, while is a kind of convergence that is beneficial for quickly deciding on a response, it doesn't allow for a reflective consideration of alternatives that is at the heart of PT.

In terms of creative experience, anticipation connects, unsurprisingly, to future orientation even though, it should be noted, it is not the only process to do so. In fact, all PT processes share an intrinsic connection to the future in the sense that they are all prospective (Seligman, Railton, Baumeister & Sripada, 2016). Pretence constructs multiple perspectives on the present that enable future action. Counterfactuals about the past are engaged in with the aim of learning something useful about what could come. Utopias have an a-temporal dimension to them, but utopian thinking is clearly aimed at envisioning unlikely futures. In this sense, anticipation is an integral part of all PT processes, one that depends considerably on AT as well. The basis of all predictions is past experience (Moulton & Kosslyn, 2009), even if anticipation doesn't use it deterministically. 'What-if' thinking operates with multiple scenarios, some of them closer and some further to what is to be expected. In this sense, to anticipate doesn't mean to think ahead as much as it does to think otherwise about what is ahead. And, when we anticipate, we also change our behaviour accordingly; as Poli (2017) notes, anticipation is about what we are ready to do, not merely think. It is the action orientation that makes PT a distributed phenomenon, embodied, enacted and extended into the world. While not all our anticipations get to materialize, they do position us towards an open future in ways that have deep consequences for how this future is brought about.

What could have been

The past orientation of PT focuses our attention on 'what could have been' or counterfactual thinking (see Roese, 1997). Counterfactuals, as the name suggests, are perspectives that go against the 'facts' or what has actually happened (e.g., imagining what life would have been like for you if you were born into a different family or a different country). While we can construct such perspectives in the present (in many ways, this is the equivalent of pretence; Kavanaugh & Harris, 1999) and sometimes about the future (Weber, 1996), the clearest ways in which we can diverge from reality is by considering what was (AT) and conceiving alternatives to it (PT).

Counterfactuals have long been a theme of study within cognitive psychology (e.g., Boninger, Gleicher & Strathman, 1994; Roese & Olson, 1995; Epstude & Roese, 2008). A lot of this research has focused on two main issues: a) the relation between counterfactuals and positive and negative affect; and b) the need to demonstrate that counterfactual thinking is, overall, beneficial. The two themes are related to each other and point to a recurrent finding in the literature: that when misfortunes come our way we tend to engage in counterfactual thinking about alternatives that, on many occasions, intensify our feelings of shame, guilt or even depression. On the other hand, there is another mechanism by which, when we avoid misfortune, we can reflect on how narrowly we escaped it and feel more fortunate, even derive important lessons for the future (e.g., how to avoid such close calls). This is, above time, considered to be the main advantage of counterfactual thinking – the possibility to learn from it. But, in a PT framework there is much more to this

phenomenon than cautionary tales. To imagine what could have been opens up, first and foremost, a space of reflection about the nature and consequences of our actions and of the actions of others. In this space, we get to play with usual chains of cause and effect, to suspend or even reverse them. We experience, thus, a degree of freedom vis a vis ‘what is’ and the usual processes of AT (while remaining anchored within reality and, for instance, the order in which the events occurred; Segura, Fernandez-Berrocal & Byrne, 2002), a kind of experience that has important consequences for our thinking and action, present and future.

Typically, in psychology, counterfactual thinking has been studied in relation to perceptions of control (Nasco & Marsh, 1999), false belief (Drayton, Turley-Ames & Guajardo, 2011), fantasy proneness (Bacon, Walsh & Martin, 2013) and even procrastination (Sirois, 2004). But, what remains to be explored further are precisely its links to our awareness of and sense of the possible. This is why, in our proposed model of PT, the dominant characteristic of creative experience captured by counterfactuals is non-linearity. By reflecting on ‘what could have been’ we not only come up with alternatives; we also trouble the linearity of time and more easily glide from past to present and future. Counterfactuals shows us that even something as ‘fixed’ in time as the past can be re-thought and ‘played’ with in cognitive and emotional terms. The key outcome of these exercises are not simply alternatives to past events – it is a sense that the actual can be reimagined even when it cannot be changed through direct action, that the past is as open to our interpretation as much as the future, that linear relations can be troubled and turned bi- or multi-directional.

