SPRINGER BRIEFS IN PSYCHOLOGY

Vlad Petre Glăveanu

Distributed Creativity

Thinking Outside the Box of the Creative Individual

Springer

SpringerBriefs in Psychology

For further volumes:
http://www.springer.com/series/10143

Vlad Petre Glăveanu

Distributed Creativity

Thinking Outside the Box of the Creative Individual

Springer

Vlad Petre Glăveanu
Department of Communication
and Psychology
Aalborg University
Aalborg
Denmark

ISSN 2192-8363 ISSN 2192-8371 (electronic)
ISBN 978-3-319-05433-9 ISBN 978-3-319-05434-6 (eBook)
DOI 10.1007/978-3-319-05434-6
Springer Cham Heidelberg New York Dordrecht London

Library of Congress Control Number: 2014934303

Printed on acid-free paper

Springer is part of Springer Science+Business Media (www.springer.com)

Contents

Chapter 1
Distributed Creativity: What Is It?

There are many ways to start a book. There are even more ways to start a creativity book one would believe, or indeed expect. For example, I could start with a definition, saying that most often when we think about creativity we refer to people or products who can either produce or who reflect, respectively, some key attributes such as novelty, originality, and value. Or I could open, like many other books do, with praising creativity and creators and arguing that the world we live in today would be unimaginable without them. This book however will follow a different path.

The path I want to follow traces creativity as a phenomenon not back to a creative person or a product, for as acclaimed, visible or important as they might be. Instead of an individual, an object or a place in which to 'locate' creativity my aim here is to distribute it *between* people, objects and places. And, in doing so, to find it in somewhat unexpected activities, such as the old custom of decorating eggs for Easter in Romanian rural communities from the north of the country and in the work, for example, of decorators like Maria Zinici, whom I met in 2009 at an Easter fair held at the Museum of the Romanian Peasant in Bucharest. Coming from a family that has been practicing this craft for generations and having children and grandchildren who continue the tradition, Maria is one of the many artisans who are known for their craftsmanship and the way she combines traditional patterns and motifs with innovations in design and technique. The creativity of her work and that of other egg decorators does not reside in spectacular outcomes that revolutionise our way of understanding the world. It is rather part of the constant making and remaking of culture we see all around us in everyday conversations, in the interaction between people, including in habitual and established practices which are said to 'keep', not 'replace' the cultural stock.

Moreover, it is not the creativity of one individual but the creative action of *many*, young and old, working together or apart, at different times and in different settings, all immersed within a physical and symbolic environment that affords but also constrains their expression. This is, in fact, the creativity that concerns me here, creativity as it takes place in everyday life and real contexts, the creativity of the 'ordinary'. And this is not to say that I will ignore highly celebrated creations or creators; on the contrary, there is no opposition between the 'ordinary' and the

V. P. Glăveanu, *Distributed Creativity*, SpringerBriefs in Psychology,
DOI: 10.1007/978-3-319-05434-6_1,

'extra-ordinary' from the perspective developed in the following pages. They are brought together by a key characteristic: creative action is *distributed between multiple actors, creations, places and times*. In this sense, Maria and her fellow decorators' activity has an important lesson to teach us—it renders visible the network of people, actions and relations that make creativity possible and that might be obscured when we focus exclusively on the 'high-end' of this phenomenon.

While I will frequently draw examples from the craft of egg decoration and art in general this is not a book about Easter eggs. Neither is it a book about the creativity of particular individuals, products or cultural contexts. What I would like to propose is a new way of thinking that precisely starts not with attributing creativity to person or culture, but distributes it in the relational space between them.

1.1 Creativity Outside Its Box

For most people the essence of creativity has to do with crossing boundaries and 'thinking outside the box'. This catchphrase is so popular in fact that it risks becoming void of all meaning since what people think is 'inside' and 'outside' the box varies greatly. For some this 'box' is made up of rigid ways of thinking and acting as well as unbending social conventions. In the context of this book however, the box will take up a completely new meaning, perhaps surprising, and become the conventional way of theorising and studying creativity. Indeed, our thinking about creativity, both in science and everyday life, establishes boundaries around what and who is or can be creative. Such 'boxing' is highly consequential and reflected in our interest for certain creative domains or activities (while denying creativity to others) as well as the time and space we allocate to creative action (effectively assigning it to 'special' contexts or moments such as brainstorming sessions or the art class).

One of the most pervasive separations creativity researchers tend to make is between the person of the creator—or, in more 'radical' versions, his/her mind, even brain—and the social and material world of culture the creator is not only surrounded by but actually immersed in. If creativity is all about getting new ideas and ideas emerge in individual minds then this must be the primary locus of creative production. This view however ends in paradox considering the fact that creative people are actually expected to make a contribution precisely to the world they are separated from. The old myth of creation *ex nihilo* or out of thin air still plagues our understanding of what it means to create as an individual detached from culture and society. In this context, distributing creativity represents, metaphorically, the action of opening up the 'box' of the individual mind not to examine it further (and then close it and put it back in its place, inside the head), but to do away with the 'box' altogether. If creativity is a *distributed, dynamic, socio-cultural and developmental phenomenon*, as argued in this book, then it makes no sense to discuss it in terms of fixed borders and static domains.

The roots of the harmful dichotomy between person and context in the psychology of creativity (a dichotomy psychology as a whole is familiar with) can be found in a basic distinction made between achievement in recognised fields such as the arts and sciences and what is considered the mundane, everyday existence of people. Let us take the example of art. In the words of Bourdieu (1993, p. 236), "everything combines to indicate that the world of art is as contrary to the world of everyday life as the sacred is to the profane". John Dewey lamented this tendency of isolating the art product from "the human conditions under which it was brought into being and from the human consequences it engenders in actual life-experience" (Dewey 1934, p. 1) as a way of disconnecting art and life and, we might say here, creativity and everyday action. The 'box' constructed around creativity has strong walls that are not merely symbolic but also material, enclosing creative production in the space of the museum, the research lab, the music conservatory, etc. Much of what it means to create is left out of this perimeter and, in fact, the very nature of the creativity going on 'inside' it is much more widely distributed than initially thought. To ignore this means not only to build narrow theories and research designs but miss precisely the creative work that is "essential to ensure the daily production and reproduction of human existence" (Willis 1990, p. 9).

Animated by a wish to recover a broader meaning of creativity, I engaged as part of my doctoral studies in an ample study of a rather 'exotic' domain for the psychology of creativity—*folk art*. With its overtones of rural life, community, simplicity, tradition and authenticity (Fine 2004, p. 29), this area typically falls outside the 'box' of creativity studies. First of all, a sharp distinction tends to be made between high or fine art and folk art or craft. Unlike the artist, for Collingwood (1938) "the craftsman knows what he wants to make before he makes it" (pp. 15–16) thus reducing the spontaneity and originality that is the core of 'pure' art. In essence, crafts are based on skill but art requires something more, something that is "due to [the artist's] creative abilities and gifts, that give each object or performance a unique and expressive character" (Becker 2008, p. 272). This conception has been challenged for a long time, including by Vygotsky (1971) whose dissertation on art unpacked the multiple similarities between artistic and popular poetry. For Vygotsky, both recognised poets and anonymous folk artists are drawing from a shared cultural background and contribute to it. In the 'Craftsman', Sennett (2008, p. 9) concludes that, far from automatic action, folk artists develop a dialogue in their work between hand and head, between problem solving and problem finding. As for the accusation of predetermination, Pye (1968, p. 52) demonstrated the fact that, unlike mechanical reproduction, the activity of a craftsman has all the elements of a workmanship of risk.

Research on craft is particularly interesting for the theory of distributed creation since the 'box' of creativity in craft cannot possibly be reduced to the individual creator's mind but necessarily includes affect, objects and tactility (Vachhani 2013), as well as a long historical trajectory that engages entire communities. My chosen folk art, *eggdecoration* in Romania, is a long-lasting tradition commonly associated with the Easter period (Marian 1992). Very popular in the country, this

craft is practiced today mainly in rural areas by families which typically sell the outcomes of their work (Hutt 2005). Specific for Romania are eggs coloured in white, red, yellow (Gorovei 2001) and ornamented with stylised and geometric figures (Zahacincshi and Zahacinschi 1992). When I began my research in 2008, I had very few notions regarding how craftsmen decorate since there is a considerable difference between colouring Easter eggs and embellishing them with traditional motifs. Following a brief period of fieldwork at the Museum of the Romanian Peasant, in Bucharest, I left for the village of Ciocăneşti in the northern part of the country, 'close to the border to Ukraine'. This community is individualised by its distinctive style of decoration, black as a background colour, as well as the fact that its inhabitants are immersed into an environment made up of traditional shapes and symbols drawn not only on eggs but also represented on houses—a unique feature that makes this village one of the few 'open air museums' in Romania.

Unlike psychologists, who are more likely to look for creativity in the art 'box', ethnographers have been observing for a long time creative expression in egg decoration, "a special technique of great virtuosity, comparable, according to some researchers, with that of old miniaturists, or those that handle the brush or the chisel" (Zahacincshi and Zahacinschi 1992, p. 22). And yet, in the interviews I conducted with folk artists in Bucharest and Ciocăneşti, the identity of being a creator was always placed in the context of keeping *tradition* and adding something (however small) to it. "Tradition remains. It is not possible to come and add anything to a carpet on the wall (…) and say that it is from your grandmother" (Valerica Juşcă). Artisans refer to decoration as 'turning the eggs', modifying patterns or renewing models rather than creating something completely novel or eccentric. Nonetheless, they do take pride in their work, especially in the fact that it results in "beautiful things made with your own hands" (Ionela Ţăran). As in any domain of creativity, tradition and innovation represent two faces of the same coin since, as one of the folk artists rightfully said: "I believe we also create, no? If we didn't, tradition would be lost. And if we didn't continue the tradition, how would that be?" (Larisa Ujică).

What my research on this particular craft revealed (see Glăveanu 2010a, 2013) is in fact the numerous ways in which creativity is part and parcel of decoration, from combining existing shapes to adapting them to new contexts and creating a personal style, easily recognisable by the self and others. One of the main goals of artisans is to generate beautiful objects (a feature that brings folk closer to fine art, Becker 2008). Interestingly, there is not only the practical impossibility of creating two eggs that are absolutely identical, but this would be a very daunting task: "when I work in a series I make two [eggs] but I cannot make more than two [similar eggs] because I get bored and then I cannot continue" (Maria Ciocan). There is a great consensus that, even when trying to copy the same model, no two eggs are alike. This makes accusations of 'stealing' patterns form other decorators absurd as "every [decorator] leaves her own mark" (Valerica Juşcă), the mark of a unique style or 'hand' as it is often called.

In the end, the work of decoration brings *eye and hand* together, as Sennett (2008) claimed, since traditional decoration never takes place exclusively in the mind but requires a wide array of tools (including eggs, colour pigments, drawing instruments, wax, heat source, etc.) and a succession of actions (typically alternating between drawing motifs in wax and immersing the egg in colour). But more than this, it also reunites the individual creator with the eyes and hands of others who taught him or her how to decorate, who help the artisan continue the activity, who appreciate and ultimately buy the products of this work. To understand craft, both 'space' and 'time' need to be also taken into account. Styles of decoration differ geographically, sometimes even within the same region, from one village to the next. The craft is also part of a historical trajectory specific for the life of rural communities and national folklore. Inquiring into the sociality, materiality and temporality of creative work is impossible when we place it in the 'box' of the mind. This book develops a distributed model of creativity that challenges this restrictive view and builds on examples from domains such as folk art.

1.2 Locating Distributed Creativity

The aim of elaborating a theoretical model of creativity comes at a time when this phenomenon is rightfully considered "an important element of the zeitgeist in the early twenty-first century, world-wide" (Craft 2005, p. ix). This observation applies on a global scale, despite obvious differences in how creativity is understood (and referred to or named) in different cultures or societies. Weiner (2000, p. 98) said that "making the *new* is our culture's agenda" and, indeed, Western traditions are built on the assumption of uniqueness and individual freedom. Against this common background, it is in Western Europe in the middle of the nineteenth century that creativity acquired its modern value (Mason 2003, p. vi). Psychologists soon followed the general enthusiasm for the individual's power to create and shape his/her environment; however, it was mainly in the second half of the last century that creativity became for them "an activity to be studied, cherished, cultivated" (Arieti 1976, p ix). Today, the literature in this area is filled with assumptions regarding the benefits of creative expression for problem solving, adaptability, and health (Runco 2004).

Of course the contemporary obsession with creativity has its own dark side. For instance, it can pressure people to act creatively (Weiner 2000), particularly in domains such as the arts, despite the fact that artists themselves are also expected to develop and stabilise a recognisable style. The same mixed messages are entering the space of schools and organisations (i.e., teachers might want creative students but don't know exactly how to handle them; Karwowski 2010). Moreover, in an age when the word creativity becomes commonplace, the greatest risk is that of *conceptual overspread*. While it is hard today to avoid the term creativity (Negus and Pickering 2004, p. vi), most of us would be hard-pressed to define it (and specialists make no exception; see Amabile 1996). One of "the most

overused and ultimately debased words in the [English] language" (Tusa 2003, p. 6), it is not so much the term itself that is meaningless but its thoughtless repetition (Williams 1961).

In fact, psychologists had and still have to some extent difficulties in pinning down what is meant by creativity. A key author in this area, and the developer of one of the most often used creativity measures, Ellis Paul Torrance, wrote that:

> Creativity defies precise definition. This conclusion does not bother me at all. In fact, I am quite happy with it. Creativity is almost infinite. It involves every sense—sight, smell, hearing, feeling, taste, and even perhaps the extrasensory. Much of it is unseen, nonverbal, and unconscious. Therefore, even if we had a precise conception of creativity, I am certain we would have difficulty putting it into words (Torrance 1988, p. 43).

And yet a precise definition was what psychologists were after in order to develop the scientific study of creativity. Despite an initial focus on the person of the creator, nowadays most definitions take "the *creative product* as the distinguishing sign of creativity" (Amabile 1996, p. 21) and promote the idea that creative outcomes are described by both novelty /originality and value /appropriateness of the solution (Stein 1953; Weisberg 1993). Focusing on the product rather than creativity inside the person solved several methodological dilemmas among which is the important limitation of not being able to observe directly the psychological aspects of individual creativity. However, this emphasis does not mean that the product (an object external to the creator) occupies itself the 'box' of creativity. In fact, when psychologists examine products and assess their features, they aim to say something about the person and his/her inner processes, traits, or cognitive mechanisms. Furthermore, a methodological concern for finished products is problematic as it ends up excluding a lot of creative action that is not product-based, such as improvised performances (see Sawyer 1995).

Despite these shortcomings, the psychology of creativity has known an accelerated *expansion* in recent decades. If in 1999 Sternberg and Lubart found this topic still marginal in psychology considering the volume of work and institutional indicators (see Sternberg and Lubart 1999, pp. 3–4), Hennessey and Amabile (2010) presented a different picture in their state of the art for the Annual Review of Psychology a decade later. They noted the fact that a series of new journals dedicated to this subject emerged in the past years and considered "the prospect of reviewing the creativity literature [under these conditions] both daunting and exciting" (Hennessey and Amabile 2010, p. 570). Moreover, the area of creativity studies needs to be considered also outside of psychology and it is certainly a fact that more and more professionals from various applied domains are attracted by this research area. Academics, policy-makers and arts educators, for example, all focus on different contexts for creativity, come from different traditions of research and hold different policy interests (Banaji et al. 2006).

This multiplicity of voices is certainly to be celebrated but we should also consider how each one of them constructs the meaning of creativity and guides its practice. For example, in psychology alone a variety of understandings can be distinguished, such as creativity as achievement, as ability or as disposition or even

attitude (Barron and Harrington 1981, p. 441). Under these circumstances, repeated calls for theoretical integration are being formulated (see, for instance, Mumford 2003) but this is a hard task to accomplish when researchers endorse different epistemological positions (e.g., realist /naturalist versus constructionist), use various methodologies (e.g., psychometric tests, experiments, case studies, interviews, observation, etc.) and, most of all, ask different questions, many of them aimed at a middle-level of theoretisation (Karwowski 2012). If there are some unifying features for the psychology of creativity that cut across the whole domain they unfortunately group around the more or less implicit belief that *it is the individual mind doing the creating*. Falling prey to what Kasof (1995) rightfully called a dispositional attribution error, most creativity scholars look towards 'internal' or psychological aspects in order to discover the essence of what it means to create, traditionally inside "the souls, genes, brains, personalities, values, cognitive styles, and special abilities of 'creative people' and 'geniuses'" (Kasof 1995, p. 311).

Associated with this reductionist and individualistic perspective is another harmful misconception regarding the relation between individual and society. Portrayed in static and mechanistic terms, society becomes a gigantic and oppressive machinery that individuals (separate and self-contained systems) can connect to and disconnect from at will (Slater 1991, p. 154). Creative individuals, if they wish precisely to be or remain creative, need to avoid the crushing force of conformity and fight the societal system in order to become what they are destined to be: mavericks, iconoclasts, or 'lonely cowboys' (Weiner 2000, p. 138). The present book has the aim of dispelling such myths and (mis)understandings and highlights the fact that, on the contrary, creative expression is possible *only* from within a society and a culture. While for decades "the empirical study of this phenomenon has generally failed to include a consideration of anyone or anything beyond the individual doing the creating" (Hennessey 2003, p. 254), much has been accomplished in recent years in terms of systemic models of what it means to create as a social and cultural being.

This shift from "person-centered to social dynamic conceptions" (John-Steiner 1992, p. 99) is part of a larger historical trajectory that I described elsewhere (see Glăveanu 2010b, c) and will only be briefly summarised here for the purpose of locating the theory of distributed creativity. What I referred to are three distinct and yet inter-connected *paradigms* that are shaping the field of creativity research in psychology and beyond. The first one is the He-paradigm or the paradigm of the genius, the exceptional creator. The 'he' is used in this context to reflect both the alterity of the genius (since this is a rare case, specific for only a handful of chosen individuals) and the fact that, historically, male creativity was the (ideological) norm. With seeds in Antiquity, our conception of the genius has been greatly shaped by the Renaissance period, when creativity became a matter of genetic inheritance (Banaji et al. 2006; Dacey 1999), and the subsequent exaltation of the arts during Romanticism and the sciences during Enlightenment (Weiner 2000; Liep 2001). Feared and revered at the same time, geniuses bear the mark of individuality, insight, outstanding ability and enormous productivity (Mason 2003,

p. 111). However, accounting for their performance in purely individualistic, bio-psychological terms, can lead to elitist and essentialist descriptions (Negus and Pickering 2004, p. 115) and ultimately pathologise the creator by breaking his/her ties to society (Montuori and Purser 1995).

Psychology contributed to demystifying the genius while retaining a more or less explicit individualism in its theories of creativity. In the APA address that is credited to have founded the field, Guilford clearly stated that "the psychologist's problem is that of creative personality" (Guilford 1950, p. 444). What he meant by personality was closer in fact to abilities than personal traits and to a cognitive perspective that considers processes and styles of thinking. Following his model of the human intellect, Guilford also helped to establish a pervasive link between creative expression and divergent thinking, a connection that underpins most creativity measures to this day. The I-paradigm advanced the useful idea that everyone has at least the potential of being creative (Weiner 2000) and helped us place the 'where' of creativity from science and art to virtually 'everywhere' (Liep 2001, p. 5; Montuori 2010). However, this 'democratisation' (Bilton 2007, p. xiii) was not accompanied by a proper 'socialisation' of the phenomenon and this limitation is clearly reflected within personality and cognition approaches to creativity which have been flourishing in psychology since the 1950s onwards.

Neither the He nor the I-paradigm can fully incorporate or promote a framework of distributed creativity. Another fundamental change of perspective was required and arose, from the 1980s on, one "away from univariate, positivistic research paradigms to more complex, constructivistic, systems-oriented research models" (Friedman and Rogers 1998, p. xviii). The We-paradigm is based on the general idea that "creativity takes place within, is constituted and influenced by, and has consequences for, a social context" (Westwood and Low 2003, p. 236). The work of scholars such as Csikszentmihalyi, Gardner, Gruber, Simonton and Amabile opened the field to social and systemic perspectives and started problematising the exclusive focus on the individual. However, these initial conceptions suffer from their own shortcomings. To take only the example of Amabile's 'social psychology of creativity' (Amabile 1996), its main focus is on how external, social variables, impact internal creativity-enhancing processes, primarily intrinsic motivation. Such a strict separation and view of the social as mainly a conditioning factor fails to account for the *interdependence* between person and context. It is only with the development of cultural perspectives in the psychology of creativity, promoted by Vera John-Steiner and Keith Sawyer, among others, that the 'social' moved from being a simple variable to a constitutive factor of creative acts and minds. My own contribution to this line of theory materialised in the form of the *cultural psychology of creativity* that focuses on the dynamic relation between the self and others, new and old and conceptualises creativity as symbolic, meaningful action (see Glăveanu 2010a, 2012).

Distributed creativity is a theoretical perspective that expands what I have previously called the We-paradigm and points not only to the role of social relations but also to interaction with artefacts and development over time for creative expression. The simplest way to understand what I mean here by

distributed creativity is to consider its opposite, non-distributed creation or the assumption that creative processes are bound to one single 'centre', one privileged 'location'—the individual mind. The first scholars to use the phrase distributed creativity (see Miettinen 2006; Sawyer and DeZutter 2009) emphasised primarily social distribution within networks of collaboration. In this regard, we are in perfect agreement with the observation by Negus and Pickering (2004, p. 23) that "creativity entails a communicative experience which is cross-relational". This relational aspect is indeed central for any account of distribution but it needs to be complemented by a focus on materiality (see Tanggaard 2013). What I will develop in the following pages is *an* account of distributed creativity that locates this phenomenon not within people or objects but in-between people and objects, *a view of creativity not as a 'thing' but as action in and on the world*. In many ways this is simultaneously an account of situated creativity (Potts et al. 2008) and a contextual description of creative action. Similar to Robbins and Aydede (2009, p. 3), who describe situated cognition as the umbrella term that covers theories of the embodied, enacted, embedded and distributed mind, I also consider any model of distributed cognition a situated one. While the attribute of being 'situated' characterises creative acts at all times—and thus is a rather static concept—distribution emphasises the (inter)active nature of creative phenomena. In this sense, creativity is never simply distributed as an end state but always in the process of being distributed.

I will end this first introductory section with a cautionary note. It would be an easy mistake to assume that a distributed perspective does away with the individual or downplays his/her role in creative production. This is certainly not the case, at least for the present conception. What my argument is against is *individualism*, *not the individual*. The mind is still a locus of creativity but never in isolation. Instead of being a 'box' for creative processes, literally envisioned as the space between one's ears, the human mind itself is distributed through (creative) action into the world. The very notion of 'individual' becomes thus reformulated in ways that contextualise its origin and expression. Having said this, I avoid also promoting the translation of individual-based attributes to the level of the group and use, for example, notions like 'group genius' (Sawyer 2007). To simply replace a smaller 'box' with a bigger one cannot be helpful and this is where the focus on relationships and their temporal dynamic is capable of solving many critical conceptual issues. In the end, I should stress the fact that, instead of losing the individual in the act of distributing creativity what we actually do is give it a new status and value. Self and culture are mutually constituting entities (Bruner 1990) and creative action bears the mark of both by participating in their formation and transformation. To endorse a vision of distributed creativity means ultimately to recognise the self as an agent within an ever-changing world.

1.3 About this Book

For the past seven years my work focused on the intersection between culture and creativity and the development of a cultural psychology of creativity (see Glăveanu 2014; Glăveanu et al. 2014). The seeds of my thinking about distributed creativity can be traced back to the fieldwork on creativity in craftwork I conducted as part of my doctoral studies at the London School of Economics. This research made me aware not only of the fact that creativity is much more than a mental process but that we need to develop more comprehensive frameworks that bring to the fore the social, symbolic, material and temporal aspects of creating. Examples from the craft of egg decoration will be offered throughout the book as I find them perfect case-study illustrations of distributed creative action.

In the next chapter I will consider more closely the theoretical background (Chap. 2), represented by theories of the extended mind and distributed cognition and, above all, cultural psychological conceptions of the mind and of creativity. In the end, a basic model will be proposed, highlighting three main types of creative distribution: (a) across people, (b) across people and objects and (c) across time. Three chapters will be dedicated to exploring each one of these lines, starting from creativity and sociality (Chap. 3), continuing with creativity and materiality (Chap. 4) and ending with creativity and temporality (Chap. 5). The final chapter will develop a reflection on why we need a theory of distributed creativity in psychology and, more broadly, in the social sciences.

True to the topic of this book, the work presented here came out of knowledge construction and exchange processes distributed across many people and many locations, including London, the village of Ciocăneşti and my present hometown, Aalborg, Denmark. I have been very fortunate to meet numerous others who shared my interest in this topic and guided my steps towards a fuller understanding of creativity and culture. Among them are my former supervisor, Sandra Jovchelovitch, the members of my doctoral committee, Alex Gillespie and Jaan Valsiner, and my colleagues at Aalborg University, Lene Tanggaard and Brady Wagoner. For comments on an initial draft I would also like to thank Maciej Karwowski, Monika Reuter and Aleksandra Kaszowska, as well as Morgan Ryan from Springer for her enthusiasm for this project. I am particularly grateful to the first reader of this manuscript, Constance de Saint Laurent, for her valuable feedback and her support. This book is dedicated to my parents, Corina and Petre Glăveanu, my first teachers of creativity.

References

Amabile, T. M. (1996). *Creativity in context*. Colorado, CO: Westview Press.

Arieti, S. (1976). *Creativity: The magic synthesis*. New York, NY: Basic Books.

Banaji, S., Burn, A., & Buckingham, D. (2006). The rhetorics of creativity: A review of the literature. *A report for creative partnerships*. Available at: http://www.creativityculture education.org/wp-content/uploads/rhetorics-of-creativity-2nd-edition-87.pdf

Barron, F., & Harrington, D. (1981). Creativity, intelligence, and personality. *Annual Review of Psychology*, *32*, 439–476. doi:10.1146/annurev.ps.32.020181.002255

Becker, H. S. (2008). *Art worlds. Updated and expended*. Berkeley, CA: University of California Press.

Bilton, C. (2007). *Management and creativity: from creative industries to creative management*. Malden, MA: Blackwell.

Bourdieu, P. (1993). *The field of cultural production*. Cambridge: Polity Press.

Bruner, J. (1990). *Acts of meaning*. Cambridge: Harvard University Press.

Collingwood, R. G. (1938). *The principles of art*. Oxford: Clarendon Press.

Craft, A. (2005). *Creativity in schools: Tensions and dilemmas*. London: Routledge.

Dacey, J. (1999). Concepts of creativity: A history. In M. Runco & S. Pritzker (Eds.), *Encyclopedia of creativity* (Vol. 1, pp. 309–322). San Diego, CA: Academic Press.

Dewey, J. (1934). *Art as experience*. New York, NY: Penguin.

Fine, G. A. (2004). *Everyday genius: Self-taught art and the culture of authenticity*. Chicago: University of Chicago Press.

Friedman, R., & Rogers, K. (1998). Introduction. In R. Friedman & K. Rogers (Eds.), *Talent in context: Historical and social perspectives on giftedness* (pp. xv–xxiv). Washington, DC: American Psychological Association.

Glăveanu, V. P. (2010a). Creativity in context: The ecology of creativity evaluations and practices in an artistic craft. *Psychological Studies*, *55*(4), 339–350. doi:10.1007/s12646-010-0056-8

Glăveanu, V. P. (2010b). Paradigms in the study of creativity: Introducing the perspective of cultural psychology. *New Ideas in Psychology*, *28*(1), 79–93. doi:http://dx.doi.org/10.1016/j.newideapsych.2009.07.007

Glăveanu, V. P. (2010c). Principles for a cultural psychology of creativity. *Culture & Psychology*, *16*(2), 147–163. doi:10.1177/1354067X10361394

Glăveanu, V. P. (2012). Habitual creativity: Revisiting habit, reconceptualizing creativity. *Review of General Psychology*, *16*(1), 78–92. doi:10.1037/a0026611

Glăveanu, V. P. (2013). Creativity and folk art: A study of creative action in traditional craft. *Psychology of Aesthetics, Creativity, and the Arts*, *7*(2), 140–154. doi:10.1037/a0029318

Glăveanu, V. P. (2014). *Thinking through creativity and culture: Toward an integrated model*. Piscataway, NJ: Transaction Publishers.

Glăveanu, V. P., Gillespie, A., & Valsiner, J. (Eds.). (2014). *Rethinking creativity: Perspectives from cultural psychology*. London: Routledge.

Gorovei, A. (2001). *Ouăle de Paşte. Studiu de folclor*, ediţia a doua. Bucureşti: Paideia.

Guilford, J. P. (1950). Creativity. *American Psychologist*, *5*, 444–454. doi:10.1037/h0063487

Hennessey, B. (2003). The social psychology of creativity. *Scandinavian Journal of Educational Research*, *47*(3), 253–271. doi:10.1080/00313830308601

Hennessey, B. A., & Amabile, T. (2010). Creativity. *Annual Review of Psychology*, *61*, 569–598. doi:10.1080/0066-4308/10/0110-0569$20.00

Hutt, A. (2005). Oul împodobit, un meşteşug vechi de mii de ani. *Descoperă România*, *I*(1), 25–33.

John-Steiner, V. (1992). Creative lives, creative tensions. *Creativity Research Journal*, *5*(1), 99–108. doi:10.1080/10400419209534426

Karwowski, M. (2010). Are creative students really welcome in the classrooms? Implicit theories of "good" and "creative" student' personality among polish teachers. *Procedia: Social and Behavioral Sciences*, *2*(2), 1233–1237. doi:10.1016/j.sbspro.2010.03.179

Karwowski, M. (2012). Middle and grand theorizing in the psychology of creativity. *Creativity and Leisure: An Intercultural and Cross-disciplinary Journal*, *1*(2), 109–114.

