Rethinking Creativity

Contributions from social and cultural psychology

Edited by
Vlad Petre Glăveanu, Alex Gillespie and
Jaan Valsiner

Routledge

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Despite more than half a century of psychological research on creativity we are still far from a clear understanding of the creative process, its antecedents and consequences and, most of all, the ways in which we can effectively support creativity. This is primarily due to a narrow focus on creative individuals isolated from culture and society. *Rethinking Creativity* proposes a fundamental review of this position and argues that creativity is not only a psychological but a sociocultural phenomenon.

This edited volume aims to relocate creativity from inside individual minds to the material, symbolic and social world of culture. It brings together eminent social and cultural psychologists who study dynamic, transformative and emergent phenomena, and invites them to conceptualise creativity in ways that depart from mainstream definitions and theoretical models found in past and present literature on the topic. Chapters include reflections on the relationship between creativity and difference, creativity as a process of symbolic transformation, the role of apprenticeships and collaboration, the importance of considering materiality and affordances in creative work, and the power of imagination to construct individual and collective trajectories.

The diverse contributions included in this book offer readers multiple pathways into the intricate relationship between mind, culture, and creativity, and invite them to rethink these phenomena in ways that foster creative action within their own life and the lives of those around them. It will be of key interest to both social, cultural and developmental psychologists, as well as to creativity researchers and those who, as part of their personal or professional life, try to understand creativity and develop creative forms of expression.

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The series **Cultural Dynamics of Social Representation** is dedicated to bringing the scholarly reader new ways of representing human lives in the contemporary social sciences. It is a part of a new direction – cultural psychology – that has emerged at the intersection of developmental, dynamic and social psychologies, anthropology, education, and sociology. It aims to provide cutting-edge examinations of global social processes, which for every country are becoming increasingly multi-cultural; the world is becoming one 'global village', with the corresponding need to know how different parts of that 'village' function. Therefore, social sciences need new ways of considering how to study human lives in their globalizing contexts. The focus of this series is the social representation of people, communities, and – last but not least – the social sciences themselves.

In this series

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Preface

The sociocultural approach to creativity

Keith Sawyer

When I entered graduate school to study creativity in 1990, I soon discovered that the field was entering a period of transition—a transition from a traditional psychological focus on the individual to a social and cultural focus on groups, interactions, and social and cultural context. I have referred to this as the *sociocultural approach* (Sawyer, 2006) and it dates back to several influential publications in the 1980s, particularly Teresa Amabile's 1983 book *The Social Psychology of Creativity* and a widely cited 1988 article by Mihaly Csikszentmihalyi: "Society, culture, and person: A systems view of creativity." Csikszentmihalyi's 1988 article argued that creativity was not located in the individual, but rather was located in a system with three components: The individual, the *field* of colleagues, gatekeepers, and experts working in the same area, and the *domain*, the collection of related products that had been created in the past and continued to influence current creative work. (Howard Gardner further developed the systems model in his 1993 book *Creating Minds*, by integrating it with his multiple intelligences theory.)

This shift in creativity research was part of a broader "sociocultural turn" in the social sciences that originated and gathered steam from the mid 1980s through the 1990s. Developmental psychologists, for example, began to study child development in a range of non-Western cultures, and found that the individualistic developmental frameworks (such as that of Piaget) were not adequate to explain the full range of human development. The anthropologist Jean Lave (1988) documented the situated social nature of cognitive practices, and Lave and Wenger (1991) demonstrated the sociocultural nature of learning practices around the world, which they broadly referred to as "apprenticeship." Barbara Rogoff (1990) reviewed an amazing variety of ethnographies of developmental practices, demonstrating that child development was socially embedded and culturally situated, not solely driven by internal psychological mechanisms, as cognitively grounded theories would have it. Ethnographies of intelligent behavior showed an impressive variety of problem-solving and cognitive practices; influential ethnographies include Hutchins' (1995) ethnography of navigation practices, and Saxe's (1991) documentation of ethnomathematical practices in a variety of cultures.

These scholars largely found that traditional psychological theories were unable to explain the situated and social nature of everyday practices. Many of them found inspiration in the rediscovered work of Russian psychologist Lev Vygotsky; although his works were originally published in the 1920s and 1930s, many scholars thought they provided an appropriate theoretical framework to explain these ethnographic studies. Vygotsky's influence grew with the translation and 1986 publication of *Thought and Language*. But the many currents that led to the sociocultural turn cannot be attributed to Vygotsky's writings alone; the sociocultural turn emerged from a broad variety of empirical and theoretical developments.

The sociocultural turn led to a burst of interest in studying the situated, social nature of creative practices. Many rigorously empirical studies have documented the distributed and collective nature of creativity as lived and practiced in the real world. Some of these studies have a distinctly practical and applied sense to them; witness the 2013 edited volume *Exploring Creativity* (Moeran & Christensen, 2013), with each chapter reporting on a distinct ethnographic study of collective creative practices in a different creative industry firm. The number of such empirical studies has been increasing, and their findings consistently show that creativity is situated, distributed, collective, and socially embedded.

Creativity itself did not change in nature in 1990. Creativity has always been distributed, collective, and socially embedded. So how could it be that the scientists who began to study creativity in the 1950s and 1960s could have missed this fact? For several decades, creativity research was committed to the study of individual cognitive processes and personality traits. How could these researchers have mistakenly associated creativity with solitary individuals? How could they have failed to notice the sociocultural nature of creativity?

I have argued (Sawyer, 2012) that these earlier creativity researchers—most of whom were based in Western cultures—were misled by what I call "the Western cultural model of creativity." In other words, their research was subtly influenced by implicitly assumed cultural beliefs about creativity. Now, there is a compelling body of evidence—provided by the sociocultural approach—that these beliefs are false (or, at best, misleading). Here is a short list of some of the beliefs that are likely to lead to an individualistic approach, each followed by what we now know to be the case:

1   *People are more creative when they're alone.* In reality, ideas often emerge in conversation. Groups play a central role in creativity. Creative people are deeply connected to social networks of experts and professionals.
2   *The essence of creativity is the moment of insight.* In reality, creativity rarely comes in a sudden burst of insight. Instead, creativity emerges through constant, hard work. Insights tend to be rather small advances in an ongoing creative process. Significant creativity almost always requires many small insights, embedded in a lifetime of hard work and collaboration.

3   *Creative ideas are often ahead of their time*. In reality, creative advances are always deeply embedded in the distributed and collective work of a large number of experts working in the same area. Social and historical approaches are best able to capture and analyze how creativity emerges over time.

4   *Creativity is an internal mental process*. In reality, creative practices are externally visible and embedded in the social and physical world. The recent popularity of "design thinking" is grounded in its insistence that creators turn their ideas into physical reality early and, often, through rapid prototyping and iterative design.