I have called this pillar of PT also ‘as-else thinking’ which is a rather uncommon expression, especially when compared to ‘as-if’ and ‘what-if’ (e.g., Kane, 2015). This term tries to capture our ability, through counterfactuals, to consider past events as if they were something else, something that is brought back to the realm of possibility from that of actuality. Of course, this is not to suggest confusing ‘what might have been’ with ‘what was’ and becoming trapped in the bubble of post-truth misinformation that is rampant today, online and offline (Rochlin, 2017). Counterfactual thinking and, more broadly, PT don’t change the past, nor do they aim to. When engaging in such thought our aim is to reappropriate a large part of our experience (arguably, the largest) in ways that reveal the fundamental openness of time itself and of our being (Heidegger, 1962).

What is not and might never be

The limits of PT are set up not by the actual – given the close interplay between PT and AT, mentioned throughout this chapter – but by the impossible. And yet, the category of the impossible can and does serve to expand our understanding of the world, including the world as is. This is because ‘what is not’ is made up of a set of perspectives above and beyond those produced through pretence, anticipation and counterfactual thinking (Merchant, 2017). It is only the unthinkable that has nothing to offer any existing set of perspectives, except perhaps the idea of unthinkability itself. In this context, ‘what is not’ means ‘what cannot be’, to differentiate it from the other processes discussed above that each engage with absence in their own way: pretence brings into the situation

meanings that exist outside of it, anticipation constructs pictures of the ‘not yet’ and counterfactuals are, by definition, not reflective of reality.

The best way to capture the uniqueness of this pillar is to refer to utopias (Levitas, 1990). Made up by two Greek words, *ou* or ‘not’ and *topos* or ‘place’, utopia literally means ‘nowhere’ and it is a term popularised in the 16th century by Thomas More’s novel of the same name. The society described by More was impossible at the time of writing and it remained so, even if socialist ideologies (Ulam, 1965) claimed, in the 20th century, the imaginary of a perfect society. Utopias easily turn into dystopias, though, and this is also a big part of the lessons of the last century. Nowhere, like the impossible, stands in a dialogical relation to somewhere and to the possible.

Utopian thinking is, in this context, a phenomenon that started to attract considerable attention precisely at a time when many people and communities worldwide find it difficult to adapt to a world that is unequal, fragmented and on the verge of environmental collapse. It might sound highly idealistic, but it is precisely in this day and age that we need utopias more than ever before. In recognition of the fact that some of the grandiose realities of the past are gone, many authors started proposing scaled-down, more manageable ‘real’ (Wright, 2011) or ‘concrete’ utopias (Alier, 1992). For the purposes of our discussion, these are just as much products – and triggers – of PT as revolutionary expressions (Hermand, 1975). In fact, referring to utopias as a way of thinking expands their scope towards all those aspects of the world that can only ever live in our imagination. These are the most distant alternatives to ‘what is’, so distant that we might not realise, easily, just how impossible they really are. They are often the product of what I call here ‘what-else thinking’, a mode of thought driven by dissatisfaction with the world ‘as is’ and a desire to re-create it for the benefit of self, others, or society. What else can be thought of? How else can the world be?

Studies of utopian thinking unsurprisingly come from those domains that reveal the dire need of radical transformation: social action (Friedmann, 2000), education (Peters & Freeman-Moir, 2006), sustainability (De Geus, 2002), inequality and health (Scott-Samuel & Smith, 2015), feminism (Mellor, 1982). Few people reflect, however, on how utopias help us think about the possible – even when it is the most unlikely possible of them all – and place us in a different state of mind vis à vis ‘tame’ perspectives that prevent us from dreaming, hoping, and striving. This is also why, at the level of creative experience, I associate utopian thinking first and foremost with open-endedness, namely with the widest horizon made accessible to us by renouncing the use of ‘what is’ as a measuring stick for all possibility. Utopias have a way of enticing one ‘in’, but don’t promise to return their followers in the same state as before. Once we understand, with the help of utopian thinking and PT, that the world we live in can be fundamentally re-imagined, we get to discover possibilities for change everywhere and learn to enjoy them, regardless of their odds of success.