Kasof, J. (1995). Explaining creativity: The attributional perspective. *Creativity Research Journal*, *8*(4), 311–366. doi:10.1207/s15326934crj0804_1

Liep, J. (2001). Introduction. In J. Liep (Ed.), *Locating cultural creativity* (pp. 1–13). London: Pluto Press.

Marian, M. B. (1992). *Mitologia oului*. Bucureşti: Ed. Minerva.

Mumford, M. D. (2003). Where have we been, where are we going? Taking stock in creativity research. *Creativity Research Journal, 15*(2–3), 107–120.
Mason, J. H. (2003). *The value of creativity: An essay on intellectual history, from Genesis to Nietzsche*. Hampshire: Ashgate.
Miettinen, R. (2006). The sources of novelty: A cultural and systemic view of distributed creativity. *Creativity and Innovation Management*, *2*, 173–181. doi:10.1111/j.1467-8691.2006.00381.x
Montuori, A. (2010). Beyond postnormal times: The future of creativity and the creativity of the future. *Futures*, *43*(2), 221–227. doi:http://dx.doi.org/10.1016/j.futures.2010.10.013
Montuori, A., & Purser, R. (1995). Deconstructing the lone genius myth: Toward a contextual view of creativity. *Journal of Humanistic Psychology*, *35*(3), 69–112. doi:10.1177/00221678950353005
Negus, K., & Pickering, M. (2004). *Creativity, communication and cultural value*. London: Sage Publications.
Potts, J. D., Hartley, J., Banks, J. A., Burgess, J. E., Cobcroft, R. S., Cunningham, S. D., et al. (2008). Consumer co-creation and situated creativity. *Industry and Innovation*, *15*(5), 459–474. doi:10.1080/13662710802373783
Pye, D. (1968). *The nature and art of workmanship*. London: The Herbert Press.
Robbins, P., & Aydede, M. (2009). A short primer on situated cognition. In P. Robbins & M. Aydede (Eds.), *The Cambridge handbook of situated cognition* (pp. 3–10). New York, NY: Cambridge University Press.
Runco, M. (2004). Creativity. *Annual Review of Psychology*, *55*, 657–687. doi:10.1146/annurev.psych.55.090902.141502
Sawyer, R. K. (1995). Creativity as mediated action: A comparison of improvisional performance and product creativity. *Mind, Culture, and Activity*, *2*(3), 172–191. doi:10.1080/10749039509524698
Sawyer, K. (2007). *Group genius: The collective power of collaboration*. New York, NY: Basic Books.
Sawyer, R. K., & DeZutter, S. (2009). Distributed creativity: How collective creations emerge from collaboration. *Psychology of Aesthetics, Creativity, and the Arts*, *3*(2), 81–92. doi:10.1037/a0013282
Sennett, R. (2008). *The craftsman*. New Have, CT: Yale University Press.
Slater, P. (1991). *A dream deferred. America's discontent and the search for a new democratic ideal*. Boston, MA: Beacon Press.
Stein, M. (1953). Creativity and culture. *Journal of Psychology*, *36*, 311–322. doi:10.1080/00223980.1953.9712897
Sternberg, R., & Lubart, T. (1999). The concept of creativity: Prospects and paradigms. In R. Sternberg (Ed.), *Handbook of creativity* (pp. 3–15). Cambridge: Cambridge University Press.
Tanggaard, L. (2013). The sociomateriality of creativity in everyday life. *Culture & Psychology*, *19*(1), 20–32. doi:10.1177/1354067X12464987
Torrance, E. P. (1988). The nature of creativity as manifest in its testing. In R. Sternberg (Ed.), *The nature of creativity: Contemporary psychological perspectives* (pp. 43–75). Cambridge: Cambridge University Press.
Tusa, J. (2003). *On creativity: Interviews exploring the process*. London: Methuen.
Vachhani, S. J. (2013). (Re)creating objects from the past—affect, tactility and everyday creativity. *Management & Organizational History*, *8*(1), 91–104. doi:10.1080/17449359.2013.750052
Vygotsky, L. S. (1971). *The psychology of art*. Cambridge, MA: The MIT Press.
Weiner, R. P. (2000). *Creativity and beyond: Cultures, values, and change*. Albany, NY: State University of New York Press.
Weisberg, R. (1993). *Creativity: Beyond the myth of the genius*. New York, NY: W. H. Freeman & Co.

Westwood, R., & Low, D. (2003). The multicultural muse: Culture, creativity and innovation. *International Management of Cross-Cultural Management*, *3*(2), 235–259. doi:10.1177/14705958030032006

Williams, R. (1961). *The long revolution*. London: Chatto & Windus.

Willis, P. (1990). *Common culture: Symbolic work at play in the everyday cultures of the young*. Milton Keynes: Open University Press.

Zahacinschi, M., & Zahacinschi, N. (1992). *Ouăle de Paşti la români*. Bucureşti: Ed. Sport-Turism.

Chapter 2
From Cognitive to Cultural Theories of 'Distribution': A Creativity Framework

2.1 Extending the Mind in Cognitive Science

The discussion of creativity as distributed action advanced in this book resonates with wider developments taking place in cognitive science and the philosophy of mind. In fact, the hypothesis that the human mind might be 'extended' into the world instead of simply being brain or organism-bound (Clark 2008) is a relatively recent advancement. It emerged as a reaction to the radical reductionism manifest in many past (and present) models of the mind as a machine located inside our brains (see for example LeDoux's 2002, synaptic self theory but also Glannon's 2009, article 'Our brains are not us'). In a 2013 volume entitled 'Cognition beyond the brain', Vallée-Tourangeau and Cowley note the fact that "as recently as twenty years ago, many would have regarded it as absurd to examine thinking with reference to events beyond the brain" (p. 1). Although this might seem to be a fairly new debate, its roots can be traced back to turn of the century psychology (for instance, in the work of Munsterberg, 1914, cited in Cole and Engeström 1993) and in the first cybernetic and systemic models proposed in the discipline (see Bateson's 1972, seminal book 'Steps to an ecology of mind'). However, most of these ideas were only partial if at all integrated by cognitive scientists. Their reaction to behaviourism was to argue for the importance of the "internal mental environment largely separated from the external world" (Hutchins 1995a, p. 371), to endorse the computer metaphor and make information processing central for human cognition. Within this framework, cognition ended up consisting basically of manipulating representations inside the heads of individuals (Varga 2013), a view that left culture, context, history and affect on the side, to be dealt with at a later point (Gardner 1985).

The time for integrating these forgotten aspects—all constitutive of cognition itself—is long overdue and a solid critique of the 'mind in the head' account is currently being built within cognitive science and beyond. There are multiple lines of 'attack', most often in dialogue with each other, that today take the shape of *embodied, embedded, enacted, extended and distributed theories of cognition* (for details see Rowlands 2010). For an orderly presentation I will proceed by following Cash's (2013) description of three main 'waves', namely (a) the extended

V. P. Glăveanu, *Distributed Creativity*, SpringerBriefs in Psychology,
DOI: 10.1007/978-3-319-05434-6_2, © The Author(s) 2014

mind, (b) the integrationist approach and (c) socially and culturally distributed cognition, and briefly discuss their strengths and limitations.

In 1998, Clark and Chalmers wrote a thought provoking article starting from the question "where does the mind stop and the rest of the world begin?" (Clark and Chalmers 1998, p. 7). They rejected the skin and skull as 'natural' borders of the mind but also didn't agree with a completely externalist view. What the two advocated for was an active externalism "based on the active role of the environment in driving cognitive processes" (p. 7), in other words, an *extended mind*. Key to their argument is what they termed the parity principle, stating basically that any part of the world that functions as a process which, were it to go on inside the head, would be clearly recognised as cognitive, should in fact be considered integral to our cognition; e.g., information in a notebook can be an obvious instance of 'external' memory. How do we test whether the part of the world in question is integral to cognitive processes? If we consider humans and entities external to them, like the notebook mentioned above, as a coupled system, then we only need to remove the external component and notice if there is any drop in behavioural competence. Trying to anticipate criticism, Clark and Chalmers stated that, while cognition may extend outside of the head, it does not mean that consciousness does so as well. But the critical point to address for them was how strong is the coupling between organism and external instances since, unlike parts of one's brain, we can connect and disconnect from objects in the world. In an effort to support their hypothesis, Clark later (2008) discussed several criteria that end up limiting what can be considered as truly 'part' of the extended mind; for example, an external resource should be readily available and information from it more or less automatically endorsed by the person.

However, even with these clarifications, the theory of the extended mind remains controversial for mainstream cognitive scientists whose initial reply was that "there is no room for an expanded psychology, no motivation for it, and no need for it" (Butler 1998, p. 222; also Rupert 2010). The spectre of 'cognitive bloat' or over-extension of human cognition is a constant source of worry, leading authors such as Adams and Aizawa (2009) to write about 'Why the mind is still in the head'. The conflict between 'internalists' and 'externalists' encouraged authors like Menary (2006) to propose the idea of *cognitive integrationism*, a perspective that considers internal and external vehicles and processes part of an integrated whole (the hybrid mind thesis). According to it, external resources do not duplicate in-the-head processes, like argued initially, but rather augment and complement them (Cash 2013). Confronted with similar critiques, 'second wave' theories of the extended mind have nevertheless attracted a great deal of attention in recent years and some efforts to elaborate them further are on the way. A special issue of Cognitive Systems Research, aiming to socialise the extended mind (see Merritt et al. 2013), is a clear example in this regard. Researchers are currently trying to understand the ontogenesis of this phenomenon (Krueger 2013) and link it to other areas like ecological psychology (see Keno 2010). From time to time, even more daring formulations are being proposed, such as hypothesising the existence of a 'collective mind' (Tollefsen 2006).

The developing orientation within the extended mind literature towards emphasising social and cultural elements is noteworthy. Clark, in his formulations of the theory, focused much more on concrete objects while failing to do justice to the intricate socio-cultural system of norms, beliefs and practices these objects are part of. The work of Gallagher (2013) makes some key steps in the direction of socialising the extended mind and recognising the role of institutional structures. Finding classic accounts too conservative, he is critical of the fact that mental processes 'out there' are still limited to the kind of things that fit a standard cognitive model. His idea of 'mental institutions' or institutions that not only help us accomplish cognitive tasks but make them possible, is certainly interesting, as well as the examples he takes, such as the legal system. Gallagher's argument is that:

> If we are justified in saying that working with a notebook or a calculator is mind-extending, it seems equally right to say that working with the law, the use of the legal system in the practice of legal argumentation, deliberation and judgment, as well as the cognitive processes involved in the enforcement of law for purposes of controlling behavior are mind-extending too (Gallagher 2013, p. 7).

Perhaps the most elaborate account of how mind and culture are integrated within a broader system is represented by Edwin Hutchins's seminal contribution to 'third wave' theories of *distributed cognition*. His ethnographic study of navigation on the US Navy ship nicknamed Palau, described at length in 'Cognition in the wild' (see Hutchins 1995a), captured the multiple ways in which cognitive tasks (e.g., determining the ship's position as part of the 'fix cycle', planning its course, etc.) are never performed by individuals in isolation but in relation to other people and close interaction with the material world. What emerged was a clear view of cognition as a cultural process, a "social distribution of cognitive labor" (Hutchins 1995a, p. 228). Beyond this empirical work, Hutchins has also been at the forefront of developing the theory of distributed cognition, drawing on multiple fields such as Russian cultural-historical activity theory, Gibson's ecological psychology, and Bateson's ecology of mind, among others. His recent focus on cognitive ecosystems (Hutchins 2010) promotes the study of cognitive phenomena in context as part of dynamic patterns of inter-relation between elements organised as socio-technical systems (Hutchins 1995b). Moreover, Hutchins also advocates for a broader understanding of cognition that integrates perception and action, with the products of their interaction accumulating "not only in the brain but throughout the cognitive ecology" (Hutchins 2010, p. 712). His discussion of how a cockpit remembers its speed is illuminating in this regard, literally taking memory outside of the head of single individuals and distributing its functions within the environment, particularly in relation to physical tools (Hutchins 1995b). This line of research into memory and remembering continues to be central to the field of distributed cognition (see for example Sutton et al. 2010; Michaelian and Sutton 2013).

In conclusion, theories of the extended mind and distributed cognition are of concern for cognitive scientists although a general consensus is not yet in sight.

Even within the group supporting these efforts to contextualise and situate cognitive functioning, different understandings apply. There is, for instance, a difference between distribution understood in a 'weaker sense' (as a metaphor for coordinated social activities) and in a 'stronger' one (in which external elements are intrinsic to the cognitive architecture) (see Perry 2013). Whatever the version adopted, there are still many critical voices, either promoting a more traditional, 'internalist' perspective, or on the contrary, trying to promote a flexible framework. Others, like Poirier and Chicoisne (2006), criticised both 'conservative' and 'liberal' interpretations that "illegitimately impose sharp readings on two fuzzy concepts: distribution and cognition" (p. 217) and argued we should recognise and deal with the vague nature of our key constructs. They also considered the sharp contrast between the cognitive and non-cognitive to be generally misleading and explored the many instances in-between (e.g., systems can be minimally or highly cognitive). Other authors, such as Salomon (1993), pointed to the fact that theories of distributed cognition need in fact to reflect more seriously on the (supposedly many) cases of non-distribution. Finally, Giere (2007) made a distinction between distributed cognition and distributed knowing, agreeing with Clark and Chalmers's (1998) remarks about consciousness not extending into the outside world.

Overall, many would accept Kirsh's (2006, p. 250) observation that "we need better theories of how people are embedded in the world as well as better theories of how the world and the larger systems we are part of coordinate action". In the next section, cultural psychology will be used as a theoretical framework to further our understanding of distribution and, within this perspective, a model of distribution creativity will be introduced. Before that however, and in order to help us differentiate cognitive from cultural approaches, I will systematise what for me seem to be the *main challenges and limitations* of the cognitive account, namely: (a) the pervasive dichotomy imposed between the inner and outer world; (b) the extension of the vocabulary of mainstream cognitive science into the cultural sphere and (c) the essentially static, non-developmental perspective on distribution and the mind.

For Button (2008), considering distributed cognition a new theoretical outlook that promises to bridge cognitive science and socio-cultural perspectives is highly misleading due to the fact that distributed cognition is, actually, cognitive science; it "does not renounce cognitive science; it actually extends it by describing social phenomena in a redundant cognitive vocabulary" (Button 2008, p. 89). For him this approach should be dismissed on the grounds of operating a sharp separation between the 'inside' and the 'outside', an old Cartesian split between the 'ghost' and the 'machinery' of the world. Even integrationist views that should overcome this dichotomy still keep the distinction between brain and world and the same applies to distributed cognition. Take for instance Zhang and Patel's (2006) discussion of affordances as distributed representations existing across the environment and the organism. They argue this by constantly referring back to internal and external representational spaces. To begin with, such distinctions are not productive because they invite controversy over what is 'inside', what is 'outside', and where we should draw the line. In reality, there is no fixed line to be drawn

since, as Bateson (1972, p. 464) reminds us, "the delimitation of an individual mind must always depend upon what phenomena we wish to understand or explain". Lines can also cut through pathways of connectivity that make organism and environment a functional totality (one should think here about Bateson's example of the blind man using a stick). Moreover, the nature of any boundary should be problematised further. Instead of being conceptualised as a limit and point of exclusion, boundaries represent in fact dynamic areas of contact, oscillatory and indeterminate at the same time (Neuman 2003, p. 99). Unfortunately, such ideas are far from what cognitive scientists are preoccupied with when trying to delineate the 'proper' locus of cognition.

Even more problematic is the fact that, once the 'inside' and 'outside' (or, as a variant, the cognitive and non-cognitive) are separated with the help of more or less constraining criteria, the way in which extension or distribution are dealt with is to claim, similar to Hutchins (1995a, p. 354), that cognition is a cultural process and culture (or a 'major component' of it) is a cognitive process. While the first part of this statement can be supported by a series of arguments regarding the development and expression of our cognitive functions, the latter opens the door for a disembodied discussion of culture (as disembodied as mainstream theories of mind tend to be). Let's take Clark and Chalmers's (1998) example of rearranging tiles on a Scrabble game tray to create words. They claim that such action is not external to cognition by invoking the parity principle mentioned before. Where does this line of reasoning lead to? The conclusion that, "in a very real sense, the re-arrangement of tiles on the tray is not part of action; it is part of *thought*" (Clark and Chalmers 1998, pp. 9–10). From a computational approach to the human mind we are now close to describing cultural processes in terms of representations, information and, ultimately, computation. If processing takes place both inside and outside a person's head and the socio-cultural world is a cognitive system (Toon 2013), then what are we to do with materiality, history and the affect-laden nature of the world we live in?

Finally, perhaps the most important line of critique points to the fact that cognitive scientists tend to focus on the wrong questions about mind and environment. Typically, they are concerned with what are the limits of cognition and where does the mind end. These questions can only be answered in a non-developmental manner (Valsiner 1997), ready to 'freeze' person and world in time, to make them static in order to draw all the necessary separation lines. If we are to consider things developmentally, in constant change due to their interactive dynamics, the need to operate with a strict division between 'internal' and 'external' vanishes: these 'spaces' are co-constitutive and permeable. The main way to account for the temporality of this constant exchange between person and world is to take human action or activity as a unit of analysis. This is not a novel proposal as several authors already pointed to the centrality of this concept for the socially extended mind. For instance, Gallagher (2013) noted that the mind is constituted by a series of activities, "whereas the concepts of propositional attitudes, mental states, representations, vehicles and even non-derived contents are derivative and are inexplicable except in reference to such activities" (p. 11). This is an old idea in cultural

psychology, for which symbolic or mediated action stands at the core of human existence within culture. From this standpoint, to think or to remember is *to do*, and, "unlike computers that *only* sit and think, people think while playing, working, creating art, and talking with one another" (Scribner 1997, p. 355).

2.2 Distribution in Cultural Psychology

The relationship between 'mind' and 'culture' emerged as a prominent topic in psychology during the 1980s (see Jahoda 1992), and its study remains today one of the most rapidly expanding areas in the discipline. Breaking down the dichotomy between 'inside' and 'outside', this perspective promotes a view of mind and culture as *co-constitutive* (Rogoff 2003). In the words of Richard Shweder, this branch of psychology studies "the way cultural traditions and social practices regulate, express, transform, and permute the human psyche, resulting less in psychic unity for mankind than in ethnic divergences in mind, self, and emotion" (Shweder 1990, p. 1). Instead of boundaries between mind and culture, cultural psychologists support a developmental and systemic outlook that focuses on integrated wholes, as they are presented in everyday experience, rather than analytically derived parts. Similar to figure and ground, person and context are defined by their inter-relation at all times. This means that, more than being inseparable, people and their world require each other (Markus and Hamedani 2007, p. 3); it does not imply, however, that cultural psychologists do not distinguish between person or psychological phenomena and the wider environment. Valsiner (1997, pp. 23–24) introduced the useful distinction in this case between exclusive and inclusive separation. The first segments phenomena from their context and eliminates the latter as irrelevant. Such a strategy is often found in mainstream cognitive science. On the contrary, inclusive forms of separation acknowledge the difference but retain a view of the phenomenon *in* context. This is the standpoint of cultural psychology.

In essence, to study psychological and cultural processes from this perspective requires the researcher to consider them distributed across people and contexts. Geertz (1973, p. 46) famously referred to the human being as "an incomplete, unfinished animal", in need of a cultural environment. Indeed, thinking, remembering, feeling, wanting, and, as we shall see later on, creating, depend on things 'outside' the body of individual organisms. Culture, as an accumulation of artefacts during historical time, is the human-specific medium of development (Cole 1996, p. 110). Its location is neither the external environment nor is culture captive in the mind of the person, but occupies precisely the symbolic space *in-between* person and his or her world (Winnicott 1971). A historical account of the development of cultural psychological thought leads us back to thinkers whose ideas are instrumental for current debates about distributed cognition, among them the writings of Wundt, Vygotsky, Luria, Leontiev, and Dewey (see Cole and Engeström 1993, for details).

At the core of cultural psychology stand *meditational* models that relate person to others and to artefacts (both material and symbolic). Our cultural experience in the world is thus defined by interactions with other people and the use of tools and signs, regulating our actions. In this sense, the person never thinks or acts outside of this intricate and dynamic system of social, material and institutional relations that make up human society. Drawing on various disciplines, from anthropology, sociology and linguistics to history and the medical sciences (Valsiner and Rosa 2007), researchers dedicated to this orientation strive to formulate a truly 'culture-inclusive psychology' (Cole 1996) which does not consider the socio-cultural environment as a set of variables external to the self—a common assumption in cross-cultural psychology. The socio-cultural paradigm, with its focus on systematic, interactive and mediated phenomena (Zittoun et al. 2007), considers cognitive distribution a developing, unfolding process that takes place both on a larger time scale (that can include the historical trajectory of different tools or symbolic forms), and within micro moments of interaction (for example in the process of learning a group's cultural repertoires and practicing them). Activities of meaning-making and the co-construction of knowledge are both a constant outcome of distribution and its engine, facilitating new forms of 'extension' of the individual towards the assimilation and transformation of culture. In this way, "mind emerges in the joint mediated activity of people" (Cole 1996, p. 104) and the same can be said about culture.

In fact, the key to a cultural psychological approach to distribution is represented by *action or activity*, two central concepts within the discipline. Their role is so central that authors like Wertsch defined the whole field in these terms: "The task of a sociocultural approach is to explicate the relationship between human action, on the one hand, and the cultural, institutional, and historical contexts in which this occurs, on the other" (Wertsch 1998, p. 24). Moreover, for Ratner (1996), psychological phenomena are seen as grounded in concrete, practical social activities where both parties depend on and sustain each other. Unlike psychology's long-lasting fascination with behaviour, cultural psychologists prefer to focus on action as it captures better the symbolic and goal-directed nature of our relation with ourselves, others and objects. Behaviour can be studied in a de-contextualised manner but human action is necessarily 'situated action' (Bruner 1990, p. 19; also Ginsburg 1980), shaped by the intentional states of the participants and the normativity of culture. Most of all, action articulates the behavioural and the intra-psychological and engages with the materiality of the world. In the words of Wertsch et al. (1995):

> this is not to say that action does not have a psychological moment or dimension. It clearly does. Even action in its most mundane motor form has its psychological dimension. The point is that we should think of this as a *moment* of action rather than as a separate process that exists somehow in isolation (pp. 10–11).

It is easy to see how action 'extends' the person into the world and relates it to others and objects in its unfolding within irreversible time, but what about 'internal' acts or those acts that have very little behavioural expression? What

about thinking and remembering, to return to the classic focus of cognitive theories? First of all, the *act* of thinking, remembering, or imagining is never taking place completely inside the head as these processes always find ways of being articulated and externalised, even if not immediately. But, more fundamentally, these 'inner', cognitively driven acts are distributed because they are culturally mediated by semiotic systems such as language. As rightfully noted by Fusaroli et al. (2013), language is a relational phenomenon and, in this sense, a completely 'private' language is inconceivable. It is not only the case that we learn language from others, we direct it towards others (or towards the self as other), and we use it to coordinate action, but words are symbolic means that have an 'external' referent, they mediate the relation between the person and something else, outside of it. Our minds are, according to these three authors, dialogically extended and, I would add, dialogically extended through (symbolic) action.

Lev Vytosky (1978) is credited as one of the first psychologists to place mediation at the core of his thinking about psychological phenomena and to stress the role of signs for human activity and the role of other people in acquiring and using these signs. However, the person is never a passive recipient of 'external' influences. On the contrary, "cultural mediation has a recursive, bidirectional effect; mediated activity simultaneously modifies both the environment and the subject" (Cole and Engeström 1993, p. 9). Wertsch et al. (1995) consider, in this regard, mediation as an active and transformative process. This is because, while cultural artefacts have the potential to shape action, they are not capable of determining it in a mechanistic way. It is the person's use of meditational means that actualises their potential within concrete contexts of interaction. Moreover, introducing new cultural tools leads to transformation and this is clearly seen in activities of learning throughout the life-span. But mediation is not all about empowering individuals or groups, it can also be constraining for action which is something that, paradoxically, emphasises its fundamental openness in relation to the future (since without constraints there would be no freedom). Finally, Wertsch and colleagues refer to the existence of 'spin-off' effects when tools that emerged for another reason are used to mediate a different type of action, leading to unanticipated uses. Concluding about mediation in cultural psychology we can agree with Cole and Engeström's (1993, p. 42) observation that, "when one takes mediation through artefacts as the central distinctive characteristic of human beings, one is declaring one's adoption of the view that human cognition is distributed".

Before ending this short presentation of cultural psychological theory and its relevance for our understanding of distributed psychological functions, I would like to highlight the need to avoid two kinds of misconception. First of all, this perspective is not against or does not aim to deny the role of the brain for cognition and action in general. Displacing the brain from the centre of our focus when it comes to the mind does not mean doing away with it altogether but rather dispelling the idea of a unique, singular and contained centre of human activity. Essentially, my view on this issue is in line with Glannon's (2009, p. 329) statement that "the brain is not the sole cause of the mind but a relational organ that shapes and is shaped by the mind in mediating interaction between the

embodied subject and the world". On the contrary, to focus exclusively on the social world risks leading us to yet another form of reductionism, this time of a socio-cultural kind. In this regard, I subscribe to Valsiner's (1997) inspired theses of 'bounded indeterminacy' and 'independent dependence', phrases that capture both the agency of individuals as well as their reliance on environmental circumstances. These concepts open new ways of thinking about creativity since the creative process itself is, at once, free and constrained and, more than this, it requires dependence (immersion) in order to gain independence (detachment) as part of the continuous cycle of experience.

While I have focused so far on the general debate about mind and its distribution within culture, it is now the moment to return to the topic of creativity and notice, together with Poirier and Chicoisne (2006, p. 217) the fact that "truly distributed cognition is emergent cognition". In other words, creativity is a natural outcome of distribution and, in addition, theories of distribution would benefit greatly from focusing on the case-study of creative expression. This will be argued more eloquently in the next chapters but, for the time being, let me emphasise the fact that a distributed model of creativity deals necessarily with creative action. The broad definition I start from in this regard is that "*to create is to act in the world, or on the world, in a new and significant way*" (Mason 2003, p. 7). In line also with a pragmatist understanding, the next section will elaborate a theoretical model that centres on the creativity of action rather than that of people or products. As Joas and Kilpinen (2006, p. 323) conclude, "individuals may also be creative, but this is due to the creativity of their action rather than vice versa".

2.3 Distributing Creativity, a Theoretical Framework

There are many grounds on which to claim that creativity is distributed action. To begin with, to create means to externalise or express, to generate an outcome that has a certain form of materiality (without necessarily being an object but also a process, a performance, etc.). The common misconception is that creativity has to do only or mainly with getting new ideas, something that is supposedly taking place in the head or brain, and what happens after this point (the 'implementation' part) is of less concern for the psychologist. A view of distributed creativity, drawing on cultural psychological scholarship, challenges this reduction by extending creative processes into the world of others, of objects, and observing how they unfold in time. The present section will focus on building the necessary theoretical framework enabling us to capture the multiple ways in which creative acts are distributed in the space between individuals and their environment. Such a project has deep roots in cultural psychology and has been expanding within the psychology of creativity as part of what I referred to before as the We-paradigm.

One of the key figures both creativity and cultural psychologists look towards in their effort to rethink creativity is Lev Vygotsky. His dissertation on art, as well as his work on imagination and creative action in childhood and adolescence,

although originally written in the first half of the last century, remain valuable resources for those interested in distributed creative action. One of the main strengths in Vygotsky's work in this area is represented by the fact that he adopted a *radically social and developmental perspective* on the human mind. For him, "to study something historically means to study it in the process of change" (Vygotsky 1978, p. 64) and the path of this developmental change is not reduced to the individual but always passes through others and requites social interaction. A cycle of internalisation and externalisation processes describes the person's relation with the world, in which initially social material is appropriated, transformed, and then embodied in the creation of new objects and meanings (Morgan and John-Steiner 2003). Moreover, as already discussed above, Vygotsky's psychology was based on the concept of mediation through tools and symbols, elements that help the person master the environment and him or herself, respectively. Following his line of thinking, we can locate the emergence of creativity within *the first* manifestations of the symbolic function as expressed in imaginative play. It is only when the child become capable of using signs that he or she creates the necessary distance between him/herself and the world that makes creativity possible (Glăveanu and Gillespie 2014). Not living bound by the here-and-now of experience, the child around the age of two starts semiotically regulating his/her action and imagining other worlds within play and fantasy.

These early achievements are extremely consequential and, we can say, there is a direct line to be drawn between them and the most elevated forms of human activity such as artistic production (see Gardner 1982). For Vygotsky, "art is the social within us, and even if it is performed by a single individual it does not mean that its essence is individual" (Vygotsky 1971, p. 249). He was one of the first to acknowledge the fact that every creator, geniuses included, is a product of his or her environment. Creative action is, in this sense, continuous with the past and with what culture has to offer while, by acting on the very resources it uses, it can also leave a mark on culture and its development. But creativity should not be reduced to revolutionary contributions that fundamentally reshape the cultural stock. "Creativity is present, in actuality, not only when great historical works are born but also whenever a person imagines, combines, alters, and creates something new" (Vygotsky 2004, p. 10). Imagination was the central psychological process behind creative production for Vygotsky who considered it a higher mental function developed out of children's play, consciously directed, supported by collaboration with others and thinking in concepts (Smolucha 1992, pp. 49–50). Today his insights are being extensively drawn upon in developmental and cultural psychology as well as creativity studies, in relation to play and meaning-making (see John-Steiner et al. 2010) and socio-cultural studies of collaborative work (see Littleton and Miell 2004).