When examined in context of the full range of the world's cultures, Europeans—and Americans in particular—are the most individualist (Triandis, 1995). When it comes to the study of social phenomena, people in individualist cultures tend to ground their methodologies and theoretical frameworks in their cultural belief that the individual is primary, and that one can explain what is most important about creativity by focusing on individual personalities and cognitions. But such a focus fails to explain many types of creativity—the creativity of a jazz ensemble generating a brilliant group improvisation, the creativity of a product design team as they develop a newer and better product, the creativity of a scientific field as individual scientists contribute successive mini-insights toward solving a challenging problem, the creativity of an economy as new industries emerge through creative destruction. These are all examples of sociocultural creative processes.

The sociocultural approach to creativity is an empirically grounded and theoretically sophisticated approach that has expanded our understanding of creativity. This book continues in this tradition, and represents an important contribution to our understanding of creativity.

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Editors' introduction

Entering into the Creativity Zone, on the border between the mundane and the monstrous

Jaan Valsiner, Vlad Petre Glăveanu and Alex Gillespie

Talking about creativity is a new fashion—itself a result of some unnamed creative processes that have been part and parcel of human lives over our cultural history. As the readers of our volume are about to find out, the word *creativity* has emerged in our talking practices very recently, yet we use it to talk of all kinds of inventions through the centuries. What is the value of saying that the makers of ancient Greek pottery were "highly creative" while looking today at the remnants of the designs on these illustrious vases made two millennia ago? Our fascination does not explain exactly how such—and many other—innovative human creations come into existence. By calling something 'creative' we actually create a 'black box' explanation: creative acts occur because of some mysterious essence—what we label creativity—existing in the creator of the fascinating (to us) object.

Such magic of words have been rampant in psychology—William James (1884) first detected it, and called it a 'psychologists' fallacy,' namely, confusing the psychological phenomenon and the label we attach to it. Behind that is the more general issue of class memberships—the name we may give to a class of objects (e.g., chairs) does not belong to that class itself. We can use the word 'chair' in our talk, but we cannot sit on it, no matter how creative we might be. Moreover, we have to use language in fixed ways in order to talk about psychological processes of ever-new kinds (see also the final discussion chapter, where the notion of 'creativity' is problematized). As a consequence, welcome to a non-creative volume on creativity!

Of course here we are inviting our readers into a trap. William James, and most psychologists since him, have been charmed by the dangers of the inclusion of labels into the classes of manifest phenomena, forgetting that innovation goes on at both levels—of the phenomena and of the meanings used to reference them. Already the very act of creating a label 'creativity' is innovation at the level of meanings, while the relation between these meanings and the realm of phenomena needs to be unpacked further. A naïve tourist arriving in a Romanian village and getting a glimpse of the patterns on decorated eggs may at first have no idea what to call them. By searching for a meaning for the new experience s/he may end up with the mundane "that round nice thing," which is in itself an innovation in the tourist's meaning system. Later on, after consulting a tourist guide, Wikipedia, or a

drunken man in a local bar, s/he may re-label it adequately— "ridiculously wasted eggs" or "beautifully decorated eggs." Each of these meaning transformations is innovation in the life-world of the naïve tourist, which seemingly has no bearing on the artist in the same village who meticulously paints the eggs trying to negotiate the tradition and one's desires to create something nobody has ever seen before (Glăveanu, 2010a).

What exactly is it, then, that brings artisan and visitor together? Let's take the example of tourists travelling to Ladakh in order to 'experience authentic culture' (as set up by tourist guides produced far from Ladakh), demanding to see and experience the traditions of the locals (Gillespie, 2006). The meanings and expectations they bring provide villagers with an arena for innovation in the ways in which they enact 'authenticity.' The tourists need the 'as-if' construct of a particular experience, and the local people provide such—'as-they-want-it'— costumed performances. Labeling the latter authentic or traditional does not make them so (Gillespie, 2007). Or rather, they are authentic *imitations* of the once-upon-a-time actual events. As such, they are themselves new—the imitators keep up the tradition while re-creating it, something that applies equally well to Easter egg decorators. After 'performing' in their national folk costumes for the benefit of the tourists, the Romanians and the Ladakh go home and dress themselves in Red Sox T-shirts and American jeans. They strive to embody the meaning attributed by others while in the process of becoming themselves—in a new way.

But how deep is this self/other divide? The tourist and the local artist seem to be involved in parallel sets of activities, even if physically located in the same geographical place. They share the object—the painted eggs or traditional performance—but they belong to two different categories of people who relate to the shared object. The artist often has no need to label one's work 'creative' as s/he is involved in the creation process. Most of them refuse to say anything about what they are doing, or create myths that conceal, rather than reveal, the actual creative process. And yet, artist and observer are capable of exchanging position, even if only symbolically (Gillespie & Martin, 2014). As mentioned above, tourists do 're-create' the artifact or performance they observe by interpreting it, while local artists are themselves observers of the tourists, of their own work and that of others. The meaning and practice of creativity in everyday contexts are not disconnected from each other, they actually *feed into one another* as actors and observers, creators and audiences come together to exchange and communicate about new or renewed cultural artifacts (for an example of other, more mundane activities, consider the rituals associated with mealtime in the case of children in their constant cultural making and re-making; Valsiner, 1987).

This difference of position between self and other, disjunction between object and sign, tension between past and present, tradition and modernity, between the practice of creativity and its multiple meanings, is fundamental for the cultural psychology of creativity developed in this book (for a theoretical model see Glăveanu & Gillespie, Chapter 1 in this volume). Such an understanding points to the fact that *any* theory of creativity—be it located within a person (a 'genius') or

in the relationship of a person with other persons in activity contexts (as the 'new look' at creativity, in this volume, entails)—needs to be *social and developmental* in its core. It has to capture the open-endedness of the possible not-yet-observed ways of acting before these become actualized. 'Fooling around' is one of the ways in which persons, groups, or collectives, create something new (Tanggaard, 2014). In the terms of James Mark Baldwin (1915), creativity amounts to 'trying, and trying again'—moving from one invented construction into a new one just as it emerges in the flow of action. There are no 'errors'—just versions of a particular construction that are somehow unsatisfying, leading to the construction of new versions, and so on. Something new emerges from the flow of something familiar—a sudden error gives rise to another that, by this moment in time, is already not an error but act of improvisation which, later on, becomes considered as a creative (rather than erroneous) move. For example:

> Jazz musicians must adjust to changing environments of their own making. They understand, and often articulate, that plans are over-rated. It is not that they cannot, or do not, play pieces identically across years, but they often abandon plans for nuanced innovation; they tinker to make the song better, where 'better' may either mean more musical or more responsive to and reflective of the artist's mood at the moment of performance. For jazz musicians, a plan is less an exact calculus for what must happen next and more a description of expectations not exactly followed while making last gasp adjustments to new patterns cascading from a newly definite past to an emergent future.
>
> (Klemp et al., 2008, p. 8)

On closer look, we are all like jazz musicians. Our scripts for daily living are set in approximate, rather than fixed, terms. We never repeat *the same* act—at most the repeated act is *similar* to its predecessor, but not the same (Sovran, 1992). We operate under conditions of amplification of variability (Maruyama, 1963), rather than striving towards the average or prototypical case. Sometimes the variability is amplified by circumstances. At others, we break the barriers purposefully so as to play beyond the circumstances, social norms, and our own current capacities. This is both the core of creativity (Tanggaard, 2014) and development (Valsiner & van der Veer, 2014), a core described by multiple themes central to this volume and to the cultural psychology of creativity.