Concluding thoughts on thinking wide and narrow

While there is some evidence, as noted above, concerning the relation between the four pillars or dimensions of PT, there is ample scope for future research to unpack how pretence, anticipation, counterfactual and utopian thinking can be primed, fostered, and to what effect. The hypothesis

advanced based on existing studies and theories is that there is at least considerable overlap between them, an overlap referred to here as ‘possibility thinking’. More than this, an even stronger claim is that PT and, its counterpart (not polar opposite) AT, are distinct systems of thinking, that they organise much more than our creative cognition but cognition in general. These two modes can be called (metaphorically) wide and narrow in the sense that PT expands our focus from ‘what is’ in the situation to ‘what could be’, ‘what is to come’, ‘what could have been’ and/or ‘what is not / will never be’. Engaging in thought related to each one of these dimensions – and combining them, a common occurrence in everyday life, as noted from the start of this chapter – is assumed to offer us a qualitatively different experience of oneself, others and the world. Instead of zooming in on what we perceive or know, we are here invited to develop alternative perspectives that are both open-ended and multiple. It is this multiplicity and this openness that not only colour but effectively transform our experience in ways that stand in contrast to AT and its emphasis on singular, closed and focused ideas and solutions.

To take a concrete example of this experiential difference, let’s consider Jerome Bruner’s example of a conversation between the young German physicist Werner Heisenberg and his established colleague, Niels Bohr, that took place in Denmark, beside the Kronberg Castle. Bruner cites Gordon Mills who, in turn, gives an account of what Bohr told Heisenberg on this occasion:

“Isn’t it strange how this castle changes as soon as one imagines that Hamlet lived here. As scientists we believe that a castle consists only of stones, and admire the way the architect put them together. The stone, the green roof with its patina, the wood carvings in the church, constitute the whole castle. None of this should be changed by the fact that Hamlet lived here, and yet it is changed completely. Suddenly the walls and the ramparts speak a different language. The courtyard becomes an entire world, a dark corner reminds us of the darkness of the human soul, we hear Hamlet’s ‘To be or not to be.’ Yet all we really know about Hamlet is that this name appears in a thirteenth-century chronicle. No one can prove that he really lived here. But everyone knows the questions Shakespeare had him ask, the human depths he was made to reveal, and so he too had to be found a place on earth, here in Kronberg” (Bruner, 1986, p. 45).

This meditation on the ‘nature’ of a castle offers a vivid contrast between thinking about actuality – the construction as a pile of rocks put together by an architect – and thinking about possibility – about how Hamlet’s story changes our perception of the material construction and invites us to reflect on the nature of death, of history, and our relation with them. The fact that Hamlet’s presence is highly uncertain doesn’t impede the work of imagination and its transformation of the experience of walking by a Danish castle. We can still admire the actual stonework, but its sight is changed, for us, by the possible stories that make “the walls and the ramparts speak a different language”. For Bruner, this is the language or narrative; for us, here, it is that of possibility, and the two have a great deal in common (Glăveanu, 2020b).

By referring to these modes as ‘wide’ and ‘narrow’ I don’t intend to imply that one is superior or more desirable than the other. In fact, narrow thinking (AT) is what often gets us through the day, safe and sound, able to solve practical problems efficiently by considering their nature and facts. Conversely, wide thinking (PT) can easily get us into trouble in the sense of constructing too many alternatives that render us unable to act or simply have us ignore real constraints with either devastating or comical effects. We can be reminded here about the story of Thales of Miletus who, gazing at the night’s sky, full of stars, fell into a hole right in front of him and was made fun of by his companion, a Thracian woman (Blumenberg, 2015). Presumably, the philosopher was caught up in wonder, a state of mind specific for wide thought, and became oblivious to the actual danger on the ground. These anecdotes might be amusing but they also hold the risk of dichotomising too sharply the two thinking systems. To solve even the most practical problems, one needs attention to facts and detail, as well as the possibility to imagine alternatives, some of them far off from the situation at hand. So, in practice, we mostly experience blended, ‘narrow-wide’ or ‘wide-narrow’ thinking, depending on the slight dominance of one over the other. In the end, Thales might have missed a particular hole, allegedly, but he wasn’t unaware of his surroundings – in fact, he was focusing his attention on a part of them, in the sky.