Another strand of literature that strongly contributes to a vision of distributed creation is represented by *systemic approaches* promoted by authors like Csikszentmihalyi, Gruber and Sawyer, among others. This conception starts from the basic premise that creators are never alone in producing their work but immersed into a complex social and cultural system. Csikszentmihalyi's (1988)

influential model in this regard brings together person, field and domain and places creativity within their inter-relation. Creative action does not end with producing a certain outcome but requires, as an integral part, the social validation of the result, its appreciation by other people, primarily experts or gatekeepers (constituting the field) within art, science, technology, etc. (constituting the domain). In this sense, the production of what is creative is distributed both between people and across time. Gruber contributed to this line of thinking with detailed case-studies of creative work that looked at how creator and context co-evolve. His dynamic systems approach (see Gruber 2005) emphasises the temporal dimension of creative action, its co-dependence on person and context, and has been applied to the study of mainly artists and scientists (see for instance Brower 2003). Sawyer took a more microgenetic approach and focused on the moment to moment emergence of creativity within collaborative action in the case of jazz performances or improvised theatre (Sawyer 2000). This approach is particularly useful as it recreates dynamic systems within local contexts and does not necessarily require established fields or domains in which creativity should take place. Indeed, one of the key limitations of systemic models is represented by their institutional perspective on who can legitimate creativity within a society and how creations contribute to a cultural domain. These ideas are close to sociological theories such as that of Bourdieu who elaborated in his work the notion of field. For him, the field (which can be economic, political, cultural, educational, etc.) is a dynamic concept defined by the position of different agents within it and their inter-relation. His thoughts on art for instance point precisely to the wide networks of distribution engaged by this practice:

> Thus, as the field is constituted as such, it becomes clear that the 'subject' of the production of the art-work—of its value but also of its meaning—is not the producer who actually creates the object in its materiality, but rather the entire set of agents engaged in the field. Among these are the producers of works classified as artistic (great or minor, famous or unknown), critics of all persuasions (who themselves are established within the field), collectors, middlemen, curators, etc., in short, all who have ties with art, who live for art and, to varying degrees, from it, and who confront each other in struggles where the imposition of not only a world view but also a vision of the artworld is at sake, and who, through these struggles, participate in the production of the value of the artist and of art (Bourdieu 1993, p. 261).

The cultural psychology of creativity, centred on a view of distributed creativity, is in perfect agreement with Vygotskian and systemic approaches to this phenomenon and integrates many of their insights. However, it is also critical of some assumptions, for instance the systemic models' emphasis on institutionalised fields and domains. From a cultural psychological standpoint, creativity is equally located within self—other interactions and depends on the negotiation of meaning but this kind of social distribution takes place at different levels and in various contexts (see also Bronfenbrenner 1979), from the more mundane (e.g., homes, school, in public spaces) to highly organised (e.g., museums, research labs). In fact, a vision of distribution creativity helps us recover the multiple continuities between everyday life and traditional domains of creative production and notice

the fact that, in all instances, creators act in relation to other people, use cultural tools and signs and draw on the past to anticipate the future. In what follows I will introduce *a cultural psychological framework for distributed creativity* that builds on previous work aimed at reconceptualising creativity theory and rewriting its basic language.

One of the key frameworks used by creativity researchers as a conceptual organiser is represented by Rhodes's (1961) four P's model that includes person, product, process and press (the environment). Emerging out of a study of definitions, this initial conception is used to locate different studies in this area, according to their focus. Despite the fact that Rhodes explicitly stated that the four elements constitute a functional whole, most references to the four P's reveal them as static and separate units. The fact that the creative person is not the only point of focus in the literature might seem encouraging for views of distributed creativity. However, since the four P's are not conceptually articulated and can be 'detached' from each other, the idea of distribution becomes less obvious. This is even more the case when we notice that creative processes are typically considered to take place in the head and products are studied only in order to infer something about the person and his/her creative potential, while press elements remain external to the individual. What this conception is missing is theoretical elaboration and integration, starting from a developmental perspective of *how* exactly people, objects and the processes that connect them participate in the generation of novel outcomes.

My own conception of distributed creativity is close to John Dewey's discussion of human experience in art. For him, "because every experience is constituted by interaction between 'subject' and 'object', between a self and its world, it is not itself either merely physical nor merely mental, no matter how much one factor or the other predominates" (Dewey 1934, p. 256). In distributed creative acts we cannot easily disentangle the psychological from the physical, the social from the individual, nor should we be concerned with such segmentations (a main preoccupation within the extended mind literature, as discussed earlier in this chapter). The two axes of self—other and material—symbolic are built into every creative act, even those performed in solitude or taking place, apparently, only 'inside' the mind. Most importantly, it is precisely because self and other don't share the same position in the world and the symbolic does not have a one-to-one relation to the material that makes creative expression is possible.

Let me elaborate a bit on this idea of *difference*, crucial from a cultural psychological and developmental point of view. When an infant is born, he or she starts gradually to perceive the world as different from his/her body and understand that there is a 'non-me' space around, not ready to immediately gratify one's needs. Gradually, with the first use of symbols (for instance in the process of acquiring language), the child becomes capable of accessing 'as-if' worlds and creating a distance between him/herself and this environment. The existence of multiple perspectives, represented by other people, and the fact that the world can be manipulated symbolically are the *sine qua non* conditions for creative expression. But they are not sufficient. It is due to the passing of time and the ever-changing

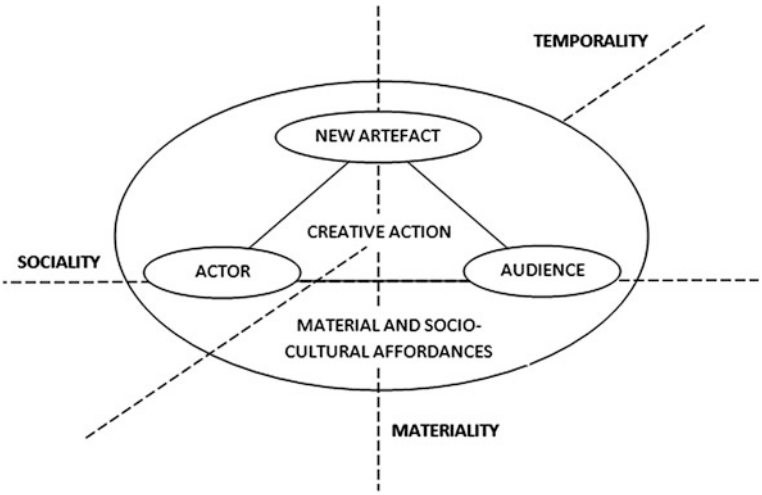

Fig. 2.1 A framework of distributed creativity (adapted from Glăveanu 2013)

nature of both person and context that humans are driven to create in order to adjust to the world and grow within it. Creativity is not the difference itself, nor the process of distanciation, but emerges as an encounter between person and world, a form of distributed activity that *acts* precisely *on* the differences above in ways that acknowledge them, exploit their potential, or try to reduce or bridge them (for a more elaborate discussion of these ideas see Glăveanu and Gillespie 2014).

The three main types of differences referred to above—between self-other, symbol-object, past-future—are inscribed into the rewriting of the four P's I recently proposed in the form of a *five A's model* (Glăveanu 2013). This conceptualisation defines creativity in relation to (at least) the following five elements: actors, audiences, artefacts, actions and affordances. While it might seem at first sight that one typology is simply replaced with another, the five A's model represents more than a change of terms, it reflects a change of epistemological position. Creativity can no longer be said to reside 'within' the person, the product, etc. It emerges as a form of action engaged in by various actors (individual or groups), in relation to multiple audiences (again individuals or groups), exploiting the affordances of the cultural (symbolic and material) world and leading to the generation of artefacts (appreciated as new and useful by self and/or others). All the five terms mentioned above are *relational* in nature: actors are defined by their interaction with audiences, action engages existing affordances and generates new ones, artefacts can become agents within creative work, etc. The visual depiction proposed above (see Fig. 2.1), captures the totality of person and culture in distributed acts of creativity and it resonates with old and new conceptions of art that focus on the triad of artist, audience, and object in creative production (see Dewey 1934; Wilson 1986). Central to it is the meditational triangle specific for cultural psychological accounts of activity (see the previous section). Essentially thus, the

five A's framework is founded, in opposition to romantic notions of inspiration, on a conception of creativity as action, as a form of doing—"a creativity of the hand" (Brinkmann and Tanggaard 2010, p. 256).

The depiction of distributed creativity proposed in Fig. 2.1 reveals three main types of distribution: *social, material and temporal*. These are captured by the inter-relation, in creative acts, between actors and audiences, by the use of affordances and cultural resources to generate new artefacts, and by the time dimension inscribed into creative work, respectively. These three main forms of distribution have been referred to by others both within the cognitive (Hutchins 2000) and the socio-cultural tradition (Cole and Engeström 1993) in relation to thinking. In the words of Hutchins:

> When one applies these principles to the observation of human activity 'in the wild', at least three interesting kinds of distribution of cognitive process become apparent: cognitive processes may be distributed across the members of a social group, cognitive processes may be distributed in the sense that the operation of the cognitive system involves coordination between internal and external (material or environmental) structure, and processes may be distributed through time in such a way that the products of earlier events can transform the nature of later events (Hutchins 2000, pp. 1–2).

Distributed creativity is, therefore, a conception that extends previous accounts of cognition and makes them engage with the sociality, materiality and temporality of the world. There are numerous arguments and illustrations of this dynamic and the book will continue by unpacking each line of distribution in turn. For instance, discussing creativity in art Beardsley (1965) concluded that "the true locus of creativity is (…) the work itself as it lives in the experience of the beholder" (p. 302), thus reaffirming the need to operate within self—other relations (something captured very well by systemic models of creativity). Keeping the example of art, Dewey (1934) described it as a process of making, giving a material form to ideas in a continuous cycle of doing and undergoing the results of one's action. Finally, these social and material dimensions become manifest solely as part of a temporal trajectory. In the end, action always occurs in time (Brenner 1980) and creative action makes no exception (Gruber and Davis 1988). Following Bergson (1911, p. 14), we can say that "duration means invention, the creation of forms, the continual elaboration of the absolutely new". It is because we live in irreversible time the same thought or feeling experience at one moment can never occur twice in an identical manner (Valsiner 2013). Novelty is therefore not the exception in our existence (as romantic theories of creativity would want us to believe) but the norm, it exists not in the mind but outside of it, in the world, or, better said, it *defines* the relation between mind and world.

A final note before proceeding to explore each one of these three types of distribution would be to make clear the fact that creativity is *simultaneously* socially, materially and temporally distributed and, in effect, it could not be otherwise. For instance, to exist in a world defined by differences of position and perspective between self and other (actor and audiences in my framework) fosters multiple interpretations of the same material reality and its objects. Semiotic processes of meaning-making both mediate the relation between self and other and are

shaped by it since any change of social position leads to new processes of symbolic (re)construction. Moreover, just as the passing of time imprints a certain dynamic to differences between people, symbols and objects, these differences themselves mark the temporal unfolding of creative action and segment its flow. Models of the creative process in psychology fail, on the whole, to be more sensitive to the diversity of changes occurring, in time, between people and people and objects, and try to abstract universal stages applicable to any context or type of creative work. Distribution loses, in this case, its dynamic aspect and takes on an almost mechanical form. The cultural psychological model of distributed creativity developed in this book brings the situated nature of creative action to the fore and describes each instance of creativity as the interplay between actors, audiences, actions, artefact and affordances. Distributed creativity is, in this sense, at once patterned and flexible, constrained by the past and fundamentally open to the future.

References

Adams, F., & Aizawa, K. (2009). Why the mind is still in the head. In P. Robbins & M. Aydede (Eds.), *The Cambridge handbook of situated cognition* (pp. 78–95). New York, NY: Cambridge University Press.

Bateson, G. (1972). *Steps to an ecology of mind*. New York, NY: Ballantine Books.

Beardsley, M. C. (1965). On the creation of art. *The Journal of Aesthetics and Art Criticism, 23*(3), 291–304.

Bergson, H. (1911). *Creative evolution*. New York, NY: Henry Holt.

Bourdieu, P. (1993). *The field of cultural production*. Cambridge: Polity Press.

Brenner, M. (1980). The structure of action: Introduction. In M. Brenner (Ed.), *The structure of action* (pp. 1–27). Oxford: Basil Blackwell Publisher.

Brinkmann, S., & Tanggaard, L. (2010). Toward an epistemology of the hand. *Studies in Philosophy and Education, 29*(3), 243–257. doi:10.1007/s11217-009-9164-0

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.

Brower, R. (2003). Constructive repetition, time, and the evolving systems approach. *Creativity Research Journal, 15*(1), 61–72. doi:10.1207/S15326934CRJ1501_7

Bruner, J. (1990). *Acts of meaning*. Cambridge, MA: Harvard University Press.

Butler, K. (1998). *Internal affairs: Making room for psychosemantic internalism*. Dordrecht: Kluwer.

Button, G. (2008). Against 'distributed cognition'. *Theory, Culture & Society, 25*(2), 87–104. doi:10.1177/0263276407086792

Cash, M. (2013). Cognition without borders: "Third wave" socially distributed cognition and relational autonomy. *Cognitive Systems Research*, *25/26*, 61–71. doi:http://dx.doi.org/10.1016/j.cogsys.2013.03.007

Clark, A. (2008). *Supersizing the mind: Reflections on embodiment, action, and cognitive extension*. Oxford: Oxford University Press.

Clark, A., & Chalmers, D. (1998). The extended mind. *Analysis, 58*(1), 7–19. doi:10.1111/1467-8284.00096

Cole, M. (1996). *Cultural psychology: A once and future discipline*. Cambridge: Belknap Press.

Cole, M., & Engeström, Y. (1993). A cultural-historical approach to distributed cognition. In G. Salomon (Ed.), *Distributed cognitions: Psychological and educational considerations* (pp. 1–46). Cambridge: Cambridge University Press.

Csikszentmihalyi, M. (1988). Society, culture, and person: A systems view of creativity. In R. Sternberg (Ed.), *The nature of creativity: Contemporary psychological perspectives* (pp. 325–339). Cambridge: Cambridge University Press.

Dewey, J. (1934). *Art as experience*. New York, NY: Penguin.

Fusaroli, R., Gangopadhyay, N., & Tylén, K. (2013). The dialogically extended mind: Language as skilful intersubjective engagement. *Cognitive Systems Research*, in press, doi:http://dx.doi.org/10.1016/j.cogsys.2013.06.002

Gallagher, S. (2013). The socially extended mind. *Cognitive Systems Research*, 25/26, 4–12, doi:http://dx.doi.org/10.1016/j.cogsys.2013.03.008

Gardner, H. (1982). *Art, mind, and brain: A cognitive approach to creativity*. New York, NY: Basic Books.

Gardner, H. (1985). *The mind's new science: A history of the cognitive revolution*. New York, NY: Basic Books.

Geertz, C. (1973). *The interpretation of cultures*. New York, NY: Basic Books.

Giere, R. N. (2007). Distributed cognition without distributed knowing. *Social Epistemology: A Journal of Knowledge, Culture and Policy, 21*(3), 313–320. doi:10.1080/02691720701674197

Ginsburg, G. P. (1980). Epilogue: A conception of situated action. In M. Brenner (Ed.), *The structure of action* (pp. 313–350). Oxford, England: Blackwell.

Glannon, W. (2009). *Our brains are not us. Bioethics, 23*, 321–329. doi:10.1111/j.1467-8519.2009.01727.x

Glăveanu, V. P. (2013). Rewriting the language of creativity: The five A's framework. *Review of General Psychology, 17*(1), 69–81. doi:10.1037/a0029528

Glăveanu, V. P., & Gillespie, A. (2014). Creativity out of difference: Theorising semiotic, social and temporal gaps. In V. P. Glăveanu, A. Gillespie, & J. Valsiner (Eds.), *Rethinking creativity: Contributions from cultural psychology (forthcoming)*. London: Routledge.

Gruber, H. (2005). The creative person as a whole: The evolving systems approach to the study of creative work. In E. Gruber & K. Bödeker (Eds.), *Creativity, psychology and the history of science* (pp. 35–104). Dordrecht: Springer.

Gruber, H., & Davis, S. (1988). Inching our way up Mount Olympus: The evolving-systems approach to creative thinking. In R. Sternberg (Ed.), *The nature of creativity: Contemporary psychological perspectives* (pp. 243–270). Cambridge: Cambridge University Press.

Hutchins, E. (1995a). *Cognition in the wild*. Cambridge, MA: MIT Press.

Hutchins, E. (1995b). How a cockpit remembers its speed. *Cognitive Science, 19*, 265–288. doi:10.1207/s15516709cog1903_1

Hutchins, E. (2000). Distributed cognition. *IESBS Distributed Cognition*. Retrieved from http://files.meetup.com/410989/DistributedCognition.pdf

Hutchins, E. (2010). Cognitive ecology. *Topics in Cognitive Science, 2*, 705–715. doi:10.1111/j.1756-8765.2010.01089.x

Jahoda, G. (1992). *Crossroads between culture and mind: Continuities and change in theories of human nature*. New York, NY: Harvester Wheatsheaf.

Joas, H., & Kilpinen, E. (2006). Creativity and society. In J. R. Shook & J. Margolis (Eds.), *A companion to pragmatism* (pp. 323–335). Malden, MA: Blackwell Publishing.

John-Steiner, V., Connery, M. C., & Marjanovic-Shane, A. (2010). Dancing with the muses: A cultural-historical approach to play, meaning making and creativity. In M. C. Connery, V. John-Steiner, & A. Marjanovic-Shane (Eds.), *Vygotsky and creativity: A cultural-historical approach to play, meaning making, and the arts* (pp. 3–16). New York, NY: Peter Lang.

Keno, T. (2010). The "extended mind" approach for a new paradigm of psychology. *Integrative Psychological & Behavioral Science, 44*, 329–339. doi:10.1007/s12124-010-9128-5

Kirsh, D. (2006). Distributed cognition: A methodological note. *Pragmatics & Cognition, 14*(2), 249–262.

Krueger, J. (2013). Ontogenesis of the socially extended mind. *Cognitive Systems Research*, *25/26*, 40-46. doi:http://dx.doi.org/10.1016/j.cogsys.2013.03.001

LeDoux, J. (2002). *Synaptic self: How our brains become who we are*. New York, NY: Penguin Books.

Littleton, K., & Miell, D. (2004). Collaborative creativity: Contemporary perspectives. In D. Miell & K. Littleton (Eds.), *Collaborative creativity: Contemporary perspectives* (pp. 1–8). London: Free Associated Books.

Markus, H. R., & Hamedani, M. (2007). Sociocultural psychology: The dynamic interdependence among self systems and social systems. In S. Kitayama & D. Cohen (Eds.), *Handbook of cultural psychology* (pp. 3–39). New York, NY: The Guilford Press.

Mason, J. H. (2003). *The value of creativity: an essay on intellectual history, from Genesis to Nietzsche*. Hampshire: Ashgate.

Menary, R. (2006). Attacking the bounds of cognition. *Philosophical Psychology, 19*(3), 329–344. doi:10.1080/09515080600690557

Merritt, M., Varga, S., & Stapleton, M. (2013). Editorial introduction: Socializing the extended mind. *Cognitive Systems Research*, *25/26*, 1–3. doi:http://dx.doi.org/10.1016/j.cogsys.2013.03.003

Michaelian, K., & Sutton, J. (2013). Distributed cognition and memory research: History and current directions. *Review of Philosophical Psychology, 4*, 1–24. doi:10.1007/s13164-013-0131-x

Moran, S., & John-Steiner, V. (2003). Creativity in the making: Vygotsky's contemporary contribution to the dialectic of development and creativity. In R. K. Sawyer, et al. (Eds.), *Creativity and development* (pp. 61–90). Oxford: Oxford University Press.

Neuman, Y. (2003). *Processes and boundaries of the mind. Extending the limit line*. New York, NY: Kluwer Academic/Plenum Publishers.

Perry, M. (2013). Distributed cognition. In H. Pashler (Ed.), *Encyclopedia of the mind* (pp. 259–261). Thousand Oaks: Sage.

Poirier, P., & Chicoisne, G. (2006). A framework for thinking about distributed cognition. *Pragmatics & Cognition, 14*(2), 215–234.

Ratner, C. (1996). Activity as a key concept for cultural psychology. *Culture & Psychology, 2*, 407–434. doi:10.1177/1354067X9600200404

Rhodes, M. (1961). An analysis of creativity. *Phi Delta Kappan, 42*, 305–311.

Rogoff, B. (2003). *The cultural nature of human development*. Oxford: Oxford University Press.

Rowlands, M. (2010). *The new science of the mind: From extended mind to embodied phenomenology*. Cambridge, MA: MIT Press.

Rupert, R. D. (2010). Extended cognition and the priority of cognitive systems. *Cognitive Systems Research, 11*, 343–356. doi:10.1016/j.cogsys.2010.04.002

Salomon, G. (1993). No distribution without individuals' cognition: A dynamic interactional view. In G. Salomon (Ed.), *Distributed cognitions: Psychological and educational considerations* (pp. 111–137). Cambridge: Cambridge University Press.

Sawyer, R. K. (2000). Improvisation and the creative process: Dewey, Collingwood, and the aesthetics of spontaneity. *The Journal of Aesthetics and Art Criticism, 58*(2), 149–161.

Scribner, S. (1997). Mind in action: A functional approach to thinking. In M. Cole, Y. Engeström, & Vasquez, O. (Eds.), *Mind, culture, and activity: Seminal papers from the Laboratory of Comparative Human Cognition* (pp. 354–368). Cambridge: Cambridge University Press.

Shweder, R. (1990). Cultural psychology: what is it? In J. Stigler, R. Shweder, & G. Herdt (Eds.), *Cultural Psychology: Essays on comparative human development* (pp. 1–43). Cambridge: Cambridge University Press.

Smolucha, F. (1992). A reconstruction of Vygotsky's theory of creativity. *Creativity Research Journal, 5*(1), 49–67. doi:10.1080/10400419209534422

Sutton, J., Harris, C. B., Keil, P. G., & Barnier, A. J. (2010). The psychology of memory, extended cognition, and socially distributed remembering. *Phenomenology and the cognitive sciences, 9*(4), 521–560. doi:10.1007/s11097-010-9182-y

Tollefsen, D. P. (2006). From extended mind to collective mind. *Cognitive Systems Research*, *7*, 140–150. doi:http://dx.doi.org/10.1016/j.cogsys.2006.01.001

Toon, A. (2013). Friends at last? Distributed cognition and the cognitive/social divide. *Philosophical Psychology*. doi:10.1080/09515089.2013.828371

Vallée-Tourangeau, F., & Cowley, S. J. (2013). Human thinking beyond the brain. In S. J. Cowley & F. Vallée-Tourangeau (Eds.), *Cognition beyond the brain: Computation, interactivity and human artifice* (pp. 1–12). London: Springer.

Valsiner, J. (1997). *Culture and the development of children's action: A theory of human development*. New York, NY: John Wiley & Sons Inc.

Valsiner, J. (2013). *An invitation to cultural psychology*. New Delhi: Sage.

Valsiner, J., & Rosa, A. (Eds.). (2007). *The Cambridge handbook of sociocultural psychology*. Cambridge: Cambridge University Press.

Varga, S. (2013). The frames of cognition. *Cognitive Systems Research*, *25/26*, 54–60. doi:http://dx.doi.org/10.1016/j.cogsys.2013.03.004

Vygotsky, L. S. (1971). *The psychology of art*. Cambridge, MA: The MIT Press.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Edited by M. Cole, V. John-Steiner, S. Scribner & E. Souberman. Cambridge, MA: Harvard University Press.

Vygotsky, L. S. (2004). Imagination and creativity in childhood. *Journal of Russian and East European Psychology, 42*(1), 7–97.

Wertsch, J. V. (1998). *Mind as action*. New York, NY: Oxford University Press.

Wertsch, J. V., del Río, P., & Alvarez, A. (1995). Sociocultural studies: History, action, and mediation. In J. V. Wertsch, P. del Río, & A. Alvarez (Eds.), *Sociocultural studies of mind* (pp. 1–34). Cambridge: Cambridge University Press.

Wilson, R. (1986). *Experiencing creativity: On the social psychology of art*. New Brunswick: Transaction Books.

Winnicott, D. W. (1971). *Playing and reality*. London: Routledge.

Zhang, J., & Patel, V. L. (2006). Distributed cognition, representation, and affordance. *Pragmatics & Cognition*, *14*(2), 333–341. doi:http://dx.doi.org/10.1075/pc.14.2.12zha

Zittoun, T., Baucal, A., Cornish, F., & Gillespie, A. (2007). Collaborative research, knowledge and emergence. *Integrative Psychological and Behavioural Science, 41*, 208–217. doi:10.1007/s12124-007-9021-z

Chapter 3
Creativity and Sociality

As any craft, Easter egg decoration requires a period of apprenticeship. For many of the artisans in the village of Ciocăneşti learning to decorate started during childhood, when either a family member or a neighbour showed them how to hold the egg and chişiţă (the wooden tool with a metal pin at the end used to apply wax) and go through the different stages of decoration. Other decorators picked up the craft in the last years, when the community started celebrating this tradition and organising annual Easter festivals. Inspired by the activity of others and also the chance of having a small financial gain from this type of work, people either retook or learned to decorate at an adult age. Of course the material conditions of the craft changed significantly in the past two decades. Colour pigments are found easily and they don't need to be produced by the decorator, like in the old days, also there are people who sell already made chişiţe, natural wax and eggs of different sizes (including ostrich eggs).

Before the 1990s, Easter egg making was practiced in Ciocăneşti by a few people, most notably three women who are said to have kept the tradition alive. Ionela Ţăran told the story of how, as a child, she went with an egg in her hand to ask one of these decorators for help and remembers how surprised she was to be told to just take a pencil and draw whatever she can on the egg. Formal 'teaching' of the craft is brief and what matters most for folk artists is continuous supervised practice. This can be a bit frustrating for beginners who sometimes expect more guidance. This is also why most decorators agree that the key quality a person who wants to decorate needs to possess is not necessarily artistic skill but patience and love for the craft. Many eggs are initially 'ruined' by novices and only those who show perseverance continue working. 'When, dear God, will I be able to draw straight lines like you?' 'Be patient, after a thousand eggs', Maria Ciocan laughs retelling her first conversation with an expert decorator. But learning the material aspects of the craft is not enough. After acquiring the practice and in order to participate in festivals and belong to the community of artisans, the person also has to respect a certain canon of decoration. Many remember the teacher at the local school who spent long hours gathering young artisans and showing them what is specific for eggs in Ciocăneşti (e.g., black is traditionally chosen as a background colour, contrasting with the white, yellow and red of the motifs).

V. P. Glăveanu, *Distributed Creativity*, SpringerBriefs in Psychology,
DOI: 10.1007/978-3-319-05434-6_3, © The Author(s) 2014

In their turn, after gaining some experience, decorators start teaching others, initially family members who are interested and willing to help. Decoration work is *shared work*. The different stages of this activity (i.e., drawing motifs 'on white', 'on yellow', 'on red', etc.) make it ideal for distributing tasks and dividing the workload between more people. Different stages are associated with different levels of complexity; the most difficult is the beginning when most of the motif is depicted, while later phases are mainly based on 'filling' with wax. Children or novices can help with the latter, initially under supervision, then by themselves. The cultural transmission of the craft requires continuous social interactions between people of different ages and levels of expertise. Interestingly, it is not only children who are being taught but adults and Maria Ciocan, for instance, helped her mother learn the craft. In many cases though, children are the most receptive and often decorators have at least one child who they think might continue their work, a practice passed down from mother to daughter (men decorators are rare).

On the other hand, we need to keep in mind the fact that learning or perfecting the craft is a life-long activity, not reserved for particular ages or contexts. Artisans admit being constantly inspired by the work of others. 'If I see a (decorated) egg at someone else I quickly memorise it and then go home, I write the model down and make it' (Larisa Ujică). Patterns are also 'taken' from books, from decorated eggs bought from the festival or from the village's Museum of the Decorated Eggs. The common way of referring to this is to say that the craft is 'stolen' from others, alluding to the fact that most decorators protect their innovations and are not willing to 'give' their models away. On the other hand, all folk artists recognise the fact that no two identical eggs can ever be made (even by the same person) and therefore accusations of stealing are not justified. Each decorator develops, in time, his or her own style of work, easily recognisable by others.

An intricate dynamic between cooperation and competition marks the life of this craft and there is help from others but also envy and sometimes resentment. In the end, all the artisans compete for recognition, for example, gaining prizes at the festival, as well as financial rewards, reflected in the number of customers one can attract. There are social occasions in which artisans would like to have their products admired by others such as the religious sermon on Easter day when everyone brings painted eggs to church, a difficult situation since 'in the village there are 15–20 women who (professionally) decorate, but in the whole village there are 150 (who bring ornamented eggs)' (Maria Ciocan). Typically, decorators collaborate within the extended family and it is often the case that sisters or mothers and children share work and profits. When going outside of this circle to ask for new motifs or techniques of decoration they can be turned down and it is common for others to say there is nothing 'new' to show, or let a year pass before sharing 'novelties'. This does not stop artisans from trying to figure out by themselves the exact procedures behind certain types of decoration they like. This involves trial and error and a whole process of experimentation that can lead to unexpected results.