The centrality of agency: creativity as bound to action

In the history of European societies there has been one actor whose creativity has been promoted actively by all of his followers. The claim "God created the Universe" (and at a speed that might compete with our twenty-first-century supercomputers) continues to be heard on many occasions. Interestingly, to

claim that "Chance created the Universe"—which may be scientifically correct—lacks such a halo of creativity. There has to be a human-like agent—a person or a collective—who can be said to be creative. A robot which acts by pre-installed program is not creative, but 'robotic.' If the robot starts to act in ways not predicted by the program, the robot is not termed 'creative,' but 'erratic.' Robots make mistakes; human beings turn some of the mistakes they make into improvisations. The self-aggrandizement of humans is remarkable: they create computers to do their work, as comfortable slaves who do not need liberation, and then they compare themselves with their creations, complimenting themselves for their creativity. Even a pole-dancing emotional robot (Orr, 2009) does not come close to the strategic affective actions of the human pole-dancer, not to speak of the joint movement patterns created by tango dancers (Tateo, 2014).

The theme of human creative agency is developed in different ways throughout this book. Alan Costall (Chapter 4 in this volume) relates it to a discussion of Gibson's well-known concept of affordances and shows how agency is afforded even in the case of the 'conventional' use of objects. Baerveldt and Cresswell, in Chapter 7, relate the conventional aspects of culture, including language use, to creativity by pointing to the generativity of norms and their creative 'variation' within daily action and interaction. The creative 'deformation' of cultural norms leads to the emergence of style, a marker of individual agency. However, creative agency is not only present in the case of isolated individuals, as all contributors to this volume agree. Jovchelovitch (Chapter 6 in this volume), in presenting the case of Brazilian favelas, brings community engagement to the fore and shows that collectives as well can be agentic and ultimately creative by turning difficult life circumstances into opportunities for the expression of self and local culture.

Creativity as a value

There is value in the act of attributing creativity. It is a value that can be attributed to an agentic individual or collective 'self,' as we have seen above, but not to a complex system that shows high flexibility in its relations with the environment. The warm Sun, or the full Moon, are not to be given the honor of being creative—even as sunrays are crucial to the upkeep of our natural survival. Nevertheless, a poet who is inspired by a full Moon could be considered 'creative'—but not the moonlight that is both the inspiration and the manifest topic of a poem. In contrast, the attribution of causality of events to chance cannot be considered 'creative.' Thus, the process of natural selection explaining evolution can be considered systematic, complete, and multi-sided—yet not creative. It becomes so once the agency of the actor—the organism that becomes the maker of evolution in irreversible time—is brought into the picture (Bergson, 1911). The transition of the basic epistemology of science from explaining what has happened (Past to Present) to what could, should, and might happen (Present to Future focus) creates the theoretical space necessary for the study of creativity (for more on temporal differences and creativity see Glăveanu & Gillespie, Chapter 1 in this volume).

Creativity, viewed from this perspective, is the process of turning something that might happen into what does happen, under the condition that it might (or should) happen. Setting of goal orientations—even if instantly (Klemp et al, 2008)—and pursuing those beyond the borders of what is known up to now is the core of creativity as a basic phenomenon. This is obvious even in those cases in which we are supposed to follow a certain 'model,' just like the designer who was given the responsibility of re-creating Wiinblad decorative patterns (see Tanggaard, Chapter 8 in this volume). This is not only a great example of how creative value (re)emerges in the process of engaging with an existing tradition, but it also brings to the fore the material qualities of creative action. Caroline, in the case study mentioned here, strives to bridge what 'was' and what 'is' by envisioning what 'can be' and this requires her also to deal with several symbolic incongruities. Wagoner's (Chapter 2 in this volume) discussion of symbolic transformation brings new insight in relation to the creative process and the reason why creativity is considered a value in contemporary societies: it produces novelty by joining together areas of experience, including cultural artifacts, that were previously kept apart. The value of 'old' creative design carries on as it itself is form transformed into contemporary types of decoration.

Arenas for creativity

How is such constant construction of novelty socially organized? If novelty is everywhere, why would only some subset of it be claimed to be 'creative' and others not? The painter who depicts peasants harvesting potatoes on canvas may easily evoke the label, while the peasants in the field need not. We could consider the arenas of creativity designated socially, guided by social representation processes in a given society. At any particular historical period, creativity involves the giving of value to the kinds of novel phenomena that are or could be coming into being. The values of this kind become coded into the realms of human activity through the label 'creative,' usually linked with the preferences of the label giver. A computer hacker becomes 'creative' after she has become an employee of a software company. Before that, she is a common criminal.

How is creativity guided by social representations? The contrast here is between three reflections upon human experiences. There are three zones—the mundane, the extraordinary, and the impossible. Creativity arenas are socially considered (at least in Western societies) part of the zone of the extraordinary—hence they can bring about awe in the audience. Creativity in the zone of the impossible may become presented as monstrosity (Daston & Park, 2001). Monsters might be feared because of their clever ways of hurting us, and, instead of being fascinated by their 'creativity', we may undertake a witch hunt. And yet, the mundane or the ordinary is itself a privileged area of creative expression as many of the chapters in this book demonstrate. Following Vytosky's scholarship, John-Steiner (Chapter 3 in this volume) recovers the meaning of creativity in play, apprenticeships, and collaborations throughout the life-span. Creativity is not only about the exceptional or the monstrous, although very often these two categories

erupt within the mundane, but relates also, at a very basic level, with our capacity to construct a life trajectory and imagine our future in the very process of building it (see Zittoun & de Saint-Laurent, Chapter 5 in this volume; Jovchelovitch, Chapter 6 in this volume). Life-creativity is one arena of creativity that spans many domains, from the ordinary to the extraordinary, although it has often been neglected by mainstream creativity research.