There has been a lot written in cognitive science about the difference between System 1, fast and easy, and System 2 thinking, requiring more cognitive effort (Evans, 2003), automatic and controlled thinking (Bargh, 1989) or thinking fast and slow (Kahneman, 2011). While there are some differences among dual processing models of cognition, the core of these distinctions has to do with how fast, effortless and essentially biased thinking is when interpreting the world or solving problems. Just like in the case of PT and AT, or wide and narrow thinking, there is no superior mode of thought and it is widely recognised that automatic and controlled processes are both meant to adapt us to our environment and its various circumstances (e.g., those moments when we have to decide quickly versus moments when we are asked to deliberate). It might be tempting to map fast into narrow and slow into wide thinking but, as shown here, there are different organising dimensions of our cognition. AT and PT can be both either fast or slow, effortless or effortful. Consider, for example, the difference between a daydream and writing a long essay on alien life – both of these involve PT (and, to some extent, AT) but the experience will be different. This holds even more when reflecting on the production of a work of art. Within a creative process, instances of fast narrow thinking and slow narrow thinking will be intertwined with fast wide thinking and slow wide thinking. Future empirical research could focus precisely on these intersections and what they tell us about the mind in its relationship to the body, to others, and to the world.

And this is a last point I would like to return to. As mentioned before, what I wanted to advance here was a ‘cultural creative cognition’ approach to the notion of possibility thinking. And yet, not much has been said about CCC itself. What grants it the (extra) qualifier of ‘cultural’ is the fact that it considers creative processes and creative experience as expanded into the environment through physical, social and symbolic means. In other words, it studies creative thinking as embodied, material and cultural cognition rather than intra-cranial and de-contextualised. This general approach leaves an important mark on how we understand PT and AT as thought systems.

Unlike the assumptions of universality that often accompany dual information processing models (a critique Bruner, one of the architects of the so-called cognitive revolution, championed later on), possibility and actuality thinking are modes of thoughts that are rooted in the physical and social embeddedness of our existence. Without physical tools, social relations and cultural resources, including language and meanings, there would be no pretence, anticipation, counterfactual or utopian thinking or, at least, not as we know them. Actuality thinking would be equally impaired, given its closeness to ‘what is’ the case in a given socio-material environment. In sum, creative cognition is not the privileged realm of possibility thinking, but of a close interplay between possibility and actuality. This, if nothing else, is the key lesson of the cultural approach to what it means to think, to create, and to live as a human being in a world of, with and for others.