The creative value of a decorated egg does not reside, however, only in the act of making it and the collaboration taking place around it, but it fundamentally relates creators with a series of 'audiences'. The aesthetic taste of customers, both coming from inside and outside Romania, and their preferences cannot be ignored by artisans who, during their years of practice, learned very well what kind of Easter eggs to make for who and how to present them. At fairs, for instance, most of them demonstrate their craft and, especially people from outside the country, are surprised to see that this work is done by hand. There are also clear colour preferences to be kept in mind. For example, children and people from Romania tend to like red eggs, foreigners enjoy other colours as well (like blue, green, yellow, etc.), while locals and collectors want to have a 'Ciocăneşti egg', with a black background. Some folk artists can comment also on what people from different nations usually buy. Combinations of colour like green and yellow, red and yellow, blue and white are appreciated by German, Italian and French customers. Black is seen by most as a symbol of death and sorrow although in the popular tradition it stands for eternity and permanence. Decorators themselves might have their own preferences and many like heavily ornamenting the egg with an increased number of miniature patterns.

It is often the case that artisans produce different types of eggs (in terms not only of colouring style but technique) for different people and, most of all, they make a clear distinction between 'traditional' patterns, that cannot or should not be radically changed, and 'novelties' called for by the growing market. This separation is most obvious during the festival of the Decorated Egg organised in the village, where rules constrain folk artists to participate in the decoration contest only with traditional motifs while they continue to sell other types of eggs to visitors on the side. Traditional patterns, depicted on chicken eggs and not varnished at the end, are then judged by a committee made up of local authorities, artists and ethnographers from the region. This form of institutionalisation challenges the boundary between fine and folk art and gives 'experts' a privileged placed in the production of craft. Their views are not, however, passively incorporated by local artists who negotiate some of the norms in ways that constantly move tradition forward and add to it in a collective effort to keep it alive.

3.1 Creation as Co-creation

The example of Easter egg decoration is eloquently arguing for the social distribution of creativity. It is not only the case that egg decorators learn the craft from others, and teach other people in turn, but the views of others and dialogue with them (at the church, at the fair, at the local museum) are crucial for creative action. The standards for evaluating what is a 'good', 'beautiful', 'traditional' or 'creative' ornamented egg are grounded in communication between people, including experts and novices, or persons from other domains (e.g., ethnographers or priests). Social judgement is *not* a separate type of process from what we normally

think of as the creative process (see Runco 1999), an add-on to the 'real' work done by the person to produce novel and useful artefacts. When psychologists make this separation they are inclined to focus on the actual making of objects and ignore what happens to them later on, after they are finished and presented to others. Focusing on revolutionary outcomes that take a long time to be created and then an even longer time to be accepted by society, we might be tricked into believing that one type of activity has little to do with the other. In reality, creators are constantly sensitive to issues related to social validation as they perform the very acts we end up calling creative. Before the product is introduced to the social arena, the creator is the first to experience and evaluate it by trying to see it through the eyes of other people. Moreover, perceiving and validating new artefacts is itself a form of creative work based on (re)interpretation and the construction of meaning.

Easter egg decoration illustrates very well this dynamic. Artisans might often work alone, commonly at night when the day's tasks are all done, but this does not mean that their creative action is not socially distributed. They do not exist in an a-social state but, in their work, they account for the taste and preferences of their customers; moreover, they frequently check with those closest to them the progress of the work and, as we saw in the introduction, try to take 'inspiration' from other decorators and their products. For as beautiful or intricate as it may be, their work is therefore *never* completely personal (in the sense of restricted to individual attributes) but shared, interpersonal. This is what Barron (1999, p. 49) also argued when he took co-creation, mutuality and collaboration to be the mark of *all* creative acts. What he was challenging was the theory of the Single Creator, a misleading view that associates creativity with what is going on in the mind of isolated individuals. It becomes thus crucial to ask, together with Bourdieu, who creates the 'creator'?

> The 'charismatic' ideology which is the ultimate basis of belief in the value of a work of art (…) It is this ideology which directs attention to the *apparent producer*, the painter, writer or composer, in short, the 'author', suppressing the question of what authorizes the author, what creates the authority with which authors authorize (Bourdieu 1986, p. 133).

To ground creativity inside the person of the 'apparent producer' is a way of denying its social distribution. While Bourdieu successfully argued that we should question what makes the creative actor an 'author', which is a very important topic of inquiry, I am of the opinion that the producer (the agent who initiates and sustains creative action) is not only apparently doing the creating. To fight against the Single Creator and subjectivist positions that 'overplay the role of self and downplay the role of the other' (Benson 1993, p. 4) does not mean to exclude the creator altogether. It is important to recognise therefore the fact that the person *does* create but not in isolation since creative action 'extends' into the world of other people. These others (referred to as audiences in Chap. 2) can and do play multiple roles in relation to an actor's creative expression: they can be collaborating to produce the outcome, they can be critical of it and try to censure its transmission, they can use in more or less original ways, they can give advice to

the creator throughout the activity, etc. In each case, it is not simply an 'external' influence that is internalised by the creative agent: processes of *interaction and communication* are part and parcel of what it means to create and effectively contribute to the final outcome.

To understand how this is so we can take examples from art and, in particular, follow Howard Becker's (2008) exploration of what he termed the 'art-world'. The main idea behind his discussion is that artistic production relies on a network of people and is informed by cultural conventions and resources. Becker placed this conception in opposition to the image of the genius (what I call the He-paradigm; Glăveanu 2010a). Against this view, he proposed a vision of art as *collaborative activity*, the result of an interplay between the person of the 'artist' (who gets credited as the author) and a multitude of other people Becker called 'support personnel'. The latter choice of term is not meant to diminish their contribution in any way but points to how we usually think about anyone other than the creator assisting the production of a work of art. Whether cooperation is ephemeral or is part of an actual work routine, 'every art (…) rests on an extensive division of labor' (Becker 2008, p. 13). Even in those situations in which the artist paints in complete solitude all the tools at his or her disposal have a social origin, an important point in favour of the distribution of creative action. According to Becker, creative actors recognised as 'authors' of a certain work are those who occupy a central position within a network of cooperating people. This ultimately raises a thought-provoking question: how do we decide *who* is the artist and who is only support personnel (Becker 2008, p. xxiv)? In line with my own critique of cognitive approaches to the distributed mind (see Chap. 2), I tend to consider this a misleading question since it takes us back to the idea of clear and fixed boundaries defining static roles. In reality, creators and audiences are *both* agents and observers of creative action as it unfolds in time.

Becker's influential work has inspired and continues to inspire research that shares the assumption that 'creative individuals are embedded within specific network contexts so that creativity itself, rather than being an individual personality characteristic is, instead, a collective phenomenon' (Giuffre 2009, p. 1). Interestingly, this conception has not been only applied to art (both fine and folk art), but is paralleled by a similar move trying to deconstruct the myth of the lonely scientist. Science is an interesting example because the aura of individuality and eminence associated with popular figures such as Newton or Einstein tends to obscure the fact that scientific production is, in fact, a deeply collaborative form of activity. Scientists are not only immersed into the work of others through the latest debates in their field, but they are also typically part of research teams, often holding overlapping memberships in multiple groups and relating to global networks (see Glăveanu et al. 2013). And yet, we are frequently pushed back, when watching award ceremonies or reading media descriptions about scientific discoveries, to the idea that individuals make science advance rather than teams. It is easier to raise a monument for a single person or, to use a dramaturgical metaphor:

> The role of genius, like the role of follower, or of intellectual crank, are masks donned for one's place in the show. Though intellectual history is written in a discourse of individuals, they are only the façade, the glamorous images of the advertisements that surround the theatre; inside, it is truly the networks who are the actors on the stage (Collins 2007, p. 165).

The sociological perspective on creativity in science developed by Collins (2007) echoes many of Becker's points about art. In addition, we have in this case a greater focus on the organisation of the network. In this account, ideas and emotional states 'flow' within the network both 'vertically' (from one generation to the next) as well as 'horizontally' (among contemporaries). These chains of communication make some ideas become the centre of attention and debate, leading to *emergent processes*. What we call 'great thinkers' according to Collins are in fact people 'who are in those places in the networks where these transformations take place. In this sense, the great thinkers are those who get credit for what happens in the network, who come to symbolize what the network does' (p. 159). This fundamental notion that networks actually do the creating is interesting but needs to be unpacked further otherwise it risks simply replacing the 'box' of the individual with the one of the group (for a recent, promising discussion see Gaggioli et al. 2013). Cultural psychology's concern for action solves this problem by affirming the simultaneously individual and social nature of creating a change in the world. Proposing a view of distributed creativity precisely helps us overcome the old dichotomy of the 'inside' and the 'outside' and place creative action in the relational space created by the person's encounter with its social (and material, see Chap. 4) environment.

Collins is not alone in challenging the individual locus of creativity in science. Schaffer (1994) was also concerned with the way we make up discoveries and attribute them to a 'culture hero' (p. 19). The myth of the genius is in need of demystification and this process has been going on in sociology and other social sciences for decades. How much of this debate entered psychology? Disappointingly little, unfortunately. Taking an intra-psychological perspective, useful also to differentiate psychology from other social sciences, led researchers to ask, in relation to the topic of creativity and sociality, more concrete (and narrow?) questions. One clear point of concern was and still is to a great extent the question of *whether individuals are more creative than groups*. This sound like a valid empirical interrogation and can be useful to ask particularly in relation to the multiple contexts in which people are placed together in work groups (in education, organisations, etc.). The surprising finding from this line of research, however, is that, in fact 'groups may inhabit intellectual activity or optimal performance' (Paulus and Nijstad 2003, p. 4), a result that has received much support in the literature (see Paulus 2000; Paulus et al. 2006). This discovery is slightly counter-intuitive if we consider what has been said above concerning the role of others in creative action and the main argument that any act of creation is, in essence, one of co-creation. There are at least three types of critique in relation to group creativity studies that I will briefly articulate below (for more details see Glăveanu 2011):

1. To begin with, the experimental setting in which most group creativity studies take place is generally *dissimilar* to everyday life contexts. As Moran and John-Steiner (2003, p. 82) note, these findings 'reflect an experimental design that throws strangers together and does not allow time for trust and complementarity to emerge'. Take for instance the task of brainstorming, a fairly common procedure proposed by Osborn (1957) to enhance team creativity. Participants are encouraged to create an atmosphere that excludes the critical evaluation of ideas and sustain it throughout the meeting. Research conditions are standardised and there is little, if any, accounting for the contextual factors intrinsic to any group situation or for the participants' interpretations of their experience.
2. A related aspect has to do with the fact that group creativity experiments follow a *non-developmental* logic (see also Valsiner 1997). There is almost no concern for what happens before the group meeting or after it. Since nobody actually applies the ideas they generate there is no sense of continuity for the group, something that can make many participants feel disengaged. In real-life, collaborations take a long time to be established and partners sometimes go through years of working side by side before they have a moment of breakthrough (John-Steiner 1992). Such a long period of maturation of creative ideas—the equivalent of distribution in time—is not permitted by the design of experimental studies and neither is a focus on how ideas are implemented. Surely further creative action is required at the group level when turning a new idea into reality and observing its consequences.
3. Finally, at a methodological level what is most surprising about group creativity experiments is the fact they actually *do not study interaction*. Much of what is going on between people is missed by the researchers who are more concerned with how to organise the different conditions and how to evaluate the outcomes of group work. This stands in sharp contrast to socio-cultural studies of collaborative creativity, for example, in the much more mundane conditions of playing in a jazz band (Sawyer 1992; Montuori 2003). These latter studies uncover the ways in which social interaction has emergent properties and collaboration requires both structure and openness for creative outcomes to be generated. Sadly, the focus in brainstorming and other similar tasks is on ideas (the product) and the conditions leading to them. Processes are inferred at best and generally psychologists give up analysing interaction as it is a very time consuming research task.

3.2 The Social Construction of Creativity

One of the key arguments in support of the thesis of (socially) distributed creativity relates to the fact that no creative act is complete without its *appreciation* and this appreciation requires interaction with other people. Such an understanding does

not exclude creative action which is not made 'public' or seems to take place in the 'mind' of the creator. Standards of evaluation, having a social origin, are internalised by the creator and play an active role in the creative process. The meaning and value of creativity, when applied to any person, object, process, context and so on, requires self–other interaction and is informed by societal discourses.

In Chap. 2 I proposed a creativity framework in which the sociality axis of actor–audience is integral to the creative act. In the section above we saw why collaboration and dialogue with others (people, groups, communities) shapes the course of one's action and the final outcome. Here, I will complement this argument by focusing on distributed meaning-making processes between creators and their audience(s). If we return to the example of art we need to note, as Becker does, that 'art worlds produce works and also give them aesthetic value' (Becker 2008, p. 39) and it is precisely the interaction between all the parties involved that generates a shared sense of worth regarding what is being produced. Of course, institutionally, the art world is sustained by groups of people who legitimate its existence (i.e., critics, collectors, museum curators, gallery owners, etc.), but it is also the case that each and every person coming in contact with artistic artefacts participates in this construction of meaning by making aesthetic judgements. Becker is right to state in this regard that, from such a perspective, aesthetics becomes an activity rather than a static body of doctrine (p. 131). The institution of the work of art was of interest for Bourdieu (1993), who placed it within a larger field of cultural production. In this sense, 'every work is, so to speak, made twice, by the originator and by the beholder, or rather, by the society to which the beholder belongs' (p. 224).

This idea might be well established in sociology but it troubles many psychologists who would rather *separate* creativity from reputation on the basis of making its study more manageable. One of the big concerns for these authors is that, 'if one makes the definition of creativity depend on the evaluation by the field, the term may lose much of its meaning' (Weisberg 1993, p. 245). When studying creativity from a positivistic perspective it is important to be able to pin down the meaning of the concept and make it operational and stable. The dynamic and social nature of reality though in the case of creativity raises insurmountable problems for experimental science. In the words of Runco:

> Creativity can be kept distinct by defining it in terms of novelty and aesthetic appeal rather than social value and impact. Novelty and aesthetic appeal can be defined for individuals; reputation cannot. This distinction makes for good science in the sense of parsimony and in terms of explanatory power. Parsimony is satisfied because this definition is more specific than one that requires the additional impact or reputation component, and power is increased because a wide range of behaviors is kept under the creativity umbrella, including personal, childhood, everyday, and potential creativity (Runco 1999, p. 242).

There are several misconceptions packed into statements like this one. To begin with, the separation between novelty and value can only be artificial as judgements about value are an intrinsic part of any action to create novelty. Second, such a distinction makes for 'narrow' instead of 'good' science and a scientific account of creativity that is unable to recognise its distributed nature is partial at best,

misleading at worst. Third, the quest for parsimony and explanatory power is legitimate but not at the expense of mutilating the phenomenon under study. Disconnecting the 'making' and 'evaluation' parts of creative action leads to an exclusive focus on the individual outside of its socio-cultural context; it also reveals a static conception that fails to see their continuity and, often, their simultaneity. Most of all, this kind of perspective is based on the erroneous assumption about social value that locates reputation and impact at the societal level. This explains the claim that, if we are to ignore this aspect, we will be able to recognise everyday life forms of creative expression, including the creativity of children. But are children's productions, for as ephemeral as they might be, outside of social appreciation and the attribution of value? Why cannot social impact and reputation be observed at the more micro-levels, within the social ecology of families and schools for instance?

A cultural psychological perspective on creativity (see Chap. 2) takes such a broad stance and tries to create bridges between institutional forms of social recognition and the validation of one's work taking place at interpersonal level (and even at the intra-personal one). The core of this idea is present in systemic models, despite the fact that they tend to focus almost exclusively on the societal production of creativity. Csikszentmihalyi's (1988, 1999) work is emblematic in this regard and remains, to this day, a key source for anyone working within the social psychology of creativity. Similar to Vygotsky, he starts from the premise that we cannot separate creative individuals and their works from the social and historical context in which they create and that creative action is never the result of a single person. For Csikszentmihalyi creativity is produced within the dialogue between three inter-related factors:

1. The field, made up of experts and gatekeepers who select from what the individual produces those outcomes that are considered worth preserving.
2. The domain, or the area of culture creative outcomes contribute to and from which, trough processes of accumulation and transmission, they become available to future creators.
3. The individual who brings about change within the cultural domain, change that the field will (ultimately if not at first) validate as creative.

As such, when asking the question 'what is creativity?', Csikszentmihalyi's (1988, p. 326) answer is 'a phenomenon that results from the interaction between these three systems' and would become impossible without any of them. This radical socialisation of creativity is essential for any account of distributed creative action, a premise supported as well by other authors such as Gardner (1994) and Nijstad and Paulus (2003). It is also intrinsic to the framework of creativity proposed in this book, where actors create in relation to audiences and they are both embedded within culture. However, systemic models, at least in their classic form, end up offering an *institutional reading of culture*. Following his theory to its last consequences, Csikszentmihalyi (in Sawyer et al. 2003) ends up denying children's creativity on the basis of there being no field or domain to judge such forms

of expression. Instead of adopting 'a more fluid and provisional notion of domains and fields' (Jones 2009, p. 65), his theory ultimately builds social walls that are too hard to climb by most of our everyday outcomes and actions. The cultural production of creativity does not require fully formalised fields, it just depends on the existence of audiences to consider the new artefact, interpret and 'use' it.

Take the example of students at school producing prints and other artistic outcomes. Gabrielle Ivinson considered in her research how the notion of art is constructed in this micro-social system in ways that either encourage students to continue artistic work or, often enough, prevent them from building an 'artist' identity. Students themselves, their peers, teachers and families all contribute to the validation of these productions and 'anchor art objects within their own hierarchically structured systems of meaning [where] objects acquire values, such as good, bad, weird, creative, funny and strange, and such meanings may be expressed in different ways' (in Zittoun et al. 2003, p. 431). Social recognition in this case does not require art critics or gallery curators assessing the quality of the outcomes but is expressed within communication and action by all the actors involved. For instance, teachers offer a mark and parents can frame the artistic outcome and place it on the wall and this gives students some concrete way of relating to their own artwork. A similar situation is specific for craft and in the example of Easter egg decoration presented at the beginning of the chapter we could see how this domain is on the way to becoming institutionalised (through the existence of a museum, competitions at the annual festival, etc.) but the creative value of a decorated egg remains negotiated at the more micro-levels of social interaction between artisans and customers. What both these examples point to as well is the possibility of *conflicting* interpretations and discrepancies between people and groups about what should be considered new, significant, or creative.

Unfortunately, within the psychology of creativity it is precisely the heterogeneity of social voices contributing to practices of evaluation that is overlooked. One of the most influential and widely used methodologies within this area today is the Consensual Assessment Technique (CAT), proposed by Teresa Amabile (1996) as a central component of her 'social psychology of creativity'. In an effort to show how the assessment of creativity is culturally and historically bound, Amabile advocated for a consensus definition of the creative outcome which asserts that 'a product or response is creative to the extent that appropriate observers independently agree it is creative' (Amabile 1996, p. 33). In essence, the application of CAT starts from selecting a task that leads to an observable product or response, is open-ended enough to allow flexibility and novelty in responses, and does not depend too much on specialised skills. Then the outcomes are presented to a panel of independent expert raters who, in the absence of a formal definition of creativity, are asked to make a hierarchy between the outcomes. Their convergence is calculated at the end and a final ordering of the products emerges. Over years of applying this technique, researchers agree that 'product creativity can be reliably and validly assessed based on the consensus of experts' (Hennessey 2003, p. 257) and there is on-going research dedicated to CAT and its application (see Kaufman et al. 2007; Hennessey et al. 2011).

One clear benefit of this approach is that it can be relatively easily applied and it stresses the role of social agreement for the construction of creative value. It is also based on the product and this makes things easier in terms of collecting and analysing data. However, there are several problematic aspects when it comes to both the procedure itself and its theoretical consequences. To start with, just as with group creativity studies, there is little interest for *how* actually judges reach their conclusions about the creativity of an artefact. Wagoner and Valsiner (2005) revealed, through a microgenetic study of rating a Likert scale, that any assessment is based on an internal dialogue between different positions. CAT demands independent ratings and there are no opportunities of eliciting such dialogues, despite the fact that real-life situations are described by interaction between people. The opinion of the creator and his or her interpretation of its outcomes are also essential in everyday contexts; CAT research, however, shows that author judgement is biased and should not be incorporated in the evaluation (Kaufman et al. 2009). But above all, the main issue is that researchers who use this technique are not particularly interested in the aspect of social interaction, they simply want to have the outcome of the evaluation process and, most importantly, to reach consensus. It is this quest, inscribed in the name of the procedure itself that is most problematic from an epistemological point of view. The assumption that individuals can agree on what is creativity when they see it ends up, paradoxically, in *reifying* this phenomenon instead of making it social-relational, contextual and dynamic. It also enforces hierarchies of knowledge by prioritising expert judgement. Through the selection of a homogenous group of experts we are also incapable, using CAT, to understand how social judgement might vary across communities of evaluators (for an alternative formulated as 'multiple feedback' see Glăveanu 2010b, 2012).

In conclusion, we can agree with Dewey's (1934, p. 49) insight regarding art that 'perfection in execution cannot be measured or defined in terms of execution; it implies those who perceive and enjoy the product that is executed' (Dewey 1934, p. 49). The social distribution of creativity articulates the two fundamental roles of maker and perceiver and, more than this, makes them *interchangeable*. For to perceive any new artefact means to create an experience, in Dewey's terms. It is a creative work of investing the object with meaning and this meaning has the potential to shape the generation of future artefacts as well as their use. Whereas the viewer is not remaking the artefact in any literal sense, to perceive still means to select, simplify, abstract, condense, etc., and this creates a strong form of distribution of creative work between actors and audiences. Dewey's idea that a piece of art is recreated each time it is experienced resonates in Eco's (1989) description of the 'open work'. What this account adds to the above is the notion that creators themselves never finish or complete a product and creative activity has a continuity in time that transcends the individual person of the maker. Creative artefacts are integrated into the social and cultural arena in a permanent state of unfinishedness that calls for new interpretations within each 'performance' or 'reading'. Interestingly, creators themselves are typically the first to confront their own product and this gives them the unique position of being audiences to their own emerging creations.

3.3 The Creative Self as Other

In Chap. 2 , I presented a framework of distributed creativity that operates with five key elements—actors, audiences, action, artefacts and affordances—and focuses on their inter-relation. This framework was grounded in the idea of difference, for instance the fact that actors and audiences occupy different social (even physical) positions. To understand this better consider a scenario in which self and other are not differentiated from each other. In this situation there is no possibility for diversity of action or opinion. Moreover, there would be no need to appreciate creative outcomes since views would never diverge (the 'ideal' case for the consensual techniques discussed before). Creative action and its social distribution are, therefore, facilitated by this 'confrontation' with otherness. Interestingly though, the other does not disappear when the creator is alone. If we go back to arguments regarding the extended mind (Chap. 2) we find a concern for coupled systems that include the person as an external element. According to the logic of cognitive science, if the external element is not readily available (Clark 2008) then no distribution takes place. In contrast, a cultural psychological approach argues that the social is not an on and off switch that one can operate at will (Slater 1991). The *human mind itself is social* and this means that the difference in social position and perspective mentioned above exists 'within' as well as 'outside' the person. In this sense, the creative actor is at once embodying other voices that contribute, in their polyphony, to the shaping of creative action.

The origins of this internal dialogue can be found in the acts of collaboration and co-creation discussed in Sect. 3.1. In fact, learning through apprenticeships, something that is not only specific for craft but marks the developmental trajectory of every human activity to some degree (see Rogoff 1995), fosters the emergence of a social mind. When the person is acquiring new ways of acting in the world or new knowledge, these skills and this knowledge remain imprinted by their social context. There is no knowledge creators use, for instance, that comes from 'nowhere'; it remains located within certain social positions or perspectives the creator is more or less consciously aware of. Against proclaiming the 'death of the author' (Burke 1992) by dissipating the mind into discourses acquired from the social arena and reproduced by the person, the cultural approach considers the mind 'a hotbed of tactical and relational improvisation' (Ingold and Hallam 2007, p. 9). Being able to adopt certain social discourses and recognise the position they are 'speaking' from, the creative actor remains an *agent* capable of selecting, combining or denying certain perspectives (e.g., artisans can comment on how ethnographers see the craft without necessarily agreeing with their views). The psychology of creativity would benefit from taking into account the acquisition and transformation of social perspectives performed in creative acts.

The consequence of adopting a social mind view in creativity theory would be to recognise, together with Becker (2008, p. 200) that individuals 'create their world, at least in part, by anticipating how other people will respond, emotionally and cognitively, to what they do'. The craft of egg decoration illustrates very well

this statement as artisans are concerned at all times with how their products will be received. They can put themselves in the position of their customers and see their own artefacts thought their eyes. This "capacity of the human mind to conceive, create and communicate about social realities in terms of the '*Alter*'" (Marková 2003, p. xiii) is more pervasive than examples of creative action. A strand within the socio-cultural approach known as dialogical self-theory (see for instance Hermans 2001) starts from the basic assumption, illustrated by Marková, that self–other positions are reversible. This goes beyond theory of mind ideas about us being able to understand the mental or emotional states of others. It places dialogue between multiple social positions at the centre of our thinking and, I will argue here together with Barrett (1999), at the centre of our capacity to create. For Barrett, knowledge creation is 'an inherently social-dialogical process' (p. 133), it relies on our capacity to see the world as others would and to be in dialogue with this 'external' perspective. Indebted to the writings of Soviet thinkers such as Lev Vygotsky and Mikhail Bakhtin, dialogical theory makes distribution an '*internal*' affair as well, not only something that happens between people. In the words of Grossen, 'the originality of a dialogical approach is (…) to consider that an interaction is a place of tensions between different temporalities, spaces, identities, third-parties and present participants' (Grossen 2008, p. 248).

One of the most eloquent descriptions of the dynamic movement between the position of the self and that of the other within creative work was offered by the pragmatist philosopher and psychologist John Dewey in his book 'Art as experience'. Dewey defined experience as the encounter between person and world in which the individual acts ('doing') and perceives the reaction of the world towards his doing ('undergoing'). If we think about a painter working on a canvas we will notice an alternation between applying colour and standing back to look at the emerging picture. At this micro level of action there are two positions being exchanged: that of actor and that of audience, of maker and perceiver. In other words, 'the artist embodies in himself the attitude of the perceiver while he works' (Dewey 1934, p. 50). Taking a more prosaic example, I am writing this chapter and, while writing, I stop and read back the paragraphs having readers in mind in ways that hopefully help me appreciate if the text is easily understandable or not. Why are we capable of changing positions while working? Because our action performed from the position of a creative actor does not exclude the fact that we are also audience members for the creation of others, in fact it fully relies on this. I can, for instance, evaluate my text based on my experience of being the reader of other texts, including my own. In this sense, we are *both speakers and listeners* and, just as it happens in everyday life, we speak and listen virtually at the same time. In Dewey's example about art:

> There is the speaker, the thing said, and the one spoken to. The external object, the product of art, is the connecting link between artist and audience. Even when the artist works in solitude all three terms are present. The work is there in progress, and the artist has to become vicariously the receiving audience. He can speak only as his work appeals to him as one spoken to through what he perceived. He observes and understands as a third person might note and interpret (Dewey 1934, p. 111).

This kind of understanding has deep consequences for creativity theory as it pushes the boundaries of distribution *internally* (at an intra-psychological level) while bridging the two sides of collaborative creativity and social evaluation discussed before. One central question in relation to creativity and sociality was to understand how it is possible to articulate creative action and its evaluation without making them two separate moments or considering them always performed by two different people: creative actors on the one side and audiences on the other. The multiple positions one can take with reference to the same work exploit self–other differences and are as much part of the social world as they are of the thinking processes of the creator. It is precisely the idea of distribution that comes to help us connect these two sides of the same coin and observe the continuities in social position and discourse between individual, group and society. Returning to Vygotsky's dissertation on art, we are not better equipped to understand one of its main claims: 'Art is the social within us, and even if its action is performed by a single individual, it does not mean that its essence is individual. (…) The social also exists where there is only one person with his individual experiences and tribulations. This is why the action of art (…) is a social action' (Vygotsky 1971, p. 249).

References

Amabile, T. M. (1996). *Creativity in context*. Boulder: Westview Press.

Barrett, F. (1999). Knowledge creating as dialogical accomplishment: A constructivist perspective. In A. Montuori & R. Purser (Eds.), *Social creativity* (Vol. I, pp. 133–151). Cresskill, NJ: Hampton Press.

Barron, F. (1999). All creation is a collaboration. In A. Montuori & R. Purser (Eds.), *Social creativity* (Vol. I, pp. 49–59). Cresskill, NJ: Hampton Press.

Becker, H. S. (2008). *Art worlds. Updated and expanded*. Berkeley: University of California Press.

Benson, C. (1993). *The absorbed self: Pragmatism, psychology and aesthetic experience*. New York: Harvester Wheatsheaf.

Bourdieu, P. (1986). The production of belief: Contribution to an economy of symbolic goods. In R. Collins, J. Curran, N. Garnham, P. Scannell, P. Schlesinger, & C. Sparks (Eds.), *Media, culture & society: A critical reader* (pp. 131–163). London: Sage.

Bourdieu, P. (1993). *The field of cultural production*. Cambridge: Polity Press.

Burke, S. (1992). *The death and return of the author: Criticism and subjectivity in Barthes, Foucault and Derrida*. Edinburgh: Edinburgh University Press.

Clark, A. (2008). *Supersizing the mind: Reflections on embodiment, action, and cognitive extension*. Oxford: Oxford University Press.

Collins, R. (2007). The creativity of intellectual networks and the struggle over attention space. In A. Sales & M. Fournier (Eds.), *Knowledge, communication and creativity* (pp. 156–165). London: Sage Publications.

Csikszentmihalyi, M. (1988). Society, culture, and person: A systems view of creativity. In R. Sternberg (Ed.), *The nature of creativity: Contemporary psychological perspectives* (pp. 325–339). Cambridge: Cambridge University Press.

Csikszentmihalyi, M. (1999). Implications of a systems perspective for the study of creativity. In R. Sternberg (Ed.), *Handbook of creativity* (pp. 313–335). Cambridge: Cambridge University Press.