The social nature of the creative processes

Creativity is not a solitary process! This is the perspective—even at times a slogan—that readers will find all through this book, gaining the appearance of a rhetorical device. It creates the ideological divide between the 'new look' at creativity—represented by this collection of chapters—and the 'old' perspective that for decades reduced the search for creativity to the individual mind of a person recognized as a 'genius' (Glăveanu, 2010b). That search did not lead to a clear understanding of creativity—neither the self-descriptions of how the 'genius' works (e.g., such as confessions by Albert Einstein of the primacy of visual thinking over verbal; Hadamard, 1954), nor what size the brain of the 'genius' was (often that status led to the preservation of the brain as a relevant body part after death), have shed any new light on the processes of creativity. Our contemporary biological science may add yet another futile search: the human genome having been decoded, the search for the 'genius gene' can begin. Like all searches of that kind—looking for simple relations from genotype to phenotype while the two levels of organization are buffered by a number of intermediate layers of biological organization—it is doomed to fail.

Yet, even as all human beings are social and cultural, each person is social and cultural in their own unique way (Valsiner, 2013). It is the flexibility of the varieties of social experiences that feeds into the process of fooling around with new ideas and practices (Tanggaard, 2014). Readiness to improvise may be enhanced in some social contexts, and stifled in others. Nevertheless it is up to the person—in one's agentive role—to make use of the contextual atmospheres. The relationship between the individual, society and culture is something that all the contributors to this volume reflect on, using their own theoretical perspectives and extensive experience of researching the creativity of social life. A productive exchange of perspectives on this topic is included in the final chapter, a discussion between all the authors in which basic assumptions about what it means to 'create' or be 'creative' are questioned, with the aim of building new theoretical, methodological and practical tools for the study of creativity as a socio-cultural phenomenon (see Gillespie et al., Chapter 9 in this volume).

Creativity in the age of choice

We cherish the *idea* of choice. Yet we often fail to distinguish between two sides of that act—that of *making* choices (choosing between given options) and

creating new choices. Obviously the latter are directly part of the phenomenon of creativity. But what about the former? The proliferation of options between which one can choose leads to the necessity to develop new psychological adaptations. So, in the case of one option—the only way to act—the choice is between acting and non-acting. If there are two options given—in a utopian society consisting of T-mazes that are usual in laboratory studies of rats—the possibility of developing a habit ('select the right option over the left') is added. But what if the number of choices is increased dramatically? What do we need to do if we have 100, 1,000, or more ready-made options between which we can and need to choose? And/ or if these given choices themselves change over time? A new form of creative action—that of navigating the ocean of uncertainties—emerges. "Calculating" decision strategies that would be "rational" becomes impossible—as the criteria of "rationality" are not determinable (Simon, 1972). The result: even the most mundane action in our everyday life demands the application of processes that fit our notion of creativity. Living forward in irreversible time (Bergson, 1911) allows us only to improvise to be ourselves, albeit always in a new form. With ever-increasing choices facing us, we have no other choice but to create!

Our contemporary society changes in directions where not only do we see the proliferation of pre-given choices as a result of a move from industrial to consumer society, but also the change of functions of the choices—from adaptation to the tasks of survival to those of promoted competitive entertainment. As a result, human desires are no longer controlled, but—for the sake of maintaining the consumerist entertainment as the major activity in society—enhanced. Existing needs and desires become activated beyond existing social order, and new needs are created as persons relate with the consumerist world. This has consequences for the ways in which psychology becomes situated in society:

> The humanistic idea of human beings having an inner self to be developed still exerts some influence on how we imagine social life, but the construction of ideal or 'pure relatedness' has come to the fore in the latest phase of consumer capitalism. The 'spirit of capitalism' has changed from 'industrial assembly-line production combined with social engineering' in the early 20th century, through 'post-industrial re-structuring,' partly facilitated by the humanistic Human Relations movement in mid-20th century, and finally into 'postmodern flexibilization facilitated by social networking' [. . .] Consequently, the social imagery recasts the social as networks. *Human desire is transformed from stable possessiveness to flexible consumption. Psychology's role is no longer primarily to develop technologies for stabilizing selves, but rather to contribute to the flexibilization of the consumerist self* [. . .] The downside is a rising frequency of depression, which indicates that not everyone can catch up and be flexible.
>
> (Brinkmann, 2008, p. 106, added emphases)

The 'new look' at creativity is situated in the new social world of consumerist society where improvisation may be appreciated for various reasons, only some

of which are relevant for the development of the persons, and of the society. Most of what becomes of creative processes produces outcomes that are transitory—*creativity garbage* might be an illustrious (to avoid the word 'creative') label for that. Creativity garbage entails all the new recombinations of existing manifold choices provided to the persons (and to social units, institutions) that allow improvisation without innovation in the form of creating new choices. The proliferation of various television talk-shows, stand-up comedies, public media contests and interest in the private lives of celebrities, establishing new awards (and ceremonies for delivering them)—are examples of how the creativity garbage production industry works. Beware of 'creativity'!—in talk and in reality shows—is the advice if there is a desire to retain one's creative processes. The usual unreadiness of artists to comment publicly on their own work is an example of such defense of creative processes against 'creativity talk.'

'Creativity talk' is what contributors to this volume also produce, but with a major difference. Instead of an unreflective repetition of ideas about how good it is to be creative, all the authors here adopt a critical stance. They are weary not only of popular discourses but also of scientific ones, particularly those of mainstream psychology. The book has its origin, in fact, in the editors' discussions, a couple of years ago, about the meaning of creativity and its rethinking from a cultural perspective, that took place at the London School of Economics as part of the first editor's doctoral viva. It became very clear then that what emerges today as the 'cultural psychology of creativity' (Glăveanu, 2010b, 2010c) requires a solid theoretical foundation. With this aim in mind, we asked colleagues who have been working extensively in the areas of creativity and culture, social transformation, knowledge construction, emergence, and collaboration, to envision what a cultural, 'new look' on creativity entails. The result: a volume with eight chapters loosely organized around core thematic interests such as cultural mediation, symbolic transformation, materiality, play and imagination, creative agency, and the generativity of culture through social interaction. In reality, any chapter would constitute a good entry point into the discussion of what is, or rather what can be, a rethinking of creativity in our times, above and beyond the simple and abundant 'creativity talk' referred to above. We believe the outcome will be of interest to all those who want to understand better why creativity does matter in our current age of choice and how it is not a separate but an integral part of our everyday existence.

Entering the Creativity Zone, we might feel ourselves to be on the border between the mundane and the so-called monstrous or simply realize that, in cultural worlds, this border is merely an illusion, an arbitrary line separating 'what is' from 'what can be' and ignoring the fact that they are both part of 'becoming' which is, ultimately, 'creating.'