References

- Alier, J. M. (1992). Ecological economics and concrete utopias. *Utopian Studies*, 3(1), 39-52.
- Andrews, M. (2014). *Narrative imagination and everyday life*. Oxford: Oxford University Press.
- Bacon, A. M., Walsh, C. R., & Martin, L. (2013). Fantasy proneness and counterfactual thinking. *Personality and Individual Differences*, 54(4), 469-473.
- Bargh, J.A. (1989). Conditional automaticity: varieties of automatic influence in social perception and cognition. In J. S. Uleman & J. A. Bargh (eds.), *Unintended thought* (pp. 3-51). New York, NY: Guilford Press.
- Beghetto, R. A. (2017). Inviting uncertainty into the classroom. *Educational Leadership*, 75(2), 20-25.
- Blumenberg, H. (2015). *The laughter of the Thracian woman: A protohistory of theory*. New York, NY: Bloomsbury Publishing.
- Bodrova, E., & Leong, D. J. (2015). Standing “a head taller than himself”: Vygotskian and post-Vygotskian views on children’s play. In J. E. Johnson, S. G. Eberle, T. S. Henricks, & D. Kuschner (Eds.), *The handbook of the study of play*, Vol. 2 (pp. 203–214). Lanham, MD: Rowman & Littlefield.
- Boninger, D. S., Gleicher, F., & Strathman, A. (1994). Counterfactual thinking: From what might have been to what may be. *Journal of Personality and Social Psychology*, 67(2), 297-307.
- Brockmeier, J. (2009). Reaching for meaning: Human agency and the narrative imagination. *Theory & Psychology*, 19(2), 213-233.
- Bruner, J. (1985). *Actual Minds, Possible Worlds*. Cambridge, MA: Harvard University Press.
- Burnard, P., Craft, A., Cremin, T., Duffy, B., Hanson, R., Keene, J., Haynes, L., & Burns, D. (2006). Documenting ‘possibility thinking’: A journey of collaborative enquiry. *International Journal of Early Years Education*, 143, 243–262.
- Carruthers, P. (2002). Human creativity: Its cognitive basis, its evolution, and its connections with childhood pretence. *The British Journal for the Philosophy of Science*, 53(2), 225-249.
- Chappell, K., Craft, A., Burnard, P., & Cremin, T. (2008). Question-posing and question-responding: The heart of possibility thinking in the early years. *Early Years*, 283, 267–286.

- Craft, A. (2003). Creative thinking in the early years of education. *Early Years*, 23(2), 143-154.
- Craft, A., McConnon, L., & Matthews, A. (2012). Child-initiated play and professional creativity: Enabling four-year-olds' possibility thinking. *Thinking Skills and Creativity*, 7(1), 48-61.
- Craft, A., Cremin, T., Burnard, P., & Chappell, K. (2008). Possibility thinking with children in England aged 3-7. In A. Craft, T. Cremin & P. Burnard (eds.), *Creative learning 3-11 and how we document it* (pp. 65-73). Stoke on Trent: Trentham Books.
- Craft, A., Cremin, T., Burnard, P., Dragovic, T., & Chappell, K. (2012). Possibility thinking: Culminative studies of an evidence-based concept driving creativity? *International Journal of Primary Education* 3-13, 41(5), 538-556.
- Cropley, A. (2006). In praise of convergent thinking. *Creativity Research Journal*, 18(3), 391-404.
- Currie, G. (2006). Why irony is pretence. In S. Nichols (ed.) *The Architecture of the Imagination* (pp. 111-33). Oxford: Oxford University Press.
- de Vries, H. B., & Lubart, T. I. (2019). Scientific creativity: divergent and convergent thinking and the impact of culture. *The Journal of Creative Behavior*, 53(2), 145-155.
- De Geus, M. (2002). Ecotopia, sustainability, and vision. *Organization & Environment*, 15(2), 187-201.
- Dewey, J. (1934). *Art as experience*. New York, NY: Perigree.
- Drayton, S., Turley-Ames, K. J., & Guajardo, N. R. (2011). Counterfactual thinking and false belief: The role of executive function. *Journal of Experimental Child Psychology*, 108(3), 532-548.
- Epstude, K., & Roese, N. J. (2008). The functional theory of counterfactual thinking. *Personality and Social Psychology Review*, 12(2), 168-192.
- Evans, J. S. B. (2003). In two minds: dual-process accounts of reasoning. *Trends in Cognitive Sciences*, 7(10), 454-459.
- Finke, R. A., Ward, T. B., & Smith, S. M. (1992). *Creative cognition: Theory, research, and applications*. Cambridge, MA: MIT Press.
- Friedmann, J. (2000). The good city: In defense of utopian thinking. *International Journal of Urban and Regional Research*, 24(2), 460-472.
- Frigg, R. (2010). Models and fiction. *Synthese*, 172(2), 251-268.
- Gillespie, A. (2006). Games and the development of perspective taking. *Human Development*, 49(2), 87-92.
- Glăveanu, V. P. (2014). *Thinking through creativity and culture: An integrated model*. New Jersey, NJ: Transaction Publishers.
- Glăveanu, V. P. (Ed.) (2016). *The Palgrave Handbook of Creativity and Culture Research*. London: Palgrave.
- Glăveanu, V. P. (2020a). *Wonder: The extraordinary power of an ordinary experience*. London: Bloomsbury Press.
- Glăveanu, V. P. (2020b). *The possible: A sociocultural theory*. New York, NY: Oxford University Press.