Dewey, J. (1934). *Art as experience*. New York: Penguin.

Eco, U. (1989). *The open work*. Cambridge: Harvard University Press.

Gaggioli, A., Riva, G., Milani, L., & Mazzoni, E. (2013). *Networked flow: Towards an understanding of creative networks*. Dordrecht: Springer.

Gardner, H. (1994). The creators' patters. In M. Boden (Ed.), Dimensions of creativity (pp. 143–158). London: MIT Press/Badford Books.

Giuffre, K. (2009). *Collective creativity: Art and society in the South Pacific*. Surrey: Ashgate Publishing.

Glăveanu, V. P. (2010a). Paradigms in the study of creativity: Introducing the perspective of cultural psychology. *New Ideas in Psychology*, *28*(1), 79–93. Retrieved from http://dx.doi.org/10.1016/j.newideapsych.2009.07.007

Glăveanu, V. P. (2010b). Creativity in context: The ecology of creativity evaluations and practices in an artistic craft. *Psychological Studies,* 55(4), 339–350. doi:10.1007/s12646-010-0056-8

Glăveanu, V. P. (2011). How are we creative together? Comparing sociocognitive and sociocultural answers. *Theory & Psychology,* 21(4), 473–492. doi:10.1177/0959354310372152

Glăveanu, V. P. (2012). A multiple feedback methodology for the study of creativity evaluations. *Journal of Constructivist Psychology, 25*(4), 346–366. Retrieved from http://dx.doi.org/10.1080/10720537.2012.651344

Glăveanu, V., Lubart, T., Bonnardel, N., Botella, M., de Biaisi, P.-M., Desainte-Catherine, M., et al. (2013). Creativity as action: Findings from five creative domains. *Frontiers in Psychology,* 4/176, 1–16. doi:10.3389/fpsyg.2013.00176

Grossen, M. (2008). Methods for studying collaborative creativity: An original and adventurous blend. *Thinking Skills and Creativity, 3*, 246–249. Retrieved from http://dx.doi.org/10.1016/j.tsc.2008.09.005

Hennessey, B. (2003). The social psychology of creativity. *Scandinavian Journal of Educational Research, 47*(3), 253–271. doi:10.1080/00313830308601

Hennessey, B. A., Amabile, T. M., & Mueller, J. S. (2011). Consensual assessment. In M. A. Runco & S. R. Pritzker (Eds.), *Encyclopedia of Creativity* (2nd ed., Vol. 1, pp. 253–260). San Diego: Academic Press.

Hermans, H. J. M. (2001). The dialogical self: Toward a theory of personal and cultural positioning. *Culture & Psychology, 7*(3), 243–281. doi:10.1177/1354067X0173001

Ingold, T., & Hallam, E. (2007). Creativity and cultural improvisation: An introduction. In E. Hallam & T. Ingold (Eds.), *Creativity and cultural improvisation* (pp. 1–24). Oxford: Berg.

John-Steiner, V. (1992). Creative lives, creative tensions. *Creativity Research Journal, 5*(1), 99–108. doi:10.1080/10400419209534426

Jones, K. (2009). *Culture and creative learning: A literature review*. Newcastle: Creativity, Culture and Education.

Kaufman, J. C., Lee, J., Baer, J., & Lee, S. (2007). Captions, consistency, creativity, and the consensual assessment technique: New evidence of reliability. *Thinking Skills and Creativity, 2*, 96–106. doi:10.1016/j.tsc.2007.04.002

Kaufman, J. C., Baer, J., & Cole, J. C. (2009). Expertise, domains, and the consensual assessment technique. *Journal of Creative Behavior, 43*(4), 223–233. doi:10.1002/j.2162-6057.2009.tb01316.x

Marková, I. (2003). *Dialogicality and social representations: The dynamics of mind*. Cambridge: Cambridge University Press.

Montuori, A. (2003). The complexity of improvisation and the improvisation of complexity: Social science, art and creativity. *Human Relations, 56*(2), 237–255.

Moran, S., & John-Steiner, V. (2003). Creativity in the making: Vygotsky's contemporary contribution to the dialectic of development and creativity. In R. K. Sawyer, et al. (Eds.), *Creativity and development* (pp. 61–90). Oxford: Oxford University Press.

Nijstad, B., & Paulus, P. (2003). Group creativity: Common themes and future directions. In P. Paulus & B. Nijstad (Eds.), *Group creativity: Innovation through collaboration* (pp. 326–339). New York: Oxford University Press.

Osborn, A. F. (1957). *Applied imagination*. New York: Scribner.

Paulus, P. (2000). Groups, teams, and creativity: The creative potential of idea-generating groups. *Applied Psychology: An International Review, 49*(2), 237–262. doi:10.1111/1464-0597.00013

Paulus, P., & Nijstad, B. (2003). Group creativity: An introduction. In P. Paulus & B. Nijstad (Eds.), *Group creativity: Innovation through collaboration* (pp. 3–11). New York: Oxford University Press.

Paulus, P., Nakui, T., & Putman, V. (2006). Group brainstorming and teamwork: Some rules for the road to innovation. In L. Thompson & H.-S. Choi (Eds.), *Creativity and innovation in organizational teams* (pp. 69–86). Mahwah: Lawrence Erlbaum Associates.

Rogoff, B. (1995). Observing sociocultural activity on three planes: Participatory appropriation, guided participation, and apprenticeship. In J. V. Wertsch, P. del Rio, & A. Alvarez (Eds.), *Sociocultural studies of mind* (pp. 139–164). Cambridge: Cambridge University Press.

Runco, M. (1999). Creativity need not be social. In A. Montuori & R. Purser (Eds.), *Social creativity* (Vol. I, pp. 237–264). Cresskill, NJ: Hampton Press.

Sawyer, R. K. (1992). Improvisational creativity: An analysis of jazz performance. *Creativity Research Journal*, *5*(3), 253–263. doi:10.1080/10400419209534439

Sawyer, R. K., John-Steiner, V., Moran, S., Sternberg, R., Feldman, D. H., Nakamura, J., et al. (2003). Key issues in creativity and development. In R. K. Sawyer, et al. (Eds.), *Creativity and development* (pp. 217–242). Oxford: Oxford University Press. Prepared by all authors.

Schaffer, S. (1994). Making up discovery. In M. Boden (Ed.), *Dimensions of creativity* (pp. 13–51). London: MIT Press/Badford Books.

Slater, P. (1991). *A dream deferred. America's discontent and the search for a new democratic ideal*. Boston: Beacon Press.

Valsiner, J. (1997). *Culture and the development of children's action: A theory of human development*. New York: Wiley

Vygotsky, L. S. (1971). *The psychology of art*. Cambridge: The MIT Press.

Wagoner, B., & Valsiner, J. (2005). Rating tasks in psychology: From static ontology to dialogical synthesis of meaning. In A. Gülerce, A. Hofmeister, I. Staeuble, G. Saunders, & J. Kaye (Eds.), *Contemporary theorizing in psychology: Global perspectives* (pp. 197–213). Toronto: Captus Press.

Weisberg, R. (1993). *Creativity: Beyond the myth of the genius*. New York: W.H. Freeman and Co.

Zittoun, T., Duveen, G., Gillespie, A., Ivinson, G., & Psaltis, C. (2003). The use of symbolic resources in developmental transitions. *Culture & Psychology, 9*(4), 415–448. doi:10.1177/1354067X0394006

Chapter 4
Creativity and Materiality

It may sound trivial to state that craftwork is a material practice but this observation is significant when focusing on creative action. Too often, as argued in this book, creativity has been conceptualised as a psychological phenomenon dependent on thinking skills, motivation, personality traits and so on. This of course does not mean that creativity researchers are oblivious to the fact that creative work is anchored in the physicality of the world; after all, the creative outcome often takes the shape of an object or performance and, as such, it engages various material and cultural resources. But *how* exactly this materiality comes to play a crucial role in the creative process itself remains largely unquestioned due to a common belief that idea generation is at the core of creative performance and ideas reside in the mind, not 'outside' of it. Easter egg decoration is only one of the many cases proving the contrary. Not only does the act of ornamenting an egg take place in the relational space between decorator and a varied array of material tools—from eggs, colour pigments, wax, and chişiţe or 'writing' tools, to the physical depiction of patterns and their accumulation in books, on houses, etc.—but (creative) ideas themselves are shaped by distributed action across people and artefacts.

The material support both facilitates and constrains action and this is a role played throughout, from before engaging in decoration (when different ways of approaching the task are tested) to long after decoration is done (when the egg, in the case of traditional craft, is cleaned of wax near a heat source and later sold at fairs). Preparation work for decoration extends in time up to several months before the eggs get to be embellished, when the artisans gather and empty them, clean their surface carefully and let them dry. The type of egg used will determine to a great extent the procedure of decoration, including the kind of motifs depicted, based on the physical properties of the shell. Almost all interviewed folk artists emphasised this aspect and it is commonly known in Ciocăneşti that chicken eggs may have a better shade of white but are hard to work on due to their fragility and porosity. In contrast, duck eggs have tougher, smoother shells that afford 'writing' on with wax in a more continuous manner. This is why most artisans today use the latter, except for Easter festivals when the norm is to work exclusively on chicken eggs as people did in the past. In this sense, the materiality of tradition is

V. P. Glăveanu, *Distributed Creativity*, SpringerBriefs in Psychology,
DOI: 10.1007/978-3-319-05434-6_4, © The Author(s) 2014

connected to cultural norms and practices of a long duration and invested with symbolic meaning.

The semiotic aspect of ornamentation is essential in a craft such as the Romanian egg decoration. In essence, every model placed on the egg has a certain meaning and tells a 'story' related to the everyday life of the village or the religious aspects of the festivity. Since it is common for geometrical patterns to be depicted on Easter eggs, these meanings can escape the viewer (who nevertheless invests them with new significations) and even the decorator him or herself, since many start working before they learn the 'messages' behind each pattern. For example, the star with eight rays is associated with perfection and femininity, the net is a motif that symbolises the separation between good and evil, while the colour black has nothing to do with death or sorrow but it stands for eternity and the absolute. These meanings are not randomly attached to their material support but co-constructed by people in relation precisely with the materiality of the world. The capacity to refer to something other than itself, to inscribe culture and meaning in action and objects, is never the achievement of a single person, nor is it the result of abstract thinking. To create or use a motif means, at once, to *materialise* it and make it *meaningful*. Within this interdependent totality it might seem at times that meaning is driving decoration work (when the artisan intends to depict something specific) or that the object itself takes charge. For example, a round or an elongated egg will call for a different kind of motif, allow the depiction of more or less intricate decoration patterns, determine the spatial relation between the main ornament and the sides or the belt and so on. In reality, there is a close dialogue between action and perception, intention and materiality within egg decoration and creativity is an outcome of this constant exchange and depends on its outcomes.

It is interesting to note, in this regard, that material properties can support but also fail the artisan and go against his or her intentions. For instance, if the wax does not have the right temperature and, most importantly, if this temperature is not kept constant, then it will not properly hold on the surface of the egg. Moreover, once you make a mistake in wax it is virtually impossible to remove it completely since wax stays on the egg and will prevent colour from catching on its surface. The only way to overcome this is to use the mistake and incorporate it in a new pattern, something that comes to demonstrate the value of *accidents* in creative work. But it is not necessary for artisans to make mistakes in order to change their work habits, the latter are much more flexible and can be adapted to new circumstances as well as deliberately transformed. Decorators are, in this regard, great experimenters and constantly try to make the most with the material support at hand. For example, after adopting a new style of embellishment that involves drawing with wax and leaving it on the surface of the egg, a new decoration possibility emerged: that of colouring wax directly. Of course one needs to go through a period of trial and error in order to know which pigments do the task and what colour shades result. Lately, other techniques have been added, for instance covering the surface of the egg with a very thin golden foil and then decorating it with wax in relief.

One of the most significant moments in the act of decoration takes place just at the end, when wax is cleaned and the resulting patterns and motifs are admired for the first time. This happens because, using the traditional technique, the decorator is forced to work on a 'negative' image of the egg (by covering parts of the shell with wax in order to keep their colour before immersion in a new pigment—this process of colouring goes from light to dark shades and, in Ciocăneşti, it usually ends in black). It is then when the artisan notices if the colours have the right shade, if the lines are straight, if the motifs are complete and symmetrical, and, most importantly, if the egg did not break during the process, including due to exposure to heat. Decorators remember 'ruining' plenty of eggs despite being careful to prevent such an outcome. Their advice is to be alert and engaged while working, even when certain segments of the activity became automatic with time. Seeing and touching the egg and decoration tools, developing a feel for the chişiţă, checking the shell and the colour pigments, require artisans to be 'present' at all times and able to respond fast to changes and unforeseen reactions of the material.

In the end, it is not only the materiality of craftwork itself that should interest us but the broader context of the environment folk artists are part of, including the physical and symbolic artefacts 'populating' it. The village of Ciocăneşti is, in this regard, a rich repository of ornamental patters frequently exhibited on doors and houses, on carpets and shirts, on tablecloths and, of course, on old and new decorated eggs. Artisans are therefore immersed at all times into a material world that is capable of instructing and inspiring them, something they refer to very often in interviews. They are not, however, passive recipients of this cultural heritage but creative actors who decide on what to take, what to keep and how to contribute to local culture, including how to 'filter' its influence; as one of the decorators said, one needs to 'visualise' a pattern found on one object in order to 'translate' it on another. Very old Easter eggs are priced possessions in the community and those who have them often go back to observe their patterns and colours and adapt them to current tastes and material tools. Finally, we should not forget that the work of decoration engages with materiality first and foremost by being highly *embodied*. The hands and eyes of decorators, their necks and backs are subjected to considerable pressure when working for long hours, often by night. But decoration activities are also a great source of pleasure and relaxation that help artisans put aside the troubles of the day and be completely immersed in the here and now. The body, the egg, the working tools, are the first media of creative work and their relation to both 'mind' and 'world' is at once dynamic and permeable.

4.1 The Cultural Life of Things

In 1986, Appadurai edited a volume on 'The social life of things'. In it, different contributors made the point that objects are turned into commodities and embody value in ways that are ultimately political, economic and social in nature. In this sense, commodities acquire a social life of interest for a variety of disciplines,

from economics and anthropology to art history. There is in fact a long tradition in anthropological studies of focusing on what is commonly referred to as *material culture* (see Miller 1998, on 'Why things matter'). Unfortunately, however, psychologists have been late to realise and incorporate a material dimension into their studies and, despite the paramount importance of objects for our everyday actions, very few studies actually considered this domain as a research area (e.g., Csikszentmihaly and Rochberg-Halton 1981). One of the main reasons for this omission has to do with disciplinary divides and how, in contrast to anthropologists who strive to unpack human culture in all its forms and facets, psychology restricted itself to the realm of the human mind. It is the fundamental misconception that mind resides in the head, challenged by distributed and cultural psychological accounts (Chap. 2), that supports the exclusion or, at least, marginalisation of the physical world within psychological studies, including within creativity research. A theoretical issue that arises as soon as objects become a point of focus is the relation between the material and the symbolic (Reckwitz 2002) and, when this relationship is seen as 'either/or', objects end up on the side of the non-cultural, a mere physical presence that needs to be invested with meaning in order to be of interest for psychological analysis. In contrast to this perspective, cultural psychology operates with a framework that recognises the instrumental, functional, communicative and symbolic qualities of objects (Boesch 2007) and aims to unpack the multiple ways in which they mediate our action in the world.

The material distribution of creative action, despite being obvious for all those researchers interested in applied fields (e.g., art and design studies, organisational psychology, etc.), has received considerable less attention than the sociality dimension discussed in the previous chapter (with a few notable exceptions, e.g., Tanggaard 2013). This is all the more surprising considering the fact that creativity is generally seen as a process leading to the generation of 'tangible' outcomes and current debates about the extended mind are keen on bringing to the fore the reliable coupling between person and external resources (Clark and Chalmers 1998; see Chap. 2). Before exploring how exactly creative action is materially distributed, it is important to reflect further on why this is the case and what the consequences of adopting this view are for our understanding of creativity, mind and culture.

Our starting point should be that human beings are *born into a world of objects*, a world in which "the activities of prior generations are cumulated in the present" (Cole 1996, p. 144) in the form of artefacts, norms and institutional forms. Tomasello (1999) refers to this accumulation as the 'ratchet effect' in which inventions are kept, transmitted and transformed across generations. What this also implies is the fact that "every cultural object is a product of creativity" (Lubart 2003, p. 117), something that is obvious from a cultural psychological perspective, where these products are commonly referred to as artefacts (see Glăveanu 2011, 2013). Adopting this approach to creativity and culture, we come to see also how, reversely, every creative product is an object of the culture it both draws on and contributes to. The idea that creativity does not spring from nowhere but uses what is already available is generally accepted today despite it diverging from popular

conceptions of geniuses creating ex nihilo / out of nothingness. "What is new is form transformed; a new form, generated from an old one" (Barron 1995, p. 313; also Arieti 1976) and "all creative thought springs from a base of cultural knowledge and is therefore, by definition, part of a cultural tradition—even when it breaks with tradition" (Feldman 1974, p. 68). The latter observation is crucial as very often we are blinded by the novelty of certain creations and oversee many continuities between the new and the old as well as fail to acknowledge that we would not be able to appreciate the new were it not for what already exists. This does not however mean that there is a deterministic relation set in place between novel and existing cultural objects or that we should follow reconstructive thinking and explanation of all new occurrences based on past conditions. Creative action is, in essence, emergent action and its outcomes are simultaneously grounded historically and extended into the future (see Chap. 5).

A direct practical consequence of highlighting the materiality of creative work is formulated by Feldman (1988, p. 288) who observed that "the artifacts of creative work are available to the person who desires to make further changes in the world" (Feldman 1988, p. 288). The material distribution of creativity relies on this interplay between *internalisation and externalisation* conceptualised by Vygotsky (1978) within his cultural-historical psychology. One benefit of thinking about the use of cultural artefacts as first internalised by creators and later materialised in action (the temporal 'gap' here can be very short since these are interrelated processes), is that it keeps the distinction between person and environment without creating static and delineated 'internal' and 'external' spaces. Instead, the relation between mind and world is based on *processes* of acquisition, transformation, and expression, all integral to creative acts. What needs to be explored further, of course, are the patterned ways in which people relate to cultural artefacts and distribute their action depending on aim and context.

An interesting contribution in this regard comes from the work of Levi-Strauss (1966), who made a basic distinction between the bricoleur and the engineer. This typology, grounded in how people solve tasks by using the cultural stock, is of particular relevance for a discussion of creativity:

> The 'bricoleur' is adept at performing a large number of diverse tasks; but, unlike the engineer, he does not subordinate each of them to the availability of raw materials and tools conceived and procured for the purpose of the project. His universe of instruments is closed and the rules of his game are always to make do with 'whatever is at hand', that is to say with a set of tools and materials which is always finite and is also heterogeneous because what it contains bears no relation to the current project, or indeed to any particular project, but is the contingent result of all the occasions there have been to renew or enrich the stock or to maintain it with the remains of precious constructions or destructions (Levi-Strauss 1966, pp. 18–19).

What the passage above denotes is a basic difference in how people approach the materiality of the world, a difference that although Levi-Strauss associated, at a broader level, with the one between the primitive and scientific mind, is more widely applicable and highly contextual. Creators are not fundamentally bricoleurs *or* engineers but they can adopt one approach or the other depending on task and

circumstances (as well as reflect both at the same time). What is relevant for our discussion is the fact that the material distribution of creativity can be looked at through these lenses and reveals a different 'style' depending on person and context. To base one's action on what is available and 'comes to hand' is perhaps one of the most common expressions of creativity in everyday life, close to the practice of improvisation (Ingold and Hallam 2007). The approach of the engineer is often that of a person whose aim is to innovate, including by creating the necessary material support for his/her action. Levi-Strauss considered this distinction less absolute than it might appear at first, and indeed we can think here about the inter-relation between habitual, improvisational and innovative creativity (see Glăveanu 2012a). But what is most interesting for our discussion of material distribution is his detailed description of *how* the bricoleur engages with materials, first by looking back at already existing objects and (re)considering them, initiating a sort of 'dialogue' with the material support before making a choice; "he interrogates all the heterogeneous objects of which his treasury is composed to discover what each of them could 'signify' and so contribute to the definition of a set [of resources] which has yet to materialize" (Levi-Strauss 1966, p. 18).

There are at least three consequences deriving from the presentation of materiality and creativity included in this section. The first is that we need new conceptual and methodological tools to help us understand how and when objects are instrumental for creative action. This is all the more important since, in all acts of creativity, "it is impossible to introduce a variation without reference to an existing pattern" (Csikszentmihalyi 1999, p. 314) and the same stands for material objects and their variation within the patterned ecology of human culture. Second, the use of objects in creative action is most often not pre-defined but (re)constructed as work progresses. While it is undeniable that objects can have a primary purpose, guiding our contact with them (see also the discussion about affordances in Sect. 4.3.), there is always *flexibility* in how these uses are enacted. This encourages 'cognitive pluralism' (John-Steiner 1995, p. 5), a term employed to describe the various material and semiotic means at the disposal of creative agents, all embedded within social practice. Finally, when it comes to objects themselves, this fundamental openness (situated within a normative context) implies the fact that placing new artefacts into an existing cultural system is an on-going task and objects, beyond being produced, need to be 'socialised' into culture, including the culture of different groups and communities. Negotiating a place for new artefacts requires dialogue, cooperation and also divergence of opinion, all contributing to what I call here the 'cultural life' of objects.

This 'cultural life', however, shaped by social interaction (see also the previous chapter) can either lead objects to being more integrated into everyday practice or, on the contrary, separate them from their context of origin (Dewey 1934). Imprisoned within the space of museums, art galleries or scientific fairs, many objects acquire a new status, that of highly creative artefacts that need to be distanced from the general public. While nobody can deny the fact that art exhibitions, for instance, can inspire prospective artists, there are numerous boundaries and power relations set in place that regulate the distribution and use of artefacts

labelled as 'art'. The example of Easter eggs is a contrasting one. Not only are these ornamented objects close to their religious and folk roots, but they circulate within the community and have the chance to be seen and admired by many, including artisans who are in search of new patterns of decoration. In the end, the material distribution of creative action relies on the *socio-cultural distribution of materials* and, in this sense, the success of creative actors depends to a great extent on their ability to discover, access and use the cultural stock. However, even when available 'at hand', in Levi-Strauss's terms, objects do not always 'cooperate' with creators and can very well resist their action and their intentions, something I go on to elaborate in the next section.

4.2 Creativity and Resistance

As discussed at the beginning of this chapter, Easter egg decorators are confronted with various challenges when performing their craft, from colour pigments that do not catch on the shell, wax that is not melted at the right temperature, chişiţe that scratch the surface, up to eggs that break right at the end, when cleaning wax off near a heat source. Accidents and the failure of the material support make this folk art an excellent example of the 'craftsmanship of risk' (Pye 1968). Reunited by action, distributed between decorator and emerging artefact, the creator-object relationship is not as smooth or unproblematic as decorators themselves would want it to be. In a very real sense, we can say that the egg and other material tools decorators use often resist their intentions and thus actively shape them, revealing new action pathways while closing others. Objects like the decorated egg are not only made, they participate in their own making and change the decorator as well in the process.

Just as creators are typically seen, in a romantic vision specific for the paradigm of the genius (the He-paradigm, see Glăveanu 2010a; also Chap. 1), as confronting and ultimately overcoming social pressures, a similar misconception applies to material conditions. The stories of highly successful creators are filled with struggle and opposition towards the limitations imposed by material constraints. Either because the necessary tools required by high-level creativity are not available or because the normativity of object use imposes itself, creative agents need to overcome their current circumstances and triumph over an uncongenial environment. Objects can therefore easily be portrayed as 'villains' in stories of creativity, sharing the culprit role with the gatekeepers who ask creators to conform rather than challenge the establishment. Needless to say, this is a highly problematic view and arguments for why creation is never a solitary endeavour but co-creation in the most concrete sense were offered before (Chap. 3). The main idea that applies to both this and the case of objects is similar: creativity is not about total freedom, not even primarily about freedom—it is about t*he capacity to integrate constraints and conventions* in the making of an intelligible, new artefact. Objects often embody such constraints and conventions (see Valsiner 1997;

Becker 2008) and their use reminds the creator of why his/her action cannot achieve its goal at all times. This type of frustration due to material conditions is a normal and, in fact, productive state of affairs when it comes to creative work (Tanggaard 2014). A world where objects are simply the passive recipients of our action would not only be less creative but make creativity impossible since the path from intention to outcome would be direct, immediate and never questioned. Creative action is, on the contrary, equally shaped by its end-state as it is by its processes and it is the latter that 'acts' on the former, based on the resistance of materials.

This understanding of creativity as a continuous cycle of doing and undergoing the reaction of the world to one's doing was eloquently captured by John Dewey in his work 'Art as experience'. He rightfully noted: "as we manipulate, we touch and feel, as we look, we see; as we listen, we hear" (Dewey 1934, p. 51). There is a constant movement in creative action between making and perceiving where the resistance of objects occupies a key role. For Dewey, it is precisely because we encounter this resistance more or less as an obstacle to our doing that we can become aware of our action and able to adapt it to an ever-changing environment in ways that foster creativity and give our experience an aesthetic quality. This pragmatist account envisions artistic creativity as the meeting place between artist and world in which action is reunited with reaction and forms an integrated totality. The resistance of material tools saves the artist's action from being purely mechanical or automatic. It also distributes the task of creating between person and object, creator and his/her developing work. Doing and undergoing are, in this context, not two distinct moments within creative action but co-constitutive and cyclical moves that question the sharp 'inside'/'outside' divide of mainstream psychology and replace it with an image of continuity and inter-dependence; in Dewey's own words:

> Antecedent subject-matter is not instantaneously changed into the matter of a work of art in where he is going because of what he has previously done; that is, the original excitation and stir of some contact with the world undergo successive transformation. The state of the matter he has arrived at sets up demands to be fulfilled and it institutes a framework that limits further operations. As the experience of transforming subject-matter into the very substance of the work of art proceeds, incidents and scenes that figured at first may drop out and others take their place, being drawn in by the suction of the qualitative material that aroused the original excitement (Dewey 1934, p. 116).

One potential pitfall associated with pragmatist accounts that connect undergoing resistance with thinking and consciousness is that creative action tends to become *intentional action*, something creators are aware of. If "the task of the mind is to reconstruct the miscarried action process by reflecting on what went wrong" (Joas and Kilpinen 2006, p. 326), then reflection is posited as a key marker of human action and a harmful dichotomy is set in place between creativity and habit or routines. This is not an uncommon distinction for the psychology of creativity, where obstacles are said to trigger creative expression (Torrance 1988), or for psychology as a whole for this matter. In the words of Luckmann, "if

appropriate elements of knowledge cannot be applied without difficulty to cope with the problem at hand, one must begin to think" (Luckmann 1982, p. 257). In sum, familiar situations, practiced solutions, and routine actions require little thinking, including creative 'thinking'. This is, however, not the case for Easter egg decoration where, as I described before, creators depict well-exercised patterns without ever creating the same egg twice. The resistance of the object may pose a challenge during the work process but this is not the only creative moment within decoration. As I have argued elsewhere (see Glăveanu 2012a), there is a strong argument to be made in favour of habitual creativity or the creativity intrinsic to human action. In other words, material resistance does not need to amount to a problem that effectively stops action, although such situations are not uncommon, including in egg decoration. The creator's intentions are permanently in a state of *tension* in relation to what the material support 'allows' or 'forbids' and physical boundaries are being constantly negotiated within creative work. To consider the reverse would mean first of all to limit creativity to those circumstances in which material resistance turns into a problem and, second, to imagine the intentions of the creator, the ones he or she becomes aware of in the process, as relatively stable, even pre-determined. In reality, as Klee rightfully points out, "the painter, when he is really a painter, forms—or rather: he allows form to arise. He has no intention, no direct one. (…) He knows a great deal, but he only knows it *afterwards*" (Paul Klee 1930, in Benson 1993, p. 11). In other words, intentionality and resistance are both dynamic phenomena that, through their inter-relation, contribute to the emergence of new artefacts. Going back to Dewey's formulation, the doing of the creative actor can never be de-coupled from undergoing and this cycle is, at all times, context-dependent.

Finally, I would like to add another perspective on materiality and resistance that does not have to do with the making stage itself but the meaning-making processes taking place 'around' creative outcomes, during and after they are generated. If we return to the general theoretical model introduced in Chap. 2, we can note that difference fosters creativity, including the difference between object and its symbolic meaning; more specifically, our semiotic descriptions of an object can never fully capture its attributes or anticipate their change over time. For instance, the meaning of a certain ornament in folk art is variable across regions, often within one and the same village (e.g. the pattern called 'the lost way' illustrates the old idea of the labyrinth, can be a metaphor for human existence, or depict the much more concrete circumstance of being lost). At the same time, the material shape of this ornament invites new interpretations and can, in fact, mean many more things for different people. However, this range is not unlimited and objects themselves impose constraints on meaning-making through their properties (e.g., the lost way pattern can be interpreted as a path but its intersecting lines do not invite one to think about a house or landscape, etc.). In this sense, we can say that some objects resist certain meanings or, even more, *resist our very efforts of taming their unfamiliarity* and anchoring them into a stable, shared symbolic system.

Daston (2004, p. 24) asked, in relation to this, "how to draw a line around chimeras that refuse so obstinately to fit into the prepared classificatory pigeonholes?". As suggested further, the act of thing-making often requires fashioning new categories. Great creations such as Darwin's evolutionary theory or Einstein's theory of relativity are considered to have been outside (and ahead) of the scientific mind frame of their time. But this holds true also for more mundane forms of creative action in which objects challenge the meanings assigned to them. Again Easter eggs offer an interesting example. They are art objects but also objects of folklore, they convey religious meaning but also have an aesthetic that transcends this kind of symbolism, they are part of the church and family ritual but also sold as commodities on a growing market. Interviewing ethnographers, priests, artists and folk artists themselves about this craft (Glăveanu 2010b) revealed the various symbolic systems used to describe and 'locate' decorated eggs. Resistance to a single, unitary meaning is, in cases such as this one, the marker of creative action distributed beyond the person of the creator and into the social sphere, an openness that matches the versatility of the material form.