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Chapter 1

Creativity out of difference

Theorising the semiotic, social and temporal origin of creative acts

Vlad Petre Glăveanu and Alex Gillespie

The invention of the Post-it® Note tells the story of a solution in search of a problem. In the early 1970s, Spencer Silver, working in the 3M research labs, was trying to find an adhesive. By accident, he created a weak glue, a substance that would stick to objects but could easily be peeled off without leaving a trace. This weak but reusable adhesive puzzled both its creator and his colleagues, who could not imagine a good use for it. Some year later, another scientist from 3M, Arthur Fry, singing in the church choir, was faced with the practical problem of keeping his place in the hymnal. Usual bookmarks wouldn't do the job as they often fell out. What he needed was something that could be stuck in place and removed without damaging the pages. And then he remembered Spencer's strange invention! But he didn't have an easy time convincing others of its utility. The first sticky notes to be produced by the company, called Press 'n Peel, did poorly on the market. It was not until free samples were offered that office workers realised the value of this new product. What followed, about a decade after its initial discovery, was the mass-production and distribution of what became Post-it® Notes, today pretty much an indispensable office supply around the world.[1]

This short history of an innovative product reveals some important things about creativity. To begin with, creative acts often start from a discrepancy between the goal or image of an invention and its actual realisation. There is a tension between a representation and the tangible object that is not always easy to bridge by the creator him or herself. This is where other people can become important for creativity. There are not only those who evaluate, use and, in this case, buy the product, but also those who can see it from a different perspective or in relation to a novel problem. Art Fry, again through a happy accident, was capable of imagining an original use for the new adhesive that its creator, Spencer Silver, did not. This difference in perspective between Art Fry and Spencer Silver proved in this case to be extremely consequential for the development of the invention. Finally, we need also to acknowledge the fact that creative acts do not end with an idea, or even with generating a product, they can have a longer duration that involves reinterpretation and appropriation into new uses. In the example above, it took about a decade between discovery and market release. Different states of the creation at different points in time drive the creative process in its uncertain path towards

being finalised. These tensions, between objects and their meaning, between the perspectives of self and other, and between the present and the future are all core topics of research in cultural psychology.

In this chapter we seek to identify the roots of human creativity in the most fundamental cultural psychological processes of semiotically mediated activity. Expanding the basic mediational structure of self–other–object–sign, we suggest that creativity arises out of three main *disjunctions or differences*. Our under-standing of these differences is relational (they are, in essence, the mark of rela-tionships) and dynamic (developmental); in this sense, 'difference' is and should be understood as a non-linear, systemic process, that of 'differentiation'. First, there is a difference between representation, the sign, and the world, or what is being signified. Action is guided by symbolic meanings of anticipated outcomes, but the outcomes of action are often surprising. Second, there is always a disjunc-tion between the perspectives of self and other. Not only is the other never fully knowable, but the other also has a perspective on us which we are never fully aware of (Bakhtin, 1923/1990). This 'surplus' meaning being created which is in the mind of the other, can, if engaged, be a source of expansive insight. Finally, there is a difference between the new artefact (and its context) as it was in the past, exists in the present, and can potentially be developed and used in the future. Tomorrow will always have surprises. Bridging this 'gap', between what is and what will be or what could be, is where human memory and imagination intersect in creative improvisation. The aim of the present chapter is to show how these three fundamental differences, each demanding resolution but being, in essence, incommensurable, are the motor of creativity, keeping in *creative tension* the self, others, signs, objects, all within the flow of irreversible time.

Creativity, big and little

There is currently a great consensus in the psychology of creativity that creative products are, at once, novel and useful (Plucker, Beghetto & Dow, 2004). To return to our example, the type of adhesive invented by Silver and its later use, discovered by Fry, where certainly novel in the 1970s and their value is dem-onstrated by the growing popularity of the brand. Of course, one may wonder if creativity itself should be considered a quality of a product (or a person) and if it is not, as demonstrated by the story of the sticky notes, a phenomenon that unfolds in time and engages multiple actors in a constant process of creating and resignifying what is being created. Nevertheless, in order to make creativity more 'tangible' (and, as such, measurable), a product definition is typically preferred despite the fact that it raises a number of important questions; for instance, how novel does the resulting artefact need to be in order to be considered creative? How useful should it be and for whom? In our case, are Post-it® Notes original and useful enough to be called a 'creative product'? Are we to consider them a great invention or simply a good idea? Or maybe Spencer Silver had a 'little' idea that only became a 'big' idea because of his links to 3M?

To answer these questions requires operating with a basic, and pervasive, dichotomy between higher-level, Big-C, historical (H) or revolutionary creativity on the one hand and lower-level, little c, personal (P) or everyday creativity on the other (see for example Boden, 1994, for a discussion of H and P creativity). Although creativity is typically claimed to exist on a continuum (Amabile, 1996), it is often the case that we turn the dichotomy above into an opposition and, more than this, focus in both scientific and lay representations on the higher ends of the presumed continuum, disregarding or downplaying the importance of more mundane acts of creation (Glăveanu, 2013). The obsession, at least in a Western context where much of the theory of creativity is being developed, with the image of great creators and revolutionary creations has the potential not only to skew our understanding of the phenomenon but also to obscure the importance of everyday acts of creativity. Moreover, it makes 'Big' and 'little' types disconnected from each other and, as such, masks the continuities between them and any 'middle' range forms of creation (for example, creativity as it takes place in community contexts, see Glăveanu, 2010; Jovchelovitch, Chapter 6 in this volume).

There have been some recent attempts to unpack this polarity and acknowledge the many differences between acts and products that are not revolutionary at a societal level. This is how, for instance, Kaufman and Beghetto (2009) proposed a four C model distinguishing between mini-c (the basic form of intrapersonal creativity), little-c (creativity leading to mundane products), Pro-c (professional-level expertise), and Big-C creativity (or eminent creativity). While this classification moves us a bit further towards acknowledging the 'middle' areas as well as pointing to a basic, mini-c form of creativity involved in action, perception, learning etc., we are still left wondering how the many types are connected and especially articulated sometimes by *one and the same* creative act. In an effort to transcend these dichotomies while keeping the idea (quite obvious in practice) that there are differences in the degree of novelty and value between creative artefacts, the first author proposed an integrated framework that distinguishes forms of creativity based on process rather than outcome. In this model, innovative creativity is embedded within improvisational creativity and both 'grow' out of a shared base of habitual creativity; as such, it is the continuities in creative expression rather than the differences that come to the fore (see Glăveanu, 2012a).