- Glăveanu, V. P., & Beghetto, R. A. (2020). Creative experience: A non-standard definition of creativity. *Creativity Research Journal*, early view.
- Goldman, A. I. (2002). Simulation theory and mental concepts. In J. Dokic & J. Proust, J. (Eds.), *Simulation and knowledge of action* (pp. 1–19). Amsterdam: John Benjamins Publishing Company, Amsterdam.
- Hardy, B. (1975) *Tellers and Listeners: The Narrative Imagination*. London: University of London/Athlone Press.
- Harris, P. L., (2000). *The work of the imagination*. Oxford: Blackwell.
- Hastrup, K. (2005). Performing the world: Agency, anticipation and creativity. *Cambridge Anthropology*, 25(2), 5–19.
- Heidegger, M. (1962). *Being and time*. New York, NY: Harper.
- Hermans, J. (1975). The necessity of utopian thinking. *Soundings*, 58, 97-111.
- Hetts, J. J., Boninger, D. S., Armor, D. A., Gleicher, F., & Nathanson, A. (2000). The influence of anticipated counterfactual regret on behavior. *Psychology & Marketing*, 17(4), 345-368.
- Hillgren, P. A., Light, A., & Strange, M. (2020). Future public policy and its knowledge base: shaping worldviews through counterfactual world-making. *Policy Design and Practice*, 3(2), 109-122.
- Hjorth, D., Strati, A., Drakopoulou Dodd, S., & Weik, E. (2018). Organisational creativity, play and entrepreneurship. *Organization Studies*, 39(2-3), 155-168.
- Hunleth, J. (2019). Zambian children's imaginal caring: On fantasy, play, and anticipation in an epidemic. *Cultural Anthropology*, 34(2), 155–86.
- Kahneman, D. (2011). *Thinking, fast and slow*. London: Macmillan.
- Kane, E. (2015). 'What If? As If', an approach to action research practice: Becoming-different in school-age childcare. *Educational Action Research*, 23(3), 350-365.
- Kavanaugh R. D., & Harris, P. L. (1999). Pretense and counterfactual thought in young children. In L. Balter & C. S. Tamis-LeMonda (eds.) *Child psychology: A handbook of contemporary issues* (pp. 158–176). Philadelphia, PA: Psychology Press.
- Krogh, S. (2018). Anticipation of organizational change. *Journal of Organizational Change Management*, 31(6), 1271-1282.
- Landreth, G. L. (2012). *Play therapy: The art of the relationship*. London: Routledge.
- Levitas, R. (1990), *The concept of utopia*. Syracuse, NY: Syracuse University Press.
- Luo, Y., Chen, X., Qi, S., You, X., & Huang, X. (2018). Well-being and anticipation for future positive events: Evidences from an fMRI study. *Frontiers in Psychology*, 8, 2199.
- Mellor, A. K. (1982). On feminist utopias. *Women's Studies: An Interdisciplinary Journal*, 9(3), 241-262.
- Merchant, B. (2017). What we are called to do 'when the unthinkable becomes the thinkable and the impossible really happens'. *International Journal of Qualitative Studies in Education*, 30(10), 1027-1035.