4.3 Objects as Agents

Most often, psychological studies of objects and object use focus on the person and his/her intentions, goals, behaviour, conceptions, experience, etc., rather than pay attention to objects themselves. As I argued above, this derives to a large extent from the general assumption that psychology as a discipline deals with psychological phenomena and, in relation to them, objects are external factors that only facilitate or constrict the expression of 'inner', mental processes. The idea of distribution, in the case of creativity and beyond, comes to challenge this focus and shows that material tools are part and parcel of an 'extended' psychological system that incorporates elements of the immediate environment. The closely coupled person and external resource (Kirsh 2006) is a preferred way to theorise this integrated system at least in the literature on distributed cognition. However, as discussed in Chap. 2, this view has some considerable limitations, among which is the fact that it operates with a static division between the 'inside' and 'outside', between person and object. In contrast, a cultural psychological, action-based perspective is keen to explore precisely how objects are crucial for our existence in the world. In Boesch's (2007, p. 162) terms, objects channel our action by determining where and how we can move and what we can do, they shape our action potential and self-concept, indicate our social status and regulate social interactions. This position, however, can easily become more radical and, instead of ignoring objects as external to the creator, make them the creator itself. In other words, I will try to have a closer look in this section at the notion of *agency* in the case of material objects.

Before this, however, we need to note the fact that psychology's (uncomfortable) relation with materiality and the agency of objects is not the norm in other

disciplines. For some time now, for example, Latour's Actor-Network Theory (ANT) has been influential in shaping the way we think about objects as agents and actions as distributed among both human and non-human participants. Latour starts his elaboration of this idea from a similar standpoint as the one above, by deploring the fact that, in the social sciences, objects have for a long time been "nowhere to be said and everywhere to be felt" (Latour 2005, p. 72), virtually not given a thought, particularly a social thought. His aim was to remedy this situation by elaborating ANT, an object-oriented sociology founded on the idea of associations. According to Latour, "In addition to 'determining' and serving as a 'backdrop for human action', things might authorize, allow, afford, encourage, permit, suggest, influence, block, render possible, forbid, and so on" (p. 72). However, he did not want to exclude, through this emphasis on objects, the human actor. The question behind ANT, also very much resonating within cultural psychology, including the cultural psychology of creativity, is *who* actually participates in action and, if non-human elements do participate, how can we conceptualise their role?

Taking a few concrete examples would be useful in this regard. Perhaps one of the most common experiences for creative actors who heavily engage with materiality in their work (e.g., painters, sculptures, designers, engineers, etc.) refers to how, after a certain point, the emerging artefact seems to 'take over' and 'lead' action to its completion. An extensive study of creativity in five different domains (see Glăveanu et al. 2013) offered ample evidence of this even in those professions that initially might seem removed from the use of physical tools. For instance, scriptwriters mention moments in which the written script of a movie shapes its elaboration and characters, once 'materialised' in the text, often prove more powerful than the (planned) storyline. Accounts such as these are normally considered to support the general statement that *objects have agency*. They are not only acted upon but effectively act on the creator giving thus a new meaning to the idea of co-creation described in Sect. 3.1—objects themselves participate in their own creation as well as shape the experience of creators who 'undergo' their influence. While an interesting formulation, particularly helpful for building a framework of distributed creativity, I will argue in what follows that we need to consider such thinking more closely and not fall prey to easy claims that "art objects are the equivalent of persons, or more precisely, social agents" (Gell 1998, p. 7). In order to unpack its meaning further, we need to understand what exactly the experience of objects as agents consists of. In this regard, Jerome Bruner's description offers a useful starting point:

> You begin to write a poem. Before long it, the poem, begins to develop metrical, stanzaic, symbolical requirements. You, as the writer of the poem, are serving it—it seems. Or you may be pursuing the task of building a formal model to represent the known properties of single nerve fibers and their synapses: soon the model takes over. Or we say of an experiment in midstream that it needs another control group really to clinch the effect. It is at this point that we get our creative second wind, at the point when the object takes over (Bruner 1962, p. 25).

Bruner used a very interesting expression to conceptualise this state of affairs—the '*freedom to be dominated*' by the object being created (p. 26). This apparent paradoxical formulation captures something essential for our discussion of object agency. It simultaneously acknowledges the active role played by objects within creative work while preserving a sense of 'freedom' for the creator. This freedom is basically represented by the more or less conscious decision to *share agency* with the object and follow its lead at different moments within the process. Moreover, Bruner stresses the point that, when such a 'distribution' of creative agency is taking place, a new opportunity to express a style or individuality emerges, the possibility of a more authentic expression transcending the intentions of the creator and allowing the object's reaction to be a testing ground for idea selection and reformulation. In a certain sense, the object at each moment gives material form to—and, in doing so, responds to and changes—the intensions, goals and representations of the creator.

Moreover, from a cultural psychological perspective, objects themselves are not void of intentionality, on the contrary. Shweder (1990, p. 2) argued that "a sociocultural environment is an intentional world" populated by 'intentional objects'. Objects bear the mark of the intentionality of their makers and users and, as such, it is impossible for us to separate them from human understanding and human activities. One cannot do anything with any object at any time since both material properties and cultural norms restrain potential uses. And yet, at a fundamental level, each object has the *potential* to transcend its designed use, to 'escape' the intentionality of its maker and impose its own conditions on activity. Shweder (pp. 27–28) proposed a simple and useful classification in this regard when he discussed the relationship between person and world as either positive, when the intentionality of the world amplifies or supports that of the person, or negative, when it diminishes or contravenes his/her intentions (see also the previous section about resistance). These relations can be active, when the person creates or selects the aspects of the intentional world most suitable for being acted upon, reactive, when other people do this on behalf of the person in light of his/her (assumed) intentionality, or passive, when the person ends up living in an intentional world designed by others for themselves. Of course, these are very broad distinctions and, in reality, combinations are possible, including opposite types coexisting within the same situation. In any case, Shweder's typology is very interesting for a discussion of creativity as it makes intentionality a relational, dynamic, co-created phenomenon. The reason why simple claims such as 'objects are agents' tend to oversimplify things is not because objects lack agency but because we need a more complex framework to theorise it. Objects can be agents but *always in relation to people*, they gain intentionality in light of the action and intention of their makers, users, perceivers. Interestingly, the reverse is also valid: people become intentional actors precisely because they 'confront' the intentions inscribed or discovered in objects.

A cultural discussion of how creativity is materially distributed needs to start from this understanding of the co-constructed nature of intentional action, equally depending on both its 'terms'—individual and object. An interesting elaboration in

this regard is represented by Gibson's theory of affordances. In essence, "the *affordances* of the environment are what it *offers* the animal, what it *provides* or *furnishes*, either for good or ill" (Gibson 1986, p. 127). To discuss affordances means to consider the action potentials embedded within the environment and available to creators for use or change (we are reminded here of Levi-Strauss's distinction between the bricoleur and the engineer, mentioned before), and thus, ultimately, to reconceptualise agency and intentionality. One of the most appealing features of this theory for any account of distribution is Gibson's premise that an affordance is not grounded in the person, nor the environment, what it captures is their inter-relation, it "refers to both the environment and the animal in a way that no existing term does" (p. 127). This makes object use an extremely contextual, situated aspect of action, changing not only as person or object change, but also from one context to the next. To take an example, chairs afford sitting but if the user is a baby then special chairs with specially designed affordances are required; at the same time, the chair might not afford sitting for more than one person or might not be seen by him or her in a dark room, case in which the affordance of sitting 'disappears'. To understand human action therefore requires not a focus on individual or materiality alone but on the ways in which the two articulate properties and intentions within changing conditions. This is extremely consequential for creativity. If affordances are not simply inscribed into objects it means that, despite certain canonical, culturally normative types of use, there is always an area of *possibility* for human action to generate new outcomes. For instance, sitting on a chair might not be extremely creative but using it as a small house by children can be. This was noticed by Gibson (1986, p. 134) early on and actually reminds of Unusual Uses creativity tests:

> The fact that a stone is a missile does not imply that it cannot be other things as well. It can be a paperweight, a bookend, a hammer, or a pendulum bob. It can be piled on another rock to make a cairn or a stone wall. These affordances are all consistent with one another.

Affordance theory is, as such, a theory of the possible and, ultimately, a theory of creativity distributed within the material world (for a more elaborate discussion of this see Glăveanu 2012b). Of course there are also some limitations within Gibson's thinking about affordances that have been extensively discussed by others (see Costall 1995). One of them is that, curiously, he do not consider the ways in which humans can create, modify or develop new affordances (Bardone 2011), assuming, contrary to his own relational account, that they are already 'there', directly perceived by the person. He also missed the aesthetics of ornaments placed on objects that seemingly do not modify their affordances but impact greatly the experience of the viewer or user (Valsiner 2013). This is certainly the case of decorated eggs: the material properties of the egg, colours, wax, etc., are not changed but the value and symbolic meaning of the egg itself is radically expanded. But, most of all, Gibson's account remains a static one, despite its situated nature. What Valsiner (2013) persuasively argues is that cultural psychology does not take the affordances of objects as given, but is very much oriented towards the future. Both the creation and use of objects is marked by this

temporal dimension that makes the engagement with objects at once regulated by what is afforded in a certain situation and open to new intentions and actions. For all the above, the *co-constructed and dynamic agency* fostered within person-objects relations needs to play a central role within any account of distributed creativity.

References

Appadurai, A. (1986). Introduction: Commodities and the politics of value. In A. Appadurai (Ed.), *The social life of things: Commodities in cultural perspective* (pp. 3–63). New York, NY: Cambridge University Press.

Arieti, S. (1976). *Creativity: The magic synthesis*. New York, NY: Basic Books.

Bardone, E. (2011). *Seeking chances: From bounded rationality to distributed cognition*. Verlag: Springer.

Barron, F. (1995). *No rootless flower: An ecology of creativity*. Cresskill: Hampton Press.

Becker, H. S. (2008). *Art worlds. Updated and expended*. Berkeley, CA: University of California Press.

Benson, C. (1993). *The absorbed self: Pragmatism, psychology and aesthetic experience*. New York, NY: Harvester Wheatsheaf.

Boesch, E. E. (2007). Cultural psychology in action-theoretical perspective. In W. J. Looner & S.A. Hayes (Eds.), *Discovering cultural psychology: A profile and selected readings of Ernest E. Boesch* (pp. 153–165). Charlotte, North Carolina: Information Age Publishing.

Bruner, J. (1962). *On knowing: Essays for the left hand*. Cambridge: Belknap Press.

Clark, A., & Chalmers, D. (1998). The extended mind. *Analysis, 58*(1), 7–19. doi:10.1111/1467-8284.00096

Cole, M. (1996). *Cultural psychology: A once and future discipline*. Cambridge: Belknap Press.

Costall, A. (1995). Socializing affordances. *Theory and Psychology, 5*, 467–481. doi:10.1177/0959354395054001

Csikszentmihalyi, M. (1999). Implications of a systems perspective for the study of creativity. In R. Sternberg (Ed.), *Handbook of creativity* (pp. 313–335). Cambridge: Cambridge University Press.

Csikszentmihaly, M., & Rochberg-Halton, E. (1981). *The meaning of things: Domestic symbols and the self*. Cambridge: Cambridge University Press.

Daston, L. (2004). Speechless. In L. Daston (Ed.), *Things that talk. Object lessons from art and science* (pp. 9–26). New York, NY: Zone Books.

Dewey, J. (1934). *Art as experience*. New York, NY: Penguin.

Feldman, D. H. (1974). The developmental approach: Universal to unique. In S. Rosner & L. E. Abt (Eds.), *Essays in creativity* (pp. 47–85). Croton-On-Hudson, NY: North River Press.

Feldman, D. H. (1988). Creativity: Dreams, insights, and transformations. In R. Sternberg (Ed.), *The nature of creativity: Contemporary psychological perspectives* (pp. 271–297). Cambridge: Cambridge University Press.

Gell, A. (1998). *Art and agency: An anthropological theory*. Oxford: Clarendon Press.

Gibson, J. J. (1986). *The ecological approach to visual perception*. Hillsdale, New Jersey: Lawrence Erlbaum Associates.

Glăveanu, V. P. (2010a). Principles for a cultural psychology of creativity. *Culture and Psychology, 16*(2), 147–163. doi:10.1177/1354067X10361394

Glăveanu, V. P. (2010b). Creativity in context: The ecology of creativity evaluations and practices in an artistic craft. *Psychological Studies, 55*(4), 339–350. doi:10.1007/s12646-010-0056-8

Glăveanu, V. P. (2011). Creativity as cultural participation. *Journal for the Theory of Social Behaviour, 41*(1), 48–67. doi:10.1111/j.1468-5914.2010.00445.x

Glăveanu, V. P. (2012a). Habitual creativity: Revisiting habit, reconceptualizing creativity. *Review of General Psychology, 16*(1), 78–92. doi:10.1037/a0026611

Glăveanu, V. P. (2012b). What can be done with an egg? Creativity, material objects, and the theory of affordances. *Journal of Creative Behavior, 46*(3), 192–208. doi:10.1002/jocb.13

Glăveanu, V. P. (2013). Rewriting the language of creativity: The five A's framework. *Review of General Psychology, 17*(1), 69–81. doi:10.1037/a0029528

Glăveanu, V., Lubart, T., Bonnardel, N., Botella, M., de Biaisi, P.-M., Desainte-Catherine, M., et al. (2013). Creativity as action: Findings from five creative domains. *Frontiers in Psychology, 4*(176), 1–16. doi:10.3389/fpsyg.2013.00176

Ingold, T., & Hallam, E. (2007). Creativity and cultural improvisation: An introduction. In E. Hallam & T. Ingold (Eds.), *Creativity and cultural improvisation* (pp. 1–24). Oxford: Berg.

Joas, H., & Kilpinen, E. (2006). Creativity and society. In J. R. Shook & J. Margolis (Eds.), *A companion to pragmatism* (pp. 323–335). Malden, MA: Blackwell Publishing.

John-Steiner, V. (1995). Cognitive pluralism: A sociocultural approach. *Mind, Culture and Activity, 2*, 2–11. doi:10.1080/10749039509524680

Kirsh, D. (2006). Distributed cognition: A methodological note. *Pragmatics and Cognition, 14*(2), 249–262.

Latour, B. (2005). *Reassembling the social: An introduction to Actor-Network-Theory*. New York, NY: Oxford University Press.

Lévi-Strauss, C. (1966). *The savage mind*. Chicago, IL: The University of Chicago Press.

Lubart, T. (2003). *Psychologie de la créativité*. Paris: Armand Colin.

Luckmann, T. (1982). Individual action and social knowledge. In M. Von Cranach & R. Harré (Eds.), *The analysis of action* (pp. 247–265). Cambridge: Cambridge University Press.

Miller, D. (1998). Why some things matter. In D. Miller (Ed.), *Material cultures: Why some things matter* (pp. 3–21). London: University of Chicago Press.

Pye, D. (1968). *The nature and art of workmanship*. London: The Herbert Press.

Reckwitz, A. (2002). The status of the material in theories of culture: From social structure to artefacts. *Journal for the Theory of Social Behaviour, 32*(2), 195–217. doi:10.1111/1468-5914.00183

Shweder, R. (1990). Cultural psychology—What is it? In J. Stigler, R. Shweder, & G. Herdt (Eds.), *Cultural psychology: Essays on comparative human development* (pp. 1–43). Cambridge: Cambridge University Press.

Tanggaard, L. (2013). The sociomateriality of creativity in everyday life. *Culture and Psychology, 19*(1), 20–32. doi:10.1177/1354067X12464987

Tanggaard, L. (2014). *Fooling around: Pathways to creative learning*. Charlotte, NC: Information Age Publishing.

Tomasello, M. (1999). *The cultural origins of human cognition*. Cambridge, MA: Harvard University Press.

Torrance, E. P. (1988). The nature of creativity as manifest in its testing. In R. Sternberg (Ed.), *The nature of creativity: Contemporary psychological perspectives* (pp. 43–75). Cambridge: Cambridge University Press.

Valsiner, J. (1997). *Culture and the development of children's action: A theory of human development*. New York, NY: John Wiley and Sons Inc.

Valsiner, J. (2013). *An invitation to cultural psychology*. New Delhi: Sage.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. In M. Cole, V. John-Steiner, S. Scribner & E. Souberman (Eds.), Cambridge, MA: Harvard University Press.

Chapter 5
Creativity and Temporality

Creative action in the decoration of Easter eggs is not only part of a wider socio-cultural-material context, focused on in the previous two chapters, but also a temporal one. Moreover, the social and material aspects of this folk art can only be studied within their unfolding in time since it is precisely the 'movement' from past to future that marks both the historical accumulation and openness of the craft towards new developments. To capture this, however, we would need to stop considering moments of decoration as unique expressions of an individual creative process and locate them within the cultural-historical practice they are part of. This focus on how human action belongs to broader cultural patterns of activity that are, *at once,* individual and social, symbolic and material, and embedded within longer histories, stands at the core of what I define as the cultural psychology of creativity.

Easter egg decoration is a prototypical example for the above. It represents a tradition of very long duration not only in Romanian villages but Christian communities in most parts of the world. Of course, this tradition is individualised within each country and region in terms of motifs, colours, and types of symbolism. Artisans are acutely aware of the historical past of their craft and see themselves mostly as continuing it, with the responsibility of preserving the tradition and passing it on to future generations, rather than as creators who shape the domain through individual contributions. Furthermore, they are very familiar with 'old' decorated eggs and constantly reminded of them at the annual fairs and craft museums. As children, most folk artists from the village of Ciocăneşti have seen eggs ornamented decades ago by the few craftswomen who were decorating at that time. These known artisans worked only for family and friends since there was no (or at least only a very small) market for selling this kind of artefacts. On the contrary, the many changes that took place in recent decades in relation to the craft have been triggered, to a great extent, by the fact that Easter eggs became, beside artistic and traditional objects, commodities for a growing national and international market.

A first practical problem to be dealt with was how to prolong the 'life' of these delicate objects since initially eggs were not emptied and this increased the risk of breaking and made transportation difficult. Besides emptying the content, artisans nowadays also varnish the shell to protect the colour or the wax for eggs with wax

V. P. Glăveanu, *Distributed Creativity*, SpringerBriefs in Psychology,
DOI: 10.1007/978-3-319-05434-6_5, © The Author(s) 2014

in relief. The latter are themselves new additions to traditional decoration. Exploiting the affordances of wax and colour pigments, folk artists started drawing motifs in relief instead of cleaning the wax off at the end. As usual, each new development calls for another and the fact that wax could be coloured invited folk artists to expand the traditional range of dyes (eggs with wax in relief are often blue, green, violent, etc., or combinations of these) and, from this, the range of themes depicted. If traditionally Easter eggs in northern Romania reveal geometric patterns and have few figurative elements, coloured wax made it possible to create new images of landscapes, churches, people, etc. Overall, the style of decoration in Ciocăneşti changed in time from simpler motifs to heavily ornamented eggs, resembling more the aesthetics of decorative art and miniature painting.

The artisans themselves are aware of and generally open to innovations. The material conditions of work have certainly improved and today they no longer need to prepare colours from plants and minerals, as in the old days, or make their own chişite (the work instruments). If before "the models were much more simple, now the egg is 'crowded' with them, for it to be more beautiful, ornamented, appealing to look at [*ochios* in Romanian], for people to have what to see, every year to have more placed on it, to be better looking than the other eggs" (Maria Istrate). However, these developments also make the craft more difficult to learn and substantially more skill and practice are needed to attain a high level of performance. Temporality is inscribed in creative action, including the learning process both preceding and during decoration work (since learning is a continuous process for both novice and experienced decorators). Many artisans in the village of Ciocăneşti learned the craft as children within the family or from a neighbour. The early frustration of not being able to create 'good eggs' from the very first time and the fact that formal teaching is rare in the context of the craft, based primarily on learning by doing, are still remembered by the persons I interviewed. Those who acquired their decoration skills later in life had more support from others and were also encouraged by the unprecedented expansion of this tradition. Compared to even a decade ago—when obtaining the necessary work materials was difficult and motifs were not so widely available—new decorators today are expected to pick up this folk art and supported to display their products including at international fairs. These differences, at a macro-level, between the craft-world as it was a few decades ago and at present are not insignificant. They shape individual learning trajectories and leave their mark on how artisans work and how they position themselves as keepers of an old folk tradition.

If we are to focus on a more micro temporal scale in relation to decoration activities what we discover at first are relatively stable stages followed by craftsmen, independently of their level of expertise. First the eggs need to be prepared, sometimes months before they are actually decorated. This involves washing them, emptying the content, cleaning once more both the inside and outside, and letting them dry. Any mistake here can have unpleasant consequences afterwards when wax or colour do not apply well or 'catch on' due to dirt or grease remaining on the surface of the egg. When decorating, almost all artisans work on a series of eggs and, while some are drawn with wax, others are immersed into colour and yet others

are drying, becoming ready for the following stage of the process. "You write the motif on the egg on white [first phase], at the same time, when you take a small break you can put other eggs already finished in yellow while continuing to write on while, then you take the ones already yellow out and let them dry and so on. (…) Because if you work only ten eggs and let them all dry at once you are wasting time" (Dănuţ Zimbru). Nonetheless decorators, while aware of this succession, can and do change it at any time depending on their state of mind, or how many eggs they have to finish (Maria Ciocan). There are a few things in any case that rarely change. For instance, if the artisan is used to drawing motifs in pencil before making them in wax this becomes regular practice except for very simple or well-exercised patterns; also the succession of colours needs to be respected (going from light to dark shades, for example from yellow to red and then black). Outside of these, however, folk artists do not recognise any rules of decoration universally applicable. This is because every egg is different in terms of shell colour, size, even shape, and motifs can be combined in different ways on its surface. All the rest "happens as things go along. You start the egg and then you say 'wait, I will put more here, add this here, here it is too simple…'" (Ionela Ţăran).

In conclusion, the temporality of craftwork spans centuries if we consider the cultural genesis of this tradition, decades, if we consider individual trajectories, and it can also be located within the here-and-now of decoration and the minute changes applied to an established work routine, often with surprising consequences. What is important to remember is that, at all these levels, temporal markers take *a concrete, embodied form* and serve as reminders of how things were done before, how what is done now builds on the past and, most importantly, how it can continue into the future. For instance, old eggs, sometimes decorated half a century ago, are kept by artisans and become prized possessions and invaluable sources of inspiration as signs of a collective, shared past; notebooks with motifs are common, recording the individual's development, his or her first ornaments, patterns taken from others, from houses or folk objects, and even motifs invented by the decorator and kept for future reference; finally, the state of the work at each moment during decoration imposes its own constraints and any small addition or change needs to take into account what has already been done and use it as a starting point for generating novelty. On the whole, artisans recognise that innovations—for as long as they do not create a radical break with 'what is'—help the tradition go on. The growing market for the distribution of decorated eggs might take away from the romantic, religious or artistic ideals of the craft, but it certainly helped the local community keep it alive and, in many ways, made it flourish.

5.1 Creativity, Time and History

Any study of creativity that focuses on its distribution across people and objects cannot possibly ignore the passing of time. In fact, the distribution of creative action in time is an essential feature that, when taken into account, necessarily

makes us depart from restrictive, 'creativity in the head' views. This is because the temporal dimension of creativity engages both sociality and materiality. If creativity is mainly a psychological process, reduced for instance to ideation, its temporality and socio-materiality become secondary. The moment of insight is just that, one moment, and a common misconception separates it for the long period it takes the person to reach it, the many 'smaller' insights leading to the 'great' idea (for a critique see Sternberg and Davidson 1995). Of course, this preparation stage often requires the person to discuss ideas with other people, to read books, watch movies, experiment, make sketches or prototypes and so on. Moreover, preparation and insight are not as sharply divided as our analytical frames lead us to believe. On the contrary, the most important stories of creativity (see John-Steiner 1997; Gruber and Bödeker 2005) never include only one idea but reveal a continuous process of preparation-ideation-implementation integrated within a unitary activity system (see Sect. 5.2 as well). This is also supported by the fact that human action is action in the present but its trajectory cannot be disconnected from both an actualised past and a projected future. Creative work makes no exception and the *uninterrupted and irreversible flow of time* that marks its trajectory cannot be analytically segmented without imposing artificial boundaries that frequently obscure rather than reveal temporal forms of distribution. Cultural psychological scholarship operates in this regard with the following four strands of development: (1) phylogenesis, or development at the species level; (2) sociogenesis, or the development of human society and culture; (3) ontogenesis, or the development of the individual across the lifespan and (4) microgenesis, or the emergence of action within here-and-now contexts (Valsiner 1997, p. 169). Most importantly, these are not distinct levels of temporality but are embedded within and continuous with each other. In this chapter, I will focus on the last three forms of genesis in the case of creativity (leaving aside, for now, the evolutionary perspective; for a very interesting account in this regard see Festinger's 1983 volume 'The Human Legacy').

This section deals with creativity within historical time, a topic that is regularly considered outside of psychology and within disciplines such as history, economics and sociology. And yet, eliminating or ignoring the distribution of creative work on this larger, societal scale, encourages us to construct purely individual, intra-psychological models of this phenomenon. The example of egg decoration, discussed in the introduction, is illustrative in this regard. No complete account of this practice can stop at the level of an artisan's work, for as intricate or innovative as it might be. To understand how and why artisans decorate we need information about the historical trajectory of this practice, the origins of the custom and its transformation in the last decades. Reversely, creative work needs to be placed also in the context of a historical 'future', its value understood in relation to the entire life and evolution of the craft. While individual creators and their outcomes are rarely consequential, in isolation, on such a large time scale, their small changes and additions of motifs or work techniques need to be considered within networks and patterns of transmission across people. Once again, the socio-material distribution of creative action intersects the temporal one.

This historical perspective on creativity is much better represented in the sociological perspective on individuals and society developed by Gabriel Tarde at the turn of the last century. Relevant for our discussion of creativity, Tarde's thinking addresses the old question of stability and change and their inter-relation. His premise in this regard is that, "socially, everything is either *invention or imitation*" (Tarde 1903, p. 3, emphasis added). Most importantly, at both the levels of individual and societal action, these two are not opposite but continuous with each other since any human innovation grows out of imitating others and becomes non-existing if not imitated by others. In his words,

> There are two facts which we should not overlook: first, that the desire to invent and discover grows, like any other desire, with its satisfaction; second, that every invention revolves itself into the timely intersection in one mind of a current of imitation with another current which reinforces it, or with an intense perception of some objective fact which throws new light on some old idea or with the lively experience of a need that finds unhoped-for resources in some familiar practice (Tarde 1903, p. 43).

Tarde's sociology is therefore focused on temporal, dynamic processes such as the progress and decay of certain forms of imitation, the emergence of innovations and their imitation, and the conditions that shape the spreading of an innovation through imitation. In essence, this form of temporal distribution of creative action and its interplay between invention and imitation can be observed at multiple levels. Tarde was particularly interested by the individual level as well, although always placing it within a bigger societal context. For instance, he challenged the idea that imitation, a fundamental process within his conception of society, leads to the progressive resemblance of individuals. His argument was that we never imitate a single individual since the origin and expression of any imitation is necessarily socially distributed. It is thus the case that "we borrow from a hundred, a thousand, or ten thousand persons (…), the elements of thought or action which we subsequently combine, the very nature and choice of these elementary copies, as well as their combination, expresses and accentuates our original personality" (p. xxiv). Originality, as the outcome of imitation, originates precisely in the socio-material and temporal distribution of innovations within individual action. Tarde was keen also to follow the societal and historical trajectory of innovations, their genealogy in an indeterminate sequence in which every creation constrains future action without ever making it fully predictable. In his formulation, "every successful invention actualises one of the thousand possible, or rather, given certain conditions, necessary, inventions, and by its appearance it annihilates the majority of those possibilities and makes possible a host of heretofore impossible inventions" (Tarde 1903, p. 45).

What we need to add to Tarde's perspective, however, is a more precise account of *who* innovates and *who* imitates. The discussion above is at times too abstract and there seems to be no specific creative actor doing the creating. Instead, innovations and imitations themselves take centre stage. It is within another sociological account that we find the necessary elements for situating this temporal dynamic within a concrete field of social relations marked by cooperation and

competition, by power relations and, ultimately, by 'struggle'. For Bourdieu, "the *struggle itself* creates the history of the field [of cultural production]; through the struggle the field is given a temporal dimension" (Bourdieu 1993, p. 106). This struggle is essentially the one between the gatekeepers or established figures of the field, the ones who emphasise continuity, identity and reproduction. In contrast, newcomers strive for discontinuity, rupture, difference and revolution. The movement of the latter helps an avant-garde emerge that, when successful, will end up replacing the establishment and adopting their attitude towards innovations. And so the historical cycle continues. For Bourdieu, a full understanding of macro creation requires us to consider both the structure and genetic development of the socio-cultural field. However, we need also to consider the fact that such a macro-view of the historical evolution of a cultural domain or culture as a whole offers us only the general frame and can obscure individual trajectories or more or less micro transformations that take place within the field, independently of whether they are picked up or validated by gatekeepers or not (a reason why we should always understand historical changes *in connection* to ontogenetic and microgenetic transformations, both described in the following sections).