What is at stake in this debate is the fundamental question of whether great and mundane creations share a common base or process, a claim many psychologists agree with (e.g. Finke, Ward & Smith, 1992; Weisberg, 1993). And if this is the case, what exactly is this most basic unit of creativity? Is it, as many assume, a particular personality trait, thinking style or cognitive mechanism, or a neurological structure? We propose, drawing upon cultural psychology, that the minimal unit, the very 'atom', of creativity is a process of self–other–object-sign interaction (see also Wagoner, Chapter 2 in this volume). Specifically, we argue that the disjunctions, or differences, within this unit of social interaction produce novelty as each loop in the process returns to something new. How exactly (mini, little, Pro and Big-C) creativity emerges out of this dynamic configuration is explored in this chapter.

Looking for the cultural psychological 'atom' of creativity

Cultural psychology is a discipline that concerns itself with the relationship between mind and culture as reflected in acts of semiotic mediation, social interaction and human activity, all developed over socio-, onto- and micro-genetic time (see Valsiner & Rosa, 2007; Cole, 1996). In order to capture the socially and culturally mediated relation between person and world, cultural psychologists often employ the visual metaphor of the triangle that includes typically a combination of the following elements: self, other, object, sign (for more details, see Zittoun, Gillespie, Cornish & Psaltis, 2007). The basic idea is that self–other–object relations become internalised, through developmental processes, to form signs, which in turn mediate those self–other–object relations. Initially other people mediate the child's relation to the object, and then signs come to mediate the growing child's relation to those objects. Thus, from this Vygotskian perspective, any mediation by signs is by definition intersubjective (Gillespie, 2009; see also John-Steiner, Chapter 3 in this volume), and thus the acting and thinking human is never 'alone', as the difference between self and other becomes internalised into a self-reflective loop (Vygotsky & Luria, 1932/1994).

There is little doubt today that the symbolic function and its development play a crucial role in all forms of creative expression. Indeed, the 'birth' of creativity coincides with the capacity of the human child, around two years of age, to detach itself from the immediacy of the environment and use substitute objects or images that acquire a sign function (the most clear example here being an increased mastery over the use of language). This achievement is facilitated by decentration, in Piagetian terms, an ability to understand not only that the self is separate from others but that others may hold another view of the world. A fundamental difference is thus created between self, other and the environment that can be bridged only through symbolic means. Winnicott (1971) was explicit about the fact that creativity and cultural experience are twin-born within such an emerging 'third' or symbolic space (in-between the internal and external world) and both find their first expression in children's play (see also Jovchelovitch, Chapter 6 in this volume). In the words of Gardner (1982, p. 170) as well:

> Unlike other animals and unlike the infant during the first year of life, the child of two has clearly entered the realm of symbolic activity. No longer carrying out an action (like feeding himself) just for practical ends, he can use other objects or elements including himself to enact various roles, produce various actions, secure various consequences. He may eat symbolically, using pretense gestures and pretend food. Moreover, such symbolic enactments are carried out seemingly for the sheer enjoyment of representational activity. [. . .] Needless to stress, this achievement of symbolic activity is enormous – in a sense, the greatest imaginative leap of all.

All these ideas, fundamental for a cultural perspective on human psychological development, point to an essential aspect of creativity. They argue first of all that creative expression is not possible within an undifferentiated world of self, other and object, where symbolic mediation would be unnecessary (Zittoun, 2008). Furthermore, while this ontogenetic process of differentiation is crucial for the development of higher mental functions (Vygotsky, 1997), it is particularly important for our understanding of creativity. In a basic sense, signs and sign systems are themselves creations that mediate the person's relation to others and oneself. While, as discussed before, their formation would be considered by mainstream theory under mini-c creativity, we argue here that the internally fractured unit of self–other–world–sign is the generative core of all forms of creativity, from mini-c to Big-C. In fact, it is within the meditational triangle discussed by cultural psychologists that we can find the 'origins' of creative expression if we focus not so much on its elements as on the relations between them: the *disjunctions or differences existing between self and other, self and object, sign and object*, etc. In Figure 1.1 we propose an expanded meditational model, drawing also on the work of Werner and Kaplan (1963), who advanced the addressor–addressee–object–symbol framework of symbol formation (see also Wagoner, Chapter 2 in this volume). In our depiction, the temporal dimension is made visible, opening a last important type of difference, that between past, present and future.

What Figure 1.1 indicates are three different and yet deeply interconnected disjunctions or sources of difference that necessarily prompt creative expression and are, in this sense, creatogenetic. First, there is a difference between sign and object, between the symbolic construction (a representation, word or image for instance) and its referent in the world (an object, process or phenomenon). Note that we are using here a simplified model compared to Peirce's (1931) distinction between sign vehicle (its physical form), sign object (aspect of the world) and interpretant (the meaning of the sign for a symbolic frame of reference). Creativity emerges thus from the open and dynamic relation between objects and signs (and their meaning) in which one and the same object can
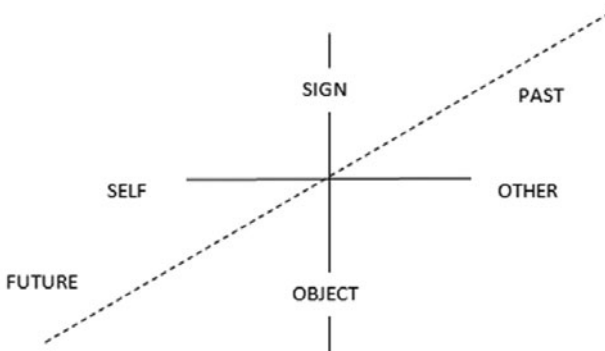

Figure 1.1 The cultural psychological model of three creatogenetic differences

be described by multiple signs and vice versa. This basic source of divergence is fostered by the various subject positions included in the model (i.e. self and other(s), where the latter can refer to a person or more, a group). One's view and interpretation of an object or phenomenon is permanently confronted by numerous (creative) alternatives. Finally, the dynamic organisation of these two main axes changes over time and therefore the perception of transformations occurring between past and present guides the course of creative expression as self, other and object 'move' towards the future. Each of these differences within the basic meditational model of cultural psychology will be analysed in turn in the next sections, keeping in mind the fact that their separation is made only for analytical purposes. In relating this model to creative action, we are building towards a definition of creativity as *originating* in differences and *acting upon* differences.

Creativity and the semiotic difference

Using symbols entails (or constitutes) a detachment from the immediacy of the world; by adopting and manipulating signifiers (meanings and words) that effectively represent or 'stand for' something else (objects, events, personal experiences, etc.), we become capable of thinking in abstract terms, planning ahead and, ultimately, engaging in the first manifestation of creativity, namely, *symbolic play* (see John-Steiner, Chapter 3 this volume). In pretence games, such as being at the doctor's, children manifest creativity not only when they assign a signifier (e.g., a syringe) to another object (e.g., a pencil) for the purposes of the game, but also by being flexible about what signifiers they assign to what objects. The difference between sign and object can be manipulated in creative ways and, we argue here, necessarily involves creativity when used in interpersonal communication (in our case, in the game context). This is because signifier and signified are never perfectly 'aligned' but, on the contrary, their relation is intrinsically open to ambiguity and change.