- Moulton, S. T., & Kosslyn, S. M. (2009). Imagining predictions: mental imagery as mental emulation. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1521), 1273-1280.
- Nagel, T. (1989). *The view from nowhere*. Oxford: Oxford University Press.
- Nasco, S. A., & Marsh, K. L. (1999). Gaining control through counterfactual thinking. *Personality and Social Psychology Bulletin*, 25(5), 557-569.
- Peters, M. A., & Freeman-Moir, D. J. (Eds.). (2006). *Edutopias: New utopian thinking in education*. London: Sense Publishers.
- Piaget, J. (1926). *Language and thought of the child*. London: Kegan Paul, Trench, & Trubner.
- Plato (1973 / ca. 369 B.C.). *Theaetetus*. McDowell, J. (trans.). Oxford: Clarendon Press.
- Poli, R. (2017). *Introduction to anticipation studies*. Cham: Springer.
- Rochlin, N. (2017). Fake news: belief in post-truth. *Library Hi Tech*, 35, 386–392.
- Roese, N. J. (1997). Counterfactual thinking. *Psychological Bulletin*, 121(1), 133–148.
- Roese, N. J., & Olson, J. M. (Eds.). (1995). *What might have been: The social psychology of counterfactual thinking*. Mahwah, NJ: Erlbaum.
- Scott-Samuel, A., & Smith, K. E. (2015). Fantasy paradigms of health inequalities: Utopian thinking? *Social Theory & Health*, 13(3), 418-436.
- Segura, S., Fernandez-Berrocal, P., & Byrne, R. M. (2002). Temporal and causal order effects in thinking about what might have been. *The Quarterly Journal of Experimental Psychology Section A*, 55(4), 1295-1305.
- Seligman, M. E., Railton, P., Baumeister, R. F., & Sripada, C. (2016). *Homo prospectus*. New York, NY: Oxford University Press.
- Singer, J. L. (2014). *Daydreaming and fantasy*. London: Routledge.
- Sirois, F. M. (2004). Procrastination and counterfactual thinking: Avoiding what might have been. *British Journal of Social Psychology*, 43(2), 269-286.
- Schaefer, C. E., & Drewes, A. A. (2011). The therapeutic powers of play and play therapy. In C. E. Schaefer (Ed.), *Foundations of play therapy*, 2nd ed. (pp. 15–25). Hoboken, NJ: Wiley.
- Schroyens, W. (2010). A meta-analytic review of thinking about what is true, possible, and irrelevant in reasoning from or reasoning about conditional propositions. *European Journal of Cognitive Psychology*, 22(6), 897-921.
- Sutherland, S. L., & Friedman, O. (2012). Preschoolers acquire general knowledge by sharing in pretense. *Child Development*, 83(3), 1064-1071.
- Sutton-Smith, B. (1966). Piaget on play: A critique. *Psychological Review*, 73, 104–110.
- Ulam, A. (1965). Socialism and utopia. *Daedalus*, 103, 382-400.
- Valsiner, J. (2007). *Culture in minds and societies: Foundations of cultural psychology*. New Dehli: Sage.
- Van Lente, H. (2012). Navigating foresight in a sea of expectations: Lessons from the sociology of expectations. *Technology Analysis & Strategic Management*, 24(8), 769-782.
- Vygotsky, L. S. (1967). Play and its role in the mental development of the child. *Soviet Psychology*, 5(3), 6-18.

- Vygotsky, L. (1978). *Mind in society*. Cambridge, MA: Cambridge University Press.
- Vygotsky, L. S. (2004). Imagination and creativity in childhood. *Journal of Russian & East European Psychology*, 42(1), 7-97.
- Ward, T. B., Smith, S. M., & Finke, R. A. (1999). Creative cognition. In R. J. Sternberg (Ed.), *Handbook of Creativity* (pp. 189–212). Cambridge: Cambridge University Press.
- Weber, S. (1996). Counterfactuals, past and future. In P.E. Tetlock & A. Belkin (eds.), *Counterfactual thought experiments in world politics* (pp. 269-288). Princeton, NJ: Princeton University Press.
- Weisberg, D. S. (2015). Pretend play. *Wiley Interdisciplinary Reviews: Cognitive Science*, 6, 249–261.
- Williams, A.M., & Ward, P. (2007). Anticipation and decision making: Exploring new horizons. In G. Tenenbaum & R. Eklund (Eds.), *Handbook of Sport Psychology*, 3rd ed. (pp. 203–223). Hoboken, NJ: John Wiley.
- Wright, E. O. (2010). *Envisioning real utopias*. London: Verso.
- Wright, E. O. (2011). Real utopias. *Contexts*, 10(2), 36-42.