To take an example, not far from Bourdieu's focus on the literary field, we can return to the idea of the art world. Howard Becker, whose conception has been referred to in Chap. 3 as well, developed an equally dynamic understanding of the sociogenesis of art. Articulating the socio-material and temporal distribution of creative action, his view relates the emergence, transformation and disappearance of an art world to the rise, growth and dissipation of collaborative networks. An art world is born when people who never cooperated before come together and produce art based on new or existing conventions. Conversely, the art world dies when all signs of this collaboration disappear although Becker rightfully notes that "we cannot clearly separate new art worlds from those which have been changed substantially by virtue of an artistic revolution, nor can we easily decide when an art world has died, as opposed to being changed or taken over by new people" (Becker 2008, p. 310). We can easily turn this discussion into one of socio-material distribution of creative activities along a temporal line that incorporates but also extends well beyond the lifespan of any single individual creator. Tarde, Bourdieu and Becker, all of them sociologists, unpacked carefully these kinds of distribution in their work. How does a historical interest manifest in psychology and, in particular, the psychology of creativity?

Perhaps the most significant and visible programme of research into creativity within a historical context was developed for several decades by Dean Keith Simonton, the one who proposed and used extensively the method of historiometry. In essence, "historiometry is the application of quantitative methods to archival data about historic personalities and events to test nomothetic hypotheses about human thought, feeling, and action" (Simonton 1999, p. 815). Different from psychobiographies or psychohistorical studies that are primarily qualitative and ideographic, Simonton's interest was to quantify features of either the creative person or product and relate them to equally quantified features of the socio-cultural environment (along political, economic and social dimensions). What

results is an image of patterned relations between creative action and its historical context based on very large samples and often covering extensive periods of time. For instance, Simonton (1975), using a sample of 5000 creative individuals and creations from Western culture, from 700 BC to 1839 AD (assigned to 20 year periods resulting in 127 generations), focused on the relationship between creativity on the one hand and socio-historical variables such as political fragmentation, civil instability, political instability, war, cultural persecution on the other. Some of the latter had a significant impact on creative expression (e.g., political fragmentation and instability), others did not (e.g., war and cultural persecution). While these results are not uninteresting they do very little to inform us about *how exactly* creative acts are distributed across historical time. Beside some questionable choices of what to quantify and how, we are also left wondering *why* creators, at different moment in time, chose a certain path or produced a certain artefact (historiometry is based on correlation, not causal inference). Above all, how can we combine conclusions from this type of analysis with a focus on other 'levels' of temporality, including, as we shall see next, an interest in the experience and life-trajectory of individual creators?

5.2 Creativity and Development

If accounts of creativity across historical time are rare in psychology, most researchers in this discipline have focused on the development of creative potential and expression, from early childhood up to old age. This focus on ontogenesis is useful for distributed models of creativity as it both situates in time descriptions of creative action and brings to the fore the co-development between person and context, be it social or material. As Feldman notes, "creative accomplishment, after all, is nothing if not a developmental shift (…). Creativity is quintessentially a developmental matter" (Feldman 1999, p. 170). The reverse is also the case since creative learning is the main driver of development across the lifespan (Tanggaard 2014). There are deep consequences resulting from this for both creativity and our understanding of developmental processes. Being quintessentially developmental in nature, creative action unfolds in time and builds on its previous achievements in order to envision a future for both self and others. This future, however, is not pre-determined since development itself is not a linear, progressive succession from one stage to the next. In the words of Jaan Valsiner:

> The main course of development is *deterministically indeterministic*: the specifiable constraint systems (which at the moment represent the deterministic state of the development process) are the basis for 'surprises'—novelty constructions (which represent the indeterministic side of development). This deterministic (bounded) indeterminacy guarantees stability and instability, continuity and change, and rigidity and flexibility in development (Valsiner 1997, p. 323).

The apparent paradox above is situated at the core of both creativity and development and it postulates the simultaneously *constrained and open* nature of

these phenomena. I call this paradox apparent because it is precisely distribution in time that resolves the tension between stability and change. Only when we operate with a static, a-temporal perspective are we able to isolate single segments within the uninterrupted flow of action and development, and evaluate them as either continuous with what came before or marking a rupture or discontinuity. In reality, ruptures *are* continuous with the past and continuity is achieved *through* change and transformation. This conclusion emerges, however, only when we add time to our view of creative action and, more than this, when we are able to operate, developmentally, with multiple time frames. For instance, the historical evolution of egg decoration as a type of craft reveals the close interplay between tradition and innovation to the point where they become indistinguishable. The ontogenesis of the craft incorporates both exercised habit and creative expression and reunites them into the unitary concept of mastery (see Glăveanu 2012). Finally, at a more micro level, every act of decoration is continuous with the previous one and, simultaneously, open to the ever-changing circumstances of the present. For a masterful analysis of these temporal lines and their inter-relation see Boesch's (1997) insightful essay 'The sound of the violin'.

Developmental psychology itself is yet to incorporate fully the perspective above, specific for socio-cultural studies. One of the most debateable issues for example, with wide implications for creativity research, is represented by the existence of two main conceptions of socialisation during childhood (Corsaro 1997). A first, traditional view, proposes a deterministic model that makes the child a passive recipient of external influences, ready to 'take in', indiscriminately, what society and culture have to offer. The second is a constructivist approach that recognises children as agents and replaces the unidirectional model of the previous view, from society to the child, with a *bidirectional* one (Lawrence and Valsiner 1993; Kuczynski et al. 1997). In essence, developmental cultural psychology turns children into creative agents capable of acquiring and also transforming the cultural context they are presented with and, moreover, transform this content precisely in the very process of acquiring it.

Creativity research into children's creative expression is not, on the whole, sensitive to this perspective. First of all, it mainly deals with creative potential rather than expression or achievement (Runco 2007). The argument is that children are not capable of creating artefacts with social value or effectively contributing to culture and, whatever spontaneous or imaginative actions they might engage in, can only be taken as a sign of potential for later creative achievement. Second, the main discovery in this line of research is that, after the preschool years and particularly when they reach the fourth grade, children's creative expression tends to decrease dramatically, something metaphorically referred to as the '*creativity slump*' (Torrance 1967). There are many hypotheses formulated regarding this apparent decline from which only some children are said to 'recuperate'. Many relate it to general cognitive development and the emergence of formal logic that constrains imagination. Most often though, the 'culprit' for this state of affairs is the educational system and its push towards conformity.

What clearly transpires through this last explanation is precisely the unidirectional understanding of socialisation mentioned above. If we consider creativity as simply breaking with the past and generating notable ideas or products that make a visible contribution to the culture of a group or community, then it is easy to discover potential 'slumps' once children enter school and even to dismiss children's creativity altogether. The stage of 'literalness', in Gardner's (1982) terms, when children become concerned with the standards of their culture and want to become its competent users, is not a sign of decreased creativity but of a change in the *quality* of creative expression. To evaluate creative potential with the means of divergent thinking tests as Torrance did, collect their productions in a more or less artificial testing situation, and score them for fluency, flexibility and originality (number of answers, number of categories and difference from the answers of others) does not take into account adaptive and constant re-interpretations of cultural norms specific for children's action.

Children's creativity, and creativity at any age for this matter, needs to be understood in terms of our capacity to acquire, use and transform meditational means such as symbols and tools (Vygotsky 1978, 2004). The emergence of creativity during childhood is marked by the first use of symbols, including linguistic ones, during play episodes. Through them, the child is able to detach him/herself from the here-and-now of the environment and think imaginatively in terms of 'as-if' scenarios. "Action in the imaginative sphere, in an imaginative situation, the creation of voluntary intentions, and the formulation of real-life plans and volitional motives—all appear in play and make it the highest level of preschool development" (Vygotsky 1978, p. 102). This revolutionary achievement facilitates the development of a new behavioural organisation and new relations with the world and requires child—adult interaction. In fact, from a cultural perspective, development is never an intra-psychological, cognitive affair (and the same applies to creativity) but conceptualised as the child's progressive participation in the cultural practices of his/her community (Rogoff 2003). This is why, to advance the idea of a 'creativity slump' with the means of divergent thinking testing means to ignore the fact that creativity is grounded in the symbolic use of cultural means as children participate in various communities, including their school community.

A temporally distributed account of creativity focusing on the entire lifespan needs to equally start from the dynamic *co-evolution* between person and environment. Creative action is, by definition, temporal and this feature has been emphasised by authors such as Gruber and Wallace (1999) whose understanding of creativity adds, beside novelty and value, purpose "creative people take on hand projects lasting a long time" (p. 94). A focus on highly creative people brings this duration to the fore. In fact, another main finding in relation to creativity and time was formulated by Hayes (1989) as the '10 year rule' basically claiming that approximately one decade of sustained work is required for high levels of creative achievement. As Weisberg (1999, p. 230) notes, "there is evidence that much of this time is spent internalizing what has already been done in the discipline; master-level performance only comes after years of extensive deliberate practice". This claim is incorporated into theories of adult creativity such as investment

theory. According to Sternberg and Lubart (1995), creative work is based on the co-participation of different factors, from intellectual abilities and knowledge to personality, motivation and environmental conditions. These resources, in different proportions, are required by all successful creators whose activity can be summarised as 'buying low and selling high': they look for a creative idea in an area that does not seem to be appealing for others and, once they formulate it, persuade other people of its value and have them committed to elaborating it, move on to exploring another uncharted field. This is an interesting perspective with a clear time distribution dimension inscribed into it, locating creative action within the social and institutional arenas of culture. However, it also applies mainly to celebrated creations and remains silent regarding the temporality of everyday life creative action.

Here is where, once again, cultural psychological scholarship is most useful. Its focus is on 'creative action in context' and this 'context' is represented not only by the socio-material conditions of work or years of practice but the entire *life-trajectory* of the person. In particular, cultural psychologists point to the fact that "from time to time (…) people find themselves faced with some kind of discontinuity, break or rupture in their ordinary experience" and in these circumstances they employ symbolic devices "that enable them to make a new adjustment to the situation or to 'resolve' the problem" (Zittoun et al. 2003, p. 416). Approaching development in terms of creative processes associated with transitions rather than fixed stages or more or less universal pathways to creative achievement represents a much more contextual and meaningful way of situating human existence into culture. It also helps us bridge the historical level with what I refer to next as 'creativity in the making'.

5.3 Creativity in the Making

As repeatedly argued in this book, a non-distributed account of creativity locates this phenomenon mainly or exclusively 'in the head' and reduces it to universal and static intra-psychological processes. In contrast, distributed creativity is both developmental and contextual; it is, in other words, not the creativity of a finished product or generic individual, it is 'creativity in the making' (see also Moran and John-Steiner 2003). The psychology of creativity, despite its claimed interest for the creative process, has often been a-developmental in its approach. While recognising the embeddedness of creative action within larger timeframes that include learning and implementation, the main focus has been on getting the creative idea and on the idea itself, leaving to the side "the way in which that idea is developed, presented and interpreted" (Bilton 2007, p. 6). This continuity between self and others, the audiences who continue to construct creative value and meaning even after the product is seemingly finished, has been discussed in Sect. 3.2. of this book. For a discussion of the continuity between person and objects and the latter's involvement as co-agents of creativity see Sect. 4.3. What we further need to

notice here, as Weisberg (1993, p. 21) did, is that "creative works in all domains, even those works that make the most radical breaks with the past, must be based on what was done before". Creativity is thus not the process that leads to rupture through the emergence of the new but, paradoxically, *to (temporal) continuity*, helping things 'go on' within an ever-changing environment. As mentioned before in this chapter, the myth of the one revolutionary insight that defines creative action is essentially non-developmental. In a metaphorical sense, Dewey considered that:

> Even the vulcano's outburst presupposes a long period of prior compression, and, if the eruption sends forth molten lava and not merely separate rocks and ashes, it implies a transformation of original raw materials. 'Spontaneity' is the result of long periods of activity, or else it is so empty as not to be an act of expression (Dewey 1934, p. 75).

Once again, noticing this longer history of creative ideas depends on the *analytical cuts* we make within the temporal continuum. One of the main models of the creative process, influential to this day, is the four stage model of Wallas (1926) distinguishing between preparation, incubation, illumination, and verification. Convergent with accounts of creative work from famous creators such as the French mathematician Henri Poincaré and based on psychoanalytically informed views regarding the subconscious maturation of ideas, this model has high ecological validity. It has also been inspirational for numerous other stage descriptions of creativity, even if the initial emphasis on incubation diminished with time. For example, Torrance (1988, p. 47) refers to the following phases of creativity: sensing difficulties, problems, missing elements; making guesses and formulating hypotheses; evaluating or testing these hypotheses; and finally revisiting and retesting them as well as communicating the results.

Despite the appeal of such general frameworks and their potential utility when it comes to explaining creative work, stage models have gradually been replaced in creativity research by a focus on processes (Lubart 2001). As Guilford advised from early on, "it is not incubation itself that we find of great interest. It is the nature of the processes that occur during the latent period of incubation, as well as before it and after it" (Guilford 1950, p. 451). Among these process-oriented views we can find for instance the Geneplore model (Ward et al. 1999) discussed in the Chap. 4 and, to a large extent, action and pragmatist approaches belong to the same general category. There is, however, a big difference in how we distribute creativity temporally between these two main orientations. While stage perspectives tend to have a wider view of creative work—one that acknowledges the importance of preparation and communication (and thus supports the socio-material distribution of creative acts)—they tend to impose artificial boundaries between stages and thus prevent us from developing a dynamic and integrative understanding of creativity. On the other hand, process models are much more dynamic and can be applied more widely but tend to lose sight of the context of creativity and turn to quasi-universal mechanisms of creative production, independent of domain. What is a feasible solution?

A cultural psychological approach to creativity operates with multiple temporal levels, including, as we have seen before, the historical and ontogenetic. When it comes to the creative act itself, this discipline proposes a *microgenetic* reading, in which action is "occurring as the person faces the ever-new next time moment in the infinite sequence of irreversible time" (Josephs and Valsiner 2007, p. 55). From this standpoint, there is not only creative action to refer to, as a distinct category (alongside other types of action), but what necessarily comes to the fore is the creativity *of* human action in the world.

Going back to the theoretical framework of distributed creativity presented in Chap. 2, I started from the premise that difference is at the core of creative expression. This is the difference between self and other, between objects and symbols, between past, present and future. These differences, however, are not static and it would be perhaps best to talk about '*differentiation*' rather than '*difference*' itself. The way differentiation finds its expression is within action and the creative quality of action, at all times, resides in how differences are negotiated, manipulated, widened or bridged by the person in concrete cultural settings. For example, the action of writing a science fiction novel engages multiple perspectives, that of the author and those of the audiences (present or imagined), uses material tools and symbols to recreate reality and it does so based on past experience projected into a potential world, including a world of the future. If, at a microgenetic level, action is situated and future-oriented (Boesch 2001), it can also never occur in the same way twice since both person and context are never identical to themselves across the passing of time. To study creativity microgenetically means to study its performance (Sawyer 1998, 2000), its actualisation within the distributed and evolving network of relations established between people and objects. This concern for the moment-to-moment production of creative action within relationships is supported by the historical and ontogenetic understanding of how any action, even when unexpected or revolutionary in its outcomes, always belongs to a social practice of longer duration and contributes to community life.

Once more, the craft of Easter egg decoration offers a good example. The microgenesis of action in this context involves its distribution between artisan and peers or family, artisan and the material support. Despite the existence of certain general stages of decoration, mentioned at the beginning of the chapter, the exact path of action is 'determined', at each moment, by the folk artist's undergoing of the state of the craft itself. The emerging artefact and the artisan constitute a *unitary* system of distribution within which what has been done on the egg constrains future decoration and ideas about what comes next, inscribed into the normativity of tradition, shape the way work, including 'accidents', are perceived. It is this close dialogue between person and object, mediated by tools and signs in its temporal unfolding that is central for any microgenetic account. Results from such an analysis, based on the filmed observation of work sessions and interviews with decorators have been reported elsewhere (Glăveanu 2013). For this section, it is important only to note that the microgenesis of creativity is the 'meeting' place between stability and change, between the continuity imposed by a personal style

of decoration, the development of a work routine, and the novelty of moment-to-moment discoveries occasioned by the changing artefact. It is primarily when considering this level of analysis that the full potential and expression of creativity in craft reveals itself. Those who contest it by comparing the decorated egg with fine art products not only ignore context but also operate exclusively with a historical timeline. Within it, any individual Easter egg will most probably be engulfed into the richness of the entire tradition, unlike the way a painting like Mona Lisa stands out over the centuries. But the tradition itself will go on due to often small, cumulative changes inscribed into each new artefact.

The creativity of egg decorators resembles that of music performers. They are not the ones to have composed the song but their interpretation recomposes it each time for a different audience, within a different context. Caffin et al. (2006, p. 200), referring to the latter, conclude that "the creativity involved in this kind of spontaneous micro-adjustment of a highly prepared interpretation makes each performance a creative activity, separate from the creativity involved in preparing the interpretation in the first place". Similarly, each and every act of decoration is, at the same time, a reenactment of an old tradition, always reenactment *with a difference*. This difference might not be apparent to outside observers, sometimes not even to the decorators themselves, although they are highly sensitive to the aesthetic qualities of their work and know very well how motifs 'should' look like. Unlike acts of mechanical reproduction, human action is microgenetically open to change and to the future and, having accepted this openness, artisans are confident that their products carry something special, something from 'within' themselves. It is common for decorators to refer to good quality craft as the result of 'working with soul', offering a personal element by appropriating tradition. Once again, in the microgenesis of creative action is where the personal and collective meet and, expressed in the evolving dyad of person-artefact, complete a view of creativity as a distributed phenomenon.

References

Becker, H. S. (2008). *Art worlds. Updated and expended*. Berkeley, CA: University of California Press.

Bilton, C. (2007). *Management and creativity: From creative industries to creative management*. Malden, MA: Blackwell.

Boesch, E. E. (1997). The sound of the violin. In M. Cole, Y. Engestrom, & O. Vasquez (Eds.), *Mind, culture and activity: Seminal papers from the laboratory of comparative human cognition* (pp. 164–184). Cambridge: Cambridge University Press.

Boesch, E. E. (2001). Symbolic action theory in cultural psychology. *Culture and Psychology, 7*(4), 479–483. doi:10.1177/1354067X0174005

Bourdieu, P. (1993). *The field of cultural production*. Cambridge: Polity Press.

Caffin, R., Lemieux, A. F., & Chen, C. (2006). Spontaneity and creativity in highly practiced performance. In I. Deliège & G. A. Wiggins (Eds.), *Musical creativity: Multidisciplinary research in theory and practice* (pp. 200–218). Hove and New York: Psychological Press.

Corsaro, W. A. (1997). *The sociology of childhood*. Thousand Oaks, CA: Pine Forge Press.

Dewey, J. (1934). *Art as experience*. New York, NY: Penguin.
Feldman, D. H. (1999). The development of creativity. In R. Sternberg (Ed.), *Handbook of creativity* (pp. 169–186). Cambridge: Cambridge University Press.
Festinger, L. (1983). *The human legacy*. New York, NY: Columbia University Press.
Gardner, H. (1982). *Art, mind, and brain: A cognitive approach to creativity*. New York, NY: Basic Books.
Glăveanu, V. P. (2012). Habitual creativity: Revisiting habit, reconceptualizing creativity. *Review of General Psychology, 16*(1), 78–92. doi:10.1037/a0026611
Glăveanu, V. P. (2013). Creativity and folk art: A study of creative action in traditional craft. *Psychology of Aesthetics, Creativity, and the Arts, 7*(2), 140–154. doi:10.1037/a0029318
Gruber, H. E., & Bödeker, K. (Eds.). (2005). *Creativity, psychology and the history of science*. Dordrecht: Springer.
Gruber, H., & Wallace, D. (1999). The case study method and evolving systems approach for understanding unique creative people at work. In R. Sternberg (Ed.), *Handbook of creativity* (pp. 93–115). Cambridge: Cambridge University Press.
Guilford, J. P. (1950). Creativity. *American Psychologist, 5*, 444–454. doi:10.1037/h0063487
Hayes, J. R. (1989). Cognitive processes in creativity. In J. A. Glover, R. R. Ronning, & C. R. Reynolds (Eds.), *Handbook of creativity* (pp. 135–145). New York, NY: Plenum Press.
John-Steiner, V. (1997). *Notebooks of the mind: Explorations of thinking*, revised edition. Oxford: Oxford University Press.
Josephs, I. E., & Valsiner, J. (2007). Developmental science meets culture: Cultural developmental psychology in the making. *European Journal of Developmental Science, 1*(1), 47–64. doi:10.3233/DEV-2007-1105
Kuczynski, L., Marshall, S., & Schell, K. (1997). Value socialization in a bidirectional context. In J. E. Grusec & L. Kuczynski (Eds.), *Parenting and the internalization of values: A handbook of contemporary theory* (pp. 23–50). New York, NY: Wiley.
Lawrence, J. A., & Valsiner, J. (1993). Conceptual roots of internalization: From transmission to transformation. *Human Development, 36*(1), 50–167. doi:10.1159/000277333
Lubart, T. I. (2001). Models of the creative process: Past, present and future. *Creativity Research Journal, 13*(3–4), 295–308. doi:10.1207/S15326934CRJ1334_07
Moran, S., & John-Steiner, V. (2003). Creativity in the making: Vygotsky's contemporary contribution to the dialectic of development and creativity. In R. K. Sawyer, et al. (Eds.), *Creativity and development* (pp. 61–90). Oxford: Oxford University Press.
Rogoff, B. (2003). *The cultural nature of human development*. Oxford: Oxford University Press.
Runco, M. (2007). *Creativity. Theories and themes: Research, development, and practice*. Burlington, MA: Elsevier Academic Press.
Sawyer, R. K. (1998). The interdisciplinary study of creativity in performance. *Creativity Research Journal, 11*(1), 11–19. doi:10.1207/s15326934crj1101_2
Sawyer, R. K. (2000). Improvisation and the creative process: Dewey, Collingwood, and the aesthetics of spontaneity. *The Journal of Aesthetics and Art Criticism, 58*(2), 149–161.
Simonton, D. K. (1975). Sociocultural context of individual creativity: A transhistorical time-series analysis. *Journal of Personality and Social Psychology, 32*(6), 1119–1133.
Simonton, D. K. (1999). Historiometry. In M. Runco & S. Pritzker (Eds.), *Encyclopaedia of creativity* (Vol. I, pp. 815–822). San Diego, CA: Academic Press.
Sternberg, R. J., & Davidson, J. E. (Eds.) (1995). *The nature of insight*. Cambridge, MA: The MIT Press.
Sternberg, R. J., & Lubart, T. I. (1995). *Defying the crowd: Cultivating creativity in a culture of conformity*. New York, NY: Free Press.
Tanggaard, L. (2014). *Fooling around: Pathways to creative learning*. Charlotte, NC: Information Age Publishing.
Tarde, G. (1903). *The laws of imitation*. New York, NY: Henry Holt and Company.
Torrance, E. P. (1967). *Understanding the fourth grade slump in creative thinking* (Report No. BR-5-0508; CRP-994). Washington, DC: US Office of Education.

Torrance, E. P. (1988). The nature of creativity as manifest in its testing. In R. Sternberg (Ed.), *The nature of creativity: Contemporary psychological perspectives* (pp. 43–75). Cambridge: Cambridge University Press.

Valsiner, J. (1997). *Culture and the development of children's action: A theory of human development*. New York, NY: Wiley.

Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. In M. Cole, V. John-Steiner, S. Scribner & E. Souberman (Eds.), Cambridge, MA: Harvard University Press.

Vygotsky, L. S. (2004). Imagination and creativity in childhood. *Journal of Russian and East European Psychology, 42*(1), 7–97.

Wallas, G. (1926). *The art of thought*. New York, NY: Harcourt-Brace.

Ward, T., Smith, S., & Finke, R. (1999). Creative cognition. In R. Sternberg (Ed.), *Handbook of creativity* (pp. 182–212). Cambridge: Cambridge University Press.

Weisberg, R. (1993). *Creativity: Beyond the myth of the genius*. New York, NY: W. H. Freeman and Co.

Weisberg, R. (1999). Creativity and knowledge: A challenge to theories. In R. Sternberg (Ed.), *Handbook of creativity* (pp. 226–250). Cambridge: Cambridge University Press.

Zittoun, T., Duveen, G., Gillespie, A., Ivinson, G., & Psaltis, C. (2003). The use of symbolic resources in developmental transitions. *Culture and Psychology, 9*(4), 415–448. doi:10.1177/1354067X0394006

Chapter 6
Why do We Need to Distribute Creativity?

6.1 Summing Up

This book started from the assumption that creativity is a distributed phenomenon and, drawing on various strands of scholarship, from cognitive to cultural theories as well as past and present developments within creativity research, explored three distinct yet intertwined 'lines' of distribution: social, material and temporal. I argued that, in order to achieve this paradigmatic view, we need to change our perspective on creativity, at least the mainstream approach promoted by psychological studies. After the 1950s, the main focus within this discipline has been on individual and intra-psychological correlates of creative expression (Barron and Harrington 1981; Bateya and Furnhamb 2006) and only gradually, since the 1980s, this 'internal' focus started to be contextualised (Hennessey 2003). Notably, a similar tendency towards reflecting more on the importance of context, including temporality, was found at the time in models of intellectual development (see Williams and Ceci 1997). Initially, research into the social/sociocultural psychology of creativity emphasised primarily the collaborative nature of creative acts (Sawyer 1995, 2003) and it is only more recently that materiality re-entered creativity theory (Tanggaard 2013, 2014), aided by a greater shift towards models of situated cognition (see Lave 1988). The developmental perspective, specific for socio-cultural research (Valsiner 2000), completes this image of distributed creation. In essence, the emerging cultural psychology of creativity moves us from a study of the creative process, located 'inside the head', to conceptualising *creative action*, extending the psychological into the social and material world.

Undoubtedly, many of the insights afforded by working within the paradigm of distributed creativity are not new; the added value here is that of reuniting them under a unitary, integrated framework. Vygotsky (2004), to take just an example, is rightfully credited as a pioneer of this type of thinking about the mind in general and creativity in particular. His concern for mediated action, for context and for the socio-cultural scaffolding of learning remains, to this day, an important point of reference within social and developmental psychology. It also inspired cultural understandings of the extended and distributed mind that are able to transcend

V. P. Glăveanu, *Distributed Creativity*, SpringerBriefs in Psychology,
DOI: 10.1007/978-3-319-05434-6_6,

some of the limitations of mainstream cognitive accounts. The latter, as discussed at length in Chap. 2, still operate with a dichotomic view of the 'inside' and 'outside' and ultimately do little beyond extending the language of computation from cognition to culture. The cultural psychological theory of distributed creativity proposed here starts from a different epistemological position. By considering psychological phenomena developmentally, cultural psychologists are not concerned with drawing clear-cut borders between elements internal and external to the mind; these 'limits' necessarily fluctuate and reveal an image of *inter-dependence and co-evolution*, a totality captured by symbolic action taking place within a cultural environment. Creative action is an excellent illustration of distribution since it clearly engages the individual and his/her psychological processes but does so in view of materialising or externalising these processes into cultural artefacts, always in collaboration with other people. Distributed creativity is not creativity without the person but creativity that takes as its rightful unit of analysis the 'person in context' (Diriwächter and Valsiner 2008).

The theoretical framework proposed in Chap. 2 (Fig. 2.1; see also Glăveanu 2013a) captures very well this totality. Within it, the creative actor exists only in relation to different audiences, the new artefact is connected to existing cultural artefacts, and creative action exploits the affordances of the socio-cultural environment. In essence, what this framework helps us do is go beyond non-distributed views that tend to locate creativity either within the person or the product. This is a traditional stance within psychological science since it helps psychologists contain this complex phenomenon and make a strong claim for why creativity should primarily be studied by this discipline: it is, first and foremost, a mental process. In contrast, elaborating a theory of distributed creativity can only be an *interdisciplinary endeavour*. This is necessarily so because creative action is not only psychological but social, economic, historical, linguistic and even political. In the spirit of a broader science of creatology (see Magyari-Beck 1999), the cultural psychological approach is open to a multitude of theoretical elaborations that draw, among others, on anthropology, sociology, history, linguistics and philosophy, as well as being in close contact with other branches of psychology: social, evolutionary, developmental, ecological. Each one of these perspectives has a unique contribution to make for our understanding of creativity and sociality, materiality and temporality. At several points, for example, I have drawn extensively on sociological literature to illuminate processes that are either downplayed by psychologists or considered outside their sphere of interest. The latter attitude is condemnable in my view as it uses disciplinary divides (indeed, it sometimes creates them!) to artificially segment a phenomenon and quarrel over scientific boundaries instead of focusing on the question at hand. The challenge is of course to articulate perspectives without imposing a uniform reading of creativity or a rigid conceptual apparatus that encompasses all but does not truly do justice to any author or discipline. If creativity does, ontologically, rely on difference, as argued in Chap. 2 (see also Glăveanu and Gillespie 2014), then recognising different theoretical positions and exploring elements of tension between them can be an extremely productive exercise.