The semiotic difference fosters at least three types of (creative) tension: a) the first is between the general and particular, between a sign normally applied to a category of instances and the unique characteristics of each instance; b) the second concerns the fact that the relation between sign and object is not best described as a 'one to one', but 'one to many' (a sign can be applied to multiple objects, an object referred to with the help of more than one sign); c) finally, as a result of the above, the use of signs in acts of communication always leaves room for misunderstanding, which can itself be creative, and which compels speakers to check and reformulate their utterances. Creativity is thus required, in the first place, to 'navigate' such differences (e.g. how many times can one reformulate a statement in order to be understood?), but these tensions can also be exploited to generate novelty or obtain an aesthetic effect.

Let's take the common example of *language* (for a more elaborate discussion of language and creativity see Baerveldt & Cresswell, Chapter 7 in this volume).

The use of language is rightfully referred to by researchers as possibly 'the best example of everyday creativity' (Runco, 2007, p. x). This is clearly so considering how, in speaking, we 'make infinite employment of finite means' (Humboldt, 1836/1999, p. 91). We can not only imagine unique sentences but necessarily have to formulate them in order to communicate. At the same time, individual words (part of the 'finite means') are not novel, nor are the grammatical rules used to create these sentences. As the context of communication is shifting (relations with others and objects over time), as well as our intentions and goals (self over time), the use of language needs to creatively adapt on a moment-to-moment basis. But the creativity of language rests on much more than our capacity to build new and useful sentences or sometimes 'push' the boundaries of language itself by inventing words. At a more basic level, it resides in the fact that words are polysemic. This is 'the remarkable feature of words in natural languages which is their ability to mean more than one thing' (Ricoeur, 1973, p. 97). For instance, the term 'white' can refer to an achromatic object colour, a group of people defined in racial terms, but also signify purity, peace or surrender. It is the latter metaphorical use of words that is emphasised by Ricoeur as part of his argument regarding the relation between polysemy, creativity and poetry. Metaphors creatively exploit the polysemy of language or, in the terms of our model, the semiotic difference between sign and object. In a metaphor we witness the creative generation of new meaning by the crossing between two sign–object relations, a literal one and a novel (metaphorical) one. As Ricoeur notes:

> when we receive a metaphorical statement as meaningful, we perceive both the literal meaning which is bound by the semantic incongruity and the new meaning which makes sense in the present context. [. . .] Two lines of interpretation are opened at the same time and several readings are allowed together and put into tension.
>
> (Ricoeur, 1973, p. 110)

It is this kind of tension that fosters creativity in language and, more generally, in any use of symbolic means. The semiotic distance between object and sign allows multiple significations but perceiving such differences and using them exploits a second type of disjunction which is social in nature.

Creativity and the social difference

As mentioned earlier, decentration (Piaget, 1973) allows one to conceive of other positions in the world than one's own. The work of the symbolic function and creativity itself would be inconceivable in its absence, since acquiring and using signs and symbols is achieved always within an *intersubjective encounter*. It is not only that adults, through their interaction with children, mediate the development of language and thinking skills (see for instance the notion of zone of proximal development, Vygotsky, 1978), but the necessity of relating object

and sign would disappear if we didn't have to communicate about and manipulate objects in relation to other persons. Moreover, the fact that different people invariably hold (more or less) different perceptions of one and the same object and may apply to it different symbolic means cultivates the polysemic nature of language referred to above. What materialises is a second type of difference, very fruitful for creativity, that between self and other, addressor and addressee, actor and audience.

If we are to consider creativity as emerging from adopting a novel look towards existing realities – from observing new uses of a common object to depicting a scene or state of mind in an artistic manner – we can wonder how it is exactly that we get to decentre our initial perception of the object, scene or state in order to acquire a new perspective. In fact, what the person does is to change positions (in a conceptual but also, often, in a physical, embodied sense) in relation to the object and its meaning. Adopting an alternative perspective on oneself, getting outside oneself so as to see oneself from the standpoint of an other, is, according to George Herbert Mead (1964), the key to humans' higher-level functions. But how do we acquire this capacity? To understand this we need to return to early ontogenesis and the study of play and games (also John-Steiner, Chapter 3 in this volume). In solo play children cultivate and rehearse roles which they encounter, such as catching a ball, eating, or going to sleep. In games, which are a joint activity, children learn to coordinate the perspectives associated with interacting roles, such as parents and children, teachers and students, and police and robbers. Social games require children to adopt different roles (e.g. of buyer and seller, attacker and defender, leader and follower, etc.) and, more than this, allow them to exchange these roles during the same activity. Situations of *position exchange* (Gillespie & Martin, 2014) foster perspective taking by simultaneously implying the differentiation of perspectives and their integration. In hide-and-seek for instance, children master the meaning of the game when they experience both positions and, as such, distinguish between them but also combine them within one sign-complex, namely, the intersubjective understanding of hiding-in-relation-to-seeking (Gillespie, 2006).

What does this tell us about creativity? Acts of creation themselves are fundamentally grounded in the dynamic of *differentiating perspectives* and recurrently adopting *multiple viewpoints* on the same problem or phenomenon. In a sense the practice behind divergent thinking, central to past and present definitions of creative potential (Runco, 2007), is rooted in one's ability to formulate ideas – and thus consider an object from a certain standpoint – while at the same time abandoning them to reposition oneself (one's thinking) in relation to the object. These ideas or perspectives are social in nature and origin, even when the task is performed in a solitary manner, due to the person's experience of exchanging positions developed, as argued above, from early childhood onwards. To take the more concrete example of the Post-it® Notes discussed at the beginning, the novel idea emerged when the position of scientist or marketer of a new adhesive substance was changed (even by accident) for one of

consumer in need of a weak glue that would temporarily fix bookmarks in a hymnal. And this is not an isolated case. In the making of art for instance, the successful artist needs to embody the views of the audience and does so often in a habitual manner. That said, of course the artist's intent may be to shock or destabilise the audience (e.g., Dada), but even such a rejection of the audience entails a well-honed understanding of its point of view. The perspectives of others (family, friends, critics, clients and so on) become internalised by the creator, something which contributes to the dialogical nature of creative acts. As Dewey (1934, p. 111) rightly notes:

> even when the artist works in solitude [. . .] 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.