In conclusion, this book has been actively drawing on psychology and sociology in order to argue for an 'expanded' model of creativity. It also illustrated its claims with the help of an anthropological-looking case-study: the decoration of Easter eggs within northern Romanian communities. Research on this practice, conducted as part of my doctoral studies (Glăveanu 2012), not only has the benefit of helping us relocate creativity at the level of everyday, community activity, but it also reveals clearly the social, material, and temporal aspects of craftwork. Moreover, what it helps us achieve is an integrated perspective of creative action as *simultaneously* socially, materially and temporally distributed. The presentation in this volume proceeded analytically by separating, more or less artificially, the three 'lines' of distribution. However, as inscribed within the theoretical model (Chap. 2) and vividly illustrated by folk art activities, creative acts are, at once, psychological, socio-material and temporal. The sociogenesis, ontogenesis and microgenesis of craftwork are deeply embedded within the sociality of apprenticeships, cooperation and artisan—customer relations, as well as the materiality and symbolism of tools and the local environment. Decorating an egg is not merely a mental process but an equally psychological and physical form of expression. It is not the act of a single individual, even when performed in solitude. It belongs to a tradition of long duration that transcends the person and reaches the level of the collective. Finally, this tradition is itself located within a wider context of community life and its multiple customs, social and material relations. This is why it is legitimate to ask '*Where does creativity in craftwork start and where does it end?*' Is it when the artisan confronts an obstacle while decorating? Is it when he or she starts the work? When the eggs and colours are prepared? While the craft is learned, years before? Equally, does creativity end once the wax is cleaned off the surface of the egg, for traditional decoration? Or when the egg is shown to others? When it is sold? Operating with a distributed perspective does not mean to agree with one of the formulations above and deny the others. This is because distributed creation is situated and systemic and allows multiple types of 'analytical cuts' for as long as, within each one, (a) we observe closely the psycho-socio-material-temporal dynamic of action, and (b) we situate it within larger 'continuums' without losing from sight lower level totalities.

6.2 The Consequences of Distribution

If there are multiple arguments in favour of a distributed theory of creativity, we need to consider, in the end, what added value will this bring to knowledge and/or practice, compared to existing, 'mainstream' accounts that situate creative processes inside the head or inside the 'box' of individual creators. The scientific emphasis on parsimonious explanations (see Runco 1999) compels us therefore to see not only if distributed creative action is a valid construct that agrees with how people experience this phenomenon in the everyday, but also if it adds considerably to our understanding or capacity to act in the world. Because, clearly

distributed creativity is a more comprehensive framework and, instead of simplifying our conceptual apparatus, it makes it significantly more complex. It is thus important to ask if the 'cost' of these additions is worth the trouble or, in other words, 'why do we need to distribute creativity?'. Below are only a few possible answers to this important question, considering the theoretical, methodological and practical implications of this new paradigmatic view.

1. One direct consequence of rethinking the theory of creativity relates to a sustained reflection on its *definition*. Traditional definitions of creativity centre on the novelty and utility of creative products (Lubart 2003). This conceptualisation, for as limiting as it may be, due to an almost exclusive focus on products at the expense of processes, proved very useful for research and for making the creativity construct operational. A distributed definition of creativity does not deny novelty or utility but broadens their meaning. First of all, in agreement with the social and temporal dimensions of distribution, these qualities are never a 'given' in the case of creative products but the result of interactions between makers, users, and the creations themselves (see also Glăveanu 2011a). It would be more accurate to say that novelty and utility are being attributed to the product and actualised in a situational manner. This is why the quality of being creative can be 'gained' or 'lost' by people and artefacts and we have multiple historical examples of this ongoing negotiation of meaning (e.g. Yamamoto 2012).

Another aspect that is rarely included in definitions but accepted implicitly is the fact that creativity uses what is 'already there', it "produces something new through the recombination and transformation of existing cultural practices or forms" (Liep 2001, p. 2). This can hardly be contested by any researcher today and it was also obvious for scholars at the turn of the last century (e.g. Baldwin 1911; Bartlett 1923). However, bringing such a conclusion to the fore has radical consequences: it expands our focus from individual and product to the world of culture. When we understand creative action as distributed within the environment we can no longer ignore the fact that this environment is part and parcel of the phenomenon we are studying. In this sense, creativity becomes a form of cultural participation (Glăveanu 2011b), where new and useful artefacts emerge from and are integrated into a cultural stock that is capable, as a consequence, to continue by transforming or renewing itself. In summary, a preferred cultural psychological or distributed definition of creativity moves the focus from product to human action and it conceptualises creative action in relation to other people, existing cultural artefacts, and as a developmental process. Why do we need such a definition? Because it is much more sensitive to context and it situates our existing criteria within a broader picture of action in and on the world. This wider applicability and the fact that it can be the starting point for more comprehensive and ecological theories and research methods are two key arguments in its favour.

2. One direct implication of starting from a broader definition relates to how we approach established *dichotomies* within the psychology of creativity, among which the common distinction made between 'P-creative' (or creative for the individual) and H-creative (new from the historical point of view, for an entire society) (Boden 1994). This basic division resonates with little c and Big C

differences as well as what Cohen and Ambrose (1999) call mature creativity versus mundane creativity or 'creativity in the small'. A simple classification system like this one is very appealing because it helps us make some easy and, from a certain perspective, useful distinctions within creative action depending (once more) on its outcome. It seems commonsensical to differentiate between a child's creative play and the theory of Einstein but how theoretically sound is it? The long-term fascination with the image of the genius, as I argued throughout the book (see also Glăveanu 2010), drives this kind of segmentation and, its more subversive effect is that it also makes us ignore or devalue creations that do not attain societal impact. Sure, everyone feels he or she may at least have the potential to be creative but we are also discouraged by comparisons with celebrated creators in our fields.

What a cultural psychological account of distributed creativity ultimately aims to do is "seek to recover the power inherent in the term [creativity] for bringing the elevated and the mundane into conjunction, and for illuminating how the exceptional and the ordinary feed off each other" (Negus and Pickering 2004, p. 1). This process has been started some time ago by the creative cognition approach (Weisberg 1993) which takes as its point of departure the claim that psychological processes required by high-level creative production are basically the same as those involved by everyday acts of creativity. The evidence brought by this line of research rests in biographical accounts and experimental studies focused on individual-level creativity. If we add social, material and temporal factors to these designs wouldn't it point to the opposite conclusion? Isn't it the case, for instance, that H and P-creative products differ precisely because of social and institutional recognition, present in the former and largely absent for the latter? It all depends on how we understand distribution. The account offered here was based on the simple observation that creative action is, at once, psychological, social, material and temporal. The fact that the social, in our example, can be represented by a formalised field of experts (as in systemic models of creativity; see Csikszentmihalyi 1999) or simply the social arenas of everyday life is secondary from my point of view. The making and validation of a creative product—be it a child's drawing or the theory of relativity—remain situated within networks of sociality, and this feature brings them together rather than sets them apart.

We should note in the end that our view of the little—Big dichotomy is much more nuanced today and many other types of creativity are gaining recognition (Kaufman and Beghetto 2009), including mini-c or what I would call microgenetic creativity. What the theory of distributed creativity does is support the continuity between Big, little and mini-c based on their embeddedness within each other and the fact that, when we add a temporal dimension to our thinking, we can notice how relative these categories really are. In the end, distributed creation is a paradigm that bridges high and mundane levels of creative production and, in doing so, rediscovers the value of small acts of ordinary creativity, the ones that "weave and reweave the fabric that makes social life possible" (Bateson 1999, p. 153).

3. Another perhaps surprising theoretical benefit of operating with a framework of distributed creativity is regaining a better understanding of the *role of*

individuals in creative work. An attempt to re-centre creative action from 'inside' the individual to the space in-between person and world might seem like an exclusion of individual factors. There is nothing further from the truth, as repeatedly argued in this book. What I will emphasise in this last chapter is that such a relocation not only keeps individuals as an essential 'part' of creativity, but helps us understand this 'part' and its value better. Basically, distributed creativity starts from the premise that there is "an 'and' rather than a 'versus' relationship between individual and social creativity" (Fischer et al. 2005, p. 483) and therefore there are no binary choices to be made. In the words of Montuori and Purser (1995), *both* individuals and systems are important for our study of creativity. Accused of downplaying individuals they replied:

> It is only by studying humans as humans, within their historical, social, and environmental context, that we can begin to do justice to the human struggle. In our view, viewing humans as existing within a context does not diminish the individual but adds richness to the picture and makes experience not less unique but human (Montuori and Purser 1995, p. 82).

I am in perfect agreement with this remark. Systemic, distributed accounts of creativity place the thinking and action of individuals at their centre without making it 'individual' in nature. Pointing to how individual action extends into the world of others and objects and exists within time does not make it less personal, it just shows it is, *at the same time*, social and cultural. It is not hard to avoid both psychological and sociocultural forms of reductionism (Simonton 2003); what we need to do is simply recognise, along with Freud (see Jovchelovitch 2007), that what is individual in our psychology is also social. The reverse is not that the social is personal or, like cognitive science sometimes wrongly assumes, that culture is (all about) cognition. Just as there is no perfect equality sign between the 'inside' and 'outside' but a dynamic co-evolution, processes of internalisation and externalisation linking person and context are constructive, essentially creative phenomena (Valsiner 2000; Moran and John-Steiner 2003). The mind is not projected into the world as is, neither is the world brought inside the mind untouched. In their relationship, we are only talking about world and mind *transformed*, in time.

4. Methodologically, the great value of the distribution creation paradigm is that it forces us to overcome the mirroring image of individualism in creativity theory—*methodological reductionism* (Montuori and Purser 1997). The problem in this case is not that we do not study creativity at different levels (e.g., the brain, the individual, the small group, society, and so on) but that we keep these levels distinct and reduce our explanation to just one of them. If we focus on psychometric and experimental methods to study thinking processes or properties of products, we run the risk of reducing our explanation to persons or things. It is the case that such a methodological problem exists in psychology beyond creativity studies and the same can be more or less said about research on intelligence, memory, motivation, etc. Whenever our analytical focus is on what the isolated individual does we run the risk of being oblivious to distribution, to the multiple

continuities between person and context. Moreover, a further complication derives from the fact that psychological phenomena are essentially developmental. And yet, "research on issues of *change* is often performed with the help of methods that are designed to reveal *static* features of the issues studied" (Vygotsky 1997, p. 26). It is challenging for human sciences to use the methods of natural sciences and apply them to living organisms. Much more ingenuity in research is required to capture multifaceted, systemic and developmental processes.

Creativity research, more than many other topics, confronts researchers with this enormous complexity. When we consider creative action we are faced with "an infinity of choices we might investigate; the sum of those choices is the work" (Becker 2008, p. 199). To methodologically study creative work in its unfolding we need to situate these choices in the context of the individual, of the socio-material environment, and of time. While such a broad frame of analysis can sometimes, in retrospect, seem to make creative actions and outcomes perfectly predictable, almost pre-determined, this is not the purpose of the type of research I am envisioning. To study microgenesis or creativity in the making is to recognise the *uniqueness* of each moment in time while placing this uniqueness within the *continuity* of action, of the person and of the world. Continuity is ideally observed when we refocus our analytical lenses from microgenesis to onto- and sociogenesis, from the here-and-now to the developmental pathway of the creator and his/her society and culture. It is this kind of analytical flexibility and concern for going beyond individual-level data than can save our research—and ultimately theories—from charges of methodological individualism.

5. At a practical level, the concrete way in which we can advance theory and method in the psychology of creativity is by focusing more on *what people actually do* instead of just giving them tasks and observing the results (within a classic behaviourist schema). Before exploring the potential of this reorientation, let us consider for a moment one of the key methods within the psychology of creativity, the emergence and large-scale application of which determined, to a certain extent, the emergence of this field of investigation. A brief summary of psychometrics and its assumptions goes as follows:

> Psychometric approaches to the study of creativity are those in which creativity is viewed as a mental trait that can be quantified by appropriate measurement instruments. The underlying view is of creativity as a mental trait: Creativity is best understood as a measurable human factor or characteristic. The most important characteristics of this approach are quantitative measurement, so that the creativity of a person can be summarized as a number, controlled environments, so that testing takes place in artificial contexts, and ability-based analyses, so that human creativity depends on the level of the component abilities of the reasoner (Mayer 1999, p. 452).

Starting from Guilford's (1950) emphasis on divergent thinking and up to Torrance's well-known battery of tests, the psychology of creativity was and is by and large dominated by psychometric research (although this is not the only method available, see again Mayer 1999). The critique formulated above concerning methodological reductionism finds in classic psychometric approaches the perfect illustration. Creativity as a mental trait is not distributed creativity.

Summarising the creativity of the person as a number is non-developmental. Artificial testing contexts cannot match the complexity of everyday life creative action. Ability-based analyses are silent about environmental affordances 'meeting' these abilities and placing them in a relational context. This is not to say that psychometric studies never reach useful or interesting conclusions; just, most of the times, and depending on their use, partial conclusions. While the dispute about the psychometric properties of creativity tests is still on-going (Zeng et al. 2011), what I raise here is a doubt about validity.

In line with the distributed view of creativity presented in this book, we can come to recognise, together with Barron and Harrington (1981) that what has been lost from sight in psychometry is precisely the creative process. A reformulation of creativity as action would necessarily focus our attention on what participants actually *do* within the testing situation. Moreover, it would make us consider testing as a socio-cultural activity itself, a special 'environment' the 'subject' reflects on and responds to. Creativity assessment is not, in my view, to be abandoned, but reformulated. Today there is an increased interest shown towards formative and dynamic-formative testing, particularly in the area of psychoeducational assessment (Haywood and Lidz 2006). Drawing on Vygotskian scholarship, these recent developments use *assessment as intervention* and create the perfect conditions to observe the social and material distribution of creativity (by having people work in dyads on test items, for instance). New technologies such as subjective cameras can be used to record this joint activity (for details see Glăveanu and Lahlou 2012) and analyse the data not in a static but developmental manner (employing, for example, interaction analysis; Sawyer and DeZutter 2009). Of course, naturally occurring creative action, within community contexts, remains the preferred site for researchers working within the sociocultural tradition (Rogoff 2003; Glăveanu 2011c).

6. Another theoretical point with ample practical consequences deriving from our discussion of distributed creation relates to how we conceptualise, discover and foster *creative agency* in relation to the agency of others, including objects (see Sect. 4.3). An argument has been previously made that, instead of looking at individual actors and their agentic features, we need to start considering co-agentic systems that function as a totality. The discussion of agency cannot be separated from one of intentionality and it has long been the case that creative action was reduced to intentional action (Weisberg 1993). This assumption contributed to 'grounding' creativity, as well as intention, within the individual mind, a mere result of conscious thinking and motivational processes. The paradigm of distributed creativity proposed here conceptualises intentionality as an orientation towards the world (see also Brentano 1874/1911) shaped, at each moment, by both person and the environment. The latter is not void of intentionality, on the contrary. When creating we are faced with the intentions and projects of other people, from collaborators to critics and gatekeepers. We are also facing the 'intentions' inscribed into material objects by their makers and users, as well as their resistance to our doing. From a cultural psychological perspective, this means that, at all times, we are *both* the makers/creators and subjects of the situations we encounter and ultimately

co-create. The usual first step is represented by choosing the context for action, at least in part, and, as action unfolds, person and environment are simultaneously and equally changed (Ginsburg 1980). Undergoing this change in order to create further is key to any microgenetic account of creativity (see Dewey 1934).

There are many voices nowadays that argue for research on co-creation, calling for recognition of the fact that to create is never a solitary act. To take just one example, the term produsage (Bruns 2006) has been recently proposed to capture the prevalence of user-led content production in online environments, a sign of collaborative and iterative cycles of actions in which participants are, at once, producers and users. We need a theory of distributed creativity in order to acknowledge the fact that the creative agent is multiple without making any single individual less of a 'creator' in his or her own right. If creative experience requires, in essence, "a will to expression, and to communication with others" (Negus and Pickering 2004, p. 22), it means that creativity itself is outward-looking and its privileged domain is the space between people and cultural artefacts. It is this relational space that should concern us in our thinking and research of creative action and agency. In the end, an account of distributed creativity calls for one of distributed agency, a view with deep implications for the social sciences at large.

7. A consequence of the above, and a last point to be made (out of many more), concerns the related issue of *responsibility*. Clark and Chalmers (1998) were right to note, in their discussion of the extended mind, that their theory has "obvious consequences for philosophical views of the mind and for the methodology of research in cognitive science, but there will also be effects in the moral and social domains" (p. 18; emphasis added). If we consider cognitive performance as a function of person and environment then interfering with one's environment would be equal to acting towards their person. Can the same logic be applied to distributed creativity? Since I argued previously for a view of co-agency then, indeed, any action has consequences for the agency of others sharing the same context but with a caveat: creative actors remain active in the shaping of their own life world and, as such, can and do react to and transform the actions of others.

An important consequence of thinking in terms of distributed creative action is thus that we are made to reconsider the relationship between person and his or her community. In the words of Montuori and Purser (1995, p. 104), this conception "reorients the cultural project from that of dominating the environment to that of nurturing and engendering creative relationships with the environment, so that sympathy with the non-self, with other, is actively encouraged". The two authors argue for a need to realise that, just as we are the agents of our own creative expression, we also fertilise the soil of creation for others and the same is done by others in relation to us. Instead of a view of creativity as individual acts performed in opposition to other people we are now operating with one of inter-connection, of creators as persons who shape the context for their own creativity and that of those around them.

Why is this perspective better than the alternative? Think only about the pressure to create at all cost experienced by individuals who believe creativity is ultimately 'within' them, something they have or do not have, a personal attribute.

For many of them to create means to provoke others, to stir their emotions and raise opposition. It is true that, at times, creative action meets such responses. To use them, however, as a standard for creativity is misleading and ultimately dangerous both for the creator, who can easily be alienated, and for society, that starts protecting itself from individual outbursts of creativity. Distributed creativity, in contrast, encourages us to be reflective and responsible in relation to our creative action and its outcomes. It also makes us more sensitive to the multiple ways in which this action and outcomes are experienced by others.

6.3 Epilogue

Luminiţa Niculiţă was 8 years old when I first arrived in Ciocăneşti village looking to find egg decorators and learn about their craft. The daughter of a known artisan who also works at the Museum of the Decorated Egg in the local community, she was one of the youngest decorators I have met (although by no means the only one of her age). Luminiţa was decorating eggs upstairs in the Museum house together with her older sister, Laura, assisted by their mother. A shy child, she didn't have much to say about her activity other than the fact that she likes doing it. She was also happy to show me what she does and agreed to be filmed during a work interval of 20 min because, as she later told me, "you can become tired and your hand can hurt if you decorate without a break".

The activity recorded on camera revealed the efforts done to hold the chişiţă perfectly, to insert it in wax at the right time and, most of all, to draw straight lines on the round and shiny surface of the egg. Despite her young age and these difficulties, she was capable of drawing continuously on the shell and showed many of the 'reflexes' of experienced decorators (e.g., touching her fingernail first with the work instrument to remove any extra wax). Luminiţa tried hard to solve what for her was a paramount challenge: being able to hold the egg and move it at the same time, the key to drawing 'perfect' lines on its surface. As the tip of the chişiţă was approaching her hand, she was removing her fingers, one by one, making room for the depiction of the motif (illustrations in Glăveanu 2013b). Expert decorators normally rotate the egg instead of risking losing their grip. This is something both her mother and sister do and, although there was not much talking during the decoration itself, Luminiţa's decorated egg was discussed afterwards by all of us. Instead of listening to our praises, she gave it one quick look and whispered: "I don't like it, it's ugly". This critical outlook is convergent with her ambition to become a known decorator, like her mother and sister, who both won prizes in previous years at the annual festival of the decorated egg.

Luminiţa's act can be interpreted in multiple ways. For some it might be simply a child trying to learn a traditional form of decoration, a process that has nothing or little to do with what it really means to create. Others might wonder what Luminiţa is thinking about while decorating and can concentrate on her intrinsic motivation to achieve as a good premise for high level creativity or an analysis of

her goals. The perspective I advocated for here expands this focus and considers the child's relation to her environment, her use of tools and interactions with others, the progress of her work and the way this progress shapes, at each moment, ongoing action. Luminiţa's action, just like that of expert folk artists, shows from this early age signs of what Bruner (1962) called a 'detachment of commitment'. Within it, the commitment to understand, to master a technique or render a meaning, leaves room for sudden moments when creative actors "are disengaged from that which exists conventionally and are engaged deeply in what they construct to replace it" (p. 24). There are many theoretical and practical arguments for adopting this perspective rather than alternative, non-distributed frameworks, several of them discussed in this chapter. A last point I would like to add draws on Barron's (1995) inspired statement that creativity is not a rootless flower; "like speech, thought, hard work, it grows from deep roots" (Barron 1995, p. 9). Distributed creativity starts from the same premise. It also tells us that creativity is not a *single* flower either but a *garden*—an old metaphor of culture—we constantly cultivate for ourselves and others.

References

Baldwin, J. M. (1911). *The individual and society or psychology and sociology*. Boston, MA: Richard G. Badger.

Barron, F. (1995). *No rootless flower: An ecology of creativity*. Cresskill, NJ: Hampton Press.

Barron, F., & Harrington, D. (1981). Creativity, intelligence, and personality. *Annual Review of Psychology, 32*, 439–476. doi:10.1146/annurev.ps.32.020181.002255

Bartlett, F. C. (1923). *Psychology and primitive culture*. Cambridge: Cambridge University Press.

Bateson, M. C. (1999). Ordinary creativity. In A. Montuori & R. Purser (Eds.), *Social creativity* (Vol. I, pp. 153–171). Cresskill, NJ: Hampton Press.

Batey, M., & Furnham, A. (2006). Creativity, intelligence, and personality: A critical review of the scattered literature. *Genetic, Social, and General Psychology Monographs, 132*(4), 355–429. doi:10.3200/MONO.132.4.355-430

Becker, H. S. (2008). *Art worlds. Updated and expended*. Berkeley, CA: University of California Press.

Boden, M. (1994). What is creativity? In M. Boden (Ed.), *Dimensions of creativity* (pp. 75–117). London: MIT Press/Badford Books.

Brentano, F. (1874/1911). *Psychology from an empirical standpoint*. London: Routledge and Kegan Paul.

Bruner, J. (1962). *On knowing: Essays for the left hand*. Cambridge: Belknap Press.

Bruns, A. (2006). Towards produsage: Futures for user-led content production. In F. Sudweeks, H. Hrachovec, & C. Ess (Eds.), *Proceedings cultural attitudes towards communication and technology* (pp. 275–284). Estonia: Tartu.

Clark, A., & Chalmers, D. (1998). The extended mind. *Analysis, 58*(1), 7–19. doi:10.1111/1467-8284.00096

Cohen, L., & Ambrose, D. (1999). Adaptation and creativity. In M. Runco & S. Pritzker (Eds.), *Encyclopedia of creativity* (Vol. 1, pp. 9–22). San Diego, CA: Academic Press.

Csikszentmihalyi, M. (1999). Implications of a systems perspective for the study of creativity. In R. Sternberg (Ed.), *Handbook of creativity* (pp. 313–335). Cambridge: Cambridge University Press.

Dewey, J. (1934). *Art as experience*. New York, NY: Penguin.
Diriwächter, R., & Valsiner, J. (Eds.). (2008). *Striving for the whole: Creating theoretical syntheses*. New Brunswick, NJ: Transaction.
Fischer, G., Giaccardi, E., Eden, H., Sugimoto, M., & Ye, Y. (2005). Beyond binary choices: Integrating individual and social creativity. *International Journal of Human-Computer Studies, 63*, 482–512. doi:10.1016/j.ijhcs.2005.04.014
Ginsburg, G. P. (1980). Epilogue: A conception of situated action. In M. Brenner (Ed.), *The structure of action* (pp. 313–350). Oxford: Basil Blackwell Publisher.
Glăveanu, V. P. (2010). Principles for a cultural psychology of creativity. *Culture & Psychology, 16*(2), 147–163. doi:10.1177/1354067X10361394
Glăveanu, V. P. (2011a). Creating creativity: Reflections from fieldwork. *Integrative Psychological and Behavioral Science, 45*(1), 100–115. doi:10.1007/s12124-010-9147-2
Glăveanu, V. P. (2011b). Creativity as cultural participation. *Journal for the Theory of Social Behaviour, 41*(1), 48–67. doi:10.1111/j.1468-5914.2010.00445.x
Glăveanu, V. P. (2011c). How are we creative together? Comparing sociocognitive and sociocultural answers. *Theory & Psychology, 21*(4), 473–492. doi:10.1177/0959354310372152
Glăveanu, V. P. (2012). *Creativity and culture: Towards a cultural psychology of creativity in folk art*. PhD thesis, The London School of Economics and Political Science.
Glăveanu, V. P. (2013a). Rewriting the language of creativity: The five A's framework. *Review of General Psychology, 17*(1), 69–81. doi:10.1037/a0029528
Glăveanu, V. P. (2013b). Creativity and folk art: A study of creative action in traditional craft. *Psychology of Aesthetics, Creativity, and the Arts, 7*(2), 140–154. doi:10.1037/a0029318
Glăveanu, V. P., & Gillespie, A. (2014). Creativity out of difference: Theorising semiotic, social and temporal gaps. In V. P. Glăveanu, A. Gillespie, & J. Valsiner (Eds.), *Rethinking creativity: Contributions from cultural psychology (forthcoming)*. London: Routledge.
Glăveanu, V. P., & Lahlou, S. (2012). 'Through the creator's eyes': Using the subjective camera to study craft creativity. *Creativity Research Journal, 24*(2–3), 152–162. doi:10.1080/10400419.2012.677293
Guilford, J. P. (1950). Creativity. *American Psychologist, 5*, 444–454. doi:10.1037/h0063487
Haywood, H. C., & Lidz, C. S. (2006). *Dynamic assessment in practice: Clinical and educational applications*. Cambridge: Cambridge University Press.
Hennessey, B. A. (2003). Is the social psychology of creativity really social? Moving beyond a focus on the individual. In P. Paulus & B. Nijstad (Eds.), *Group creativity: Innovation through collaboration* (pp. 181–201). New York, NY: Oxford University Press.
Jovchelovitch, S. (2007). *Knowledge in context: Representations, community and culture*. London: Routledge.
Kaufman, J. C., & Beghetto, R. A. (2009). Beyond big and little: The four C model of creativity. *Review of General Psychology, 13*(1), 1–12. doi:10.1037/a0013688
Lave, J. (1988). *Cognition in practice: Mind, mathematics and culture in everyday life*. Cambridge: Cambridge University Press.
Liep, J. (2001). Introduction. In J. Liep (Ed.), *Locating cultural creativity* (pp. 1–13). London: Pluto Press.
Lubart, T. (2003). *Psychologie de la créativité*. Paris: Armand Colin.
Magyari-Beck, I. (1999). Creatology. In M. Runco & S. Pritzker (Eds.), *Encyclopaedia of creativity* (Vol. 1, pp. 433–441). San Diego, CA: Academic Press.
Mayer, R. (1999). Fifty years of creativity research. In R. Sternberg (Ed.), *Handbook of creativity* (pp. 449–460). Cambridge: Cambridge University Press.
Montuori, A., & Purser, R. (1995). Deconstructing the lone genius myth: Toward a contextual view of creativity. *Journal of Humanistic Psychology, 35*(3), 69–112. doi:10.1177/00221678950353005
Montuori, A., & Purser, R. (1997). Social creativity: The challenge of complexity. Translation of Le dimensioni sociali della creatività. *Pluriverso*, *1*(2), 78–88.

Moran, S., & John-Steiner, V. (2003). Creativity in the making: Vygotsky's contemporary contribution to the dialectic of development and creativity. In R. K. Sawyer, et al. (Eds.), *Creativity and development* (pp. 61–90). Oxford: Oxford University Press.

Negus, K., & Pickering, M. (2004). *Creativity, communication and cultural value*. London: Sage Publications.

Rogoff, B. (2003). *The cultural nature of human development*. Oxford: Oxford University Press.

Runco, M. (1999). Creativity need not be social. In A. Montuori & R. Purser (Eds.), *Social creativity* (Vol. I, pp. 237–264). Cresskill, NJ: Hampton Press.

Sawyer, R. K. (1995). Creativity as mediated action: A comparison of improvisational performance and product creativity. *Mind, Culture, and Activity, 2*(3), 172–191. doi:10.1080/10749039509524698

Sawyer, R. K. (2003). Emergence in creativity and development. In R. K. Sawyer, et al. (Eds.), *Creativity and development* (pp. 12–60). Oxford: Oxford University Press.

Sawyer, R. K., & DeZutter, S. (2009). Distributed creativity: How collective creations emerge from collaboration. *Psychology of Aesthetics, Creativity, and the Arts, 3*(2), 81–92. doi:10.1037/a0013282

Simonton, D. K. (2003). Creative cultures, nations, and civilizations: Strategies and results. In P. Paulus & B. Nijstad (Eds.), *Group creativity: Innovation through collaboration* (pp. 304–325). New York, NY: Oxford University Press.

Tanggaard, L. (2013). The sociomateriality of creativity in everyday life. *Culture & Psychology, 19*(1), 20–32. doi:10.1177/1354067X12464987

Tanggaard, L. (2014). *Fooling around: Pathways to creative learning*. Charlotte, NC: Information Age Publishing.

Valsiner, J. (2000). *Culture and human development: An introduction*. London: Sage.

Vygotsky, L. S. (1997). The history of the development of higher mental functions. In R. W. Rieber (Ed.), *The collected works of L.S. Vygotsky*, vol. IV (pp. 1–251). New York, NY: Plenum Press.

Vygotsky, L. S. (2004). Imagination and creativity in childhood. *Journal of Russian and East European Psychology, 42*(1), 7–97.

Weisberg, R. (1993). *Creativity: Beyond the myth of the genius*. New York, NY: W. H. Freeman and Co.

Williams, W. M., & Ceci, S. J. (1997). A person–process–context–time approach to understanding intellectual development. *Review of General Psychology, 1*(3), 288–310.

Yamamoto, K. (2012). Reformation and the distrust of the projector in the Hartlib Circle. *Historical Journal*, *55*, 375–397. Retrieved from http://dx.doi.org/10.1017/S0018246X12000064

Zeng, L., Proctor, R. W., & Salvendy, G. (2011). Can traditional divergent thinking tests be trusted in measuring and predicting real-world creativity? *Creativity Research Journal, 23*(1), 24–37. doi:10.1080/10400419.2011.545713

Index

V. P. Glăveanu, *Distributed Creativity*, SpringerBriefs in Psychology,
DOI: 10.1007/978-3-319-05434-6, © The Author(s) 2014