Even the artist in complete solitude encounters (and thus is the audience for) their own work, perhaps viewing it from the standpoint of truth, beauty or God. Such a constant 'move' of encountering one's own externalisations within the arena of self–other positions can in fact come explicitly to the fore, for aesthetic purposes, in the production of art. In such cases, the artist guides the audience's encounter with the work, for example in Pamuk's novel *My Name Is Red*, where each chapter adopted the voice of a new character witnessing the unfolding drama, or in Akira Kurosawa's film *Rashomon*, where the same scene appears very different when narrated from the standpoint of each participant.

Creativity and the temporal difference

Despite being conceptualised initially in rather static terms, as a trait (of the personality system, of cognition, etc.), creativity is today widely understood as a process and, as such, distributed along a temporal dimension. While there is no final consensus as to what the stages of this process might be (Lubart, 2001), it is important for our discussion here to stress the fact that a new type of difference becomes apparent – that between past, present and future states of creative work. This dimension is, again, intertwined with the previous two disjunctions and indeed we can conclude that semiotic and social differentiations only become manifest and gain a dynamic quality precisely because of temporality. The relation between object and sign and its different social interpretations both have a *history* and are oriented towards the *future*, towards achieving more or less defined goals. This movement in the direction of an essentially open future requires the person to transcend existing conditions and imagine potential ones, all the while open to the rupture of unfulfilled expectation (Zittoun & Cerchia, 2013; see also Zittoun & de Saint-Laurent, Chapter 5 in this volume).

Undeniably one of the most important motivations to engage in creative activity rests in the desire to bridge the 'gap' between how things exist and are organised

at present (time 1) in relation to how they could be (at time 2). But the course of creativity itself is deeply shaped by another difference, that between past (time 0) and time 1 conditions, where time 0 varies in its distance to the present. Against a vision of creation spurring out of thin air (*ex hihilo*) in a purely spontaneous manner, a cultural psychological understanding of creativity emphasises the role of tradition and habit in any form of creative expression (Glăveanu, 2012a; also Baerveldt & Cresswell, Chapter 7 in this volume). Existing resources and the trajectory inscribed in a particular history of a creative act are crucial factors in relation to both its present and future. This 'weight' of the past should not be, however, viewed in a deterministic manner. Expectation is what enables us to see change (Pelaprat & Cole, 2011). Creativity operates by generating novelty as a result of the emerging properties of new wholes that transcend the characteristics of their initial parts. In this sense, creativity works to maintain a difference (non-identity) between the states of the world at times 0, 1, and 2.

The ways in which past action impacts on present developments in artistic work have been discussed at length by Beardsley (1965), who inquired about what happens between the incept and final touch in the case of art. Arguing against a Propulsive Theory that gives priority to the needs, wishes and emotions of the artist, and a Finalistic Theory that focuses exclusively on end goals, Beardsley claimed that 'each individual process that eventuates in a work of art generates its own direction and momentum' (p. 297). This is also in line with Dewey's (1934) reflections on art and stresses the fundamental fact that, in their temporal development, creative products actualise the past in the present at a micro-genetic level through the series of constraints imposed by previous action. As explicitly described by Beardsley (1965, p. 298), 'one thing is evident: once an element is chosen, it sets up demands and suggestions as to what may come next, and also places limits upon it'. An extensive investigation of craftwork conducted by the first author illustrated this process in the case of the traditional decoration of eggs before Easter (see Glăveanu, 2012b). Artisans start with a goal in mind but, depending on the size and shape of the egg, ornaments are adjusted to the material and its affordances (see Costall, Chapter 4 in this volume). In this process, whatever is depicted in the initial stages (even by accident!) directs subsequent work and it is not uncommon for a pattern to morph into another one or transform altogether. Since folk artists consider their activity one of preservation but also (re)interpretation of an old tradition, these changes quickly become integrated into the craft, continuing *a temporal cycle of accumulation and renewal* (for the case of design see Tanggaard, Chapter 8 in this volume).

Finally, it is important to stress once more that the past–present difference is complemented in creative work by an even more important disjunction, opening up towards potentiality and the future. As Beardsley (1965) reminds us, 'the creative process is kept going by tensions between what has been done and what might have been done' (pp. 298–299). The creative artist, artisan, scientist and so on progresses not only by observing what can be done at each moment under existing

circumstances but, at once, reflects on how these circumstances can be changed to allow more possibilities for action.

Creativity as acting on difference

To summarise our argument up to now, we suggest that the three types of difference intrinsic to a cultural psychological account of the symbolic and social mediation of action constitute the human capacity for *detachment* from the immediacy of the world and its objects and are at the origin of creative expression. Humans escape being trapped in the perceptual field by creating meanings which enable them to 'stand outside' the phenomenon, a crucial requirement for creativity to take place. These are the kind of differences that allow actors both to be within the flow of an activity and also to oscillate to an external position, from which the activity is evaluated, regulated or altered. Sign processes enable people to get inside activities, to empathise with others, to be lost in a world of fiction, to fuse with phenomenon; but they also allow them to gain exteriority on their own activity and experiences. The temporality of this process distributes symbolic action and social interaction along a continuum within which past states impact on present and future without fully determining them.

The existence of these differences is a precondition for creative action of any type, from mini to little, Pro and Big-C, something that helps us transcend clear-cut distinctions between these categories and pay a closer attention to their commonalities and the continuity between them. Using the meditational model proposed in Figure 1.1 we can discuss creative action in any domain, as we exemplified above, from the invention of the Post-it® Note to the creation of art and craft and the creativity of everyday language use. The semiotic, social and temporal differences and, above all, their articulation, allow us to understand the origin of creative expression and describe its unfolding but, by themselves, cannot explain the particular course of creative action. This is because central to creativity, we argue, is not any particular disjunction or difference but, rather, the more dynamic *movement between psychological orientations*, the particular ways in which we are able to 'navigate' these 'gaps' and act on them. What is interesting about human culture is not so much that humans have the ability share similar orientations or representations but, rather, that they participate in multiple representations and are able to bring these internalised differences into productive and creative tensions.

Creativity thus emerges as a communicative, interactive and intersubjective process of negotiating differences within the tetradic relationship between self, other, object and sign (in their temporal expression) in order to successfully participate in a shared physical, social and symbolic world. Creativity means *acting on* self and world, on objects and signs, and manipulating them always in and through action and communication with others. Importantly, the creative negotiation of difference is accomplished mainly in one of the following two ways. On the one hand we can observe a tendency to *reduce the disjunction* between object and sign, between the positions of self and other, to 'align' meaning and therefore achieve a shared form of understanding. On the other hand, an opposite movement involves deliberately

'*widening*' *existing differences* and encouraging new perspectives to emerge in an intersubjective space. To exemplify these tendencies let us return to Ricoeur's (1973) discussion of creativity in language. After having declared polysemy as the fundamental feature of any natural language, Ricoeur moves on to analyse different strategies of language use and distinguishes between ordinary uses, aiming to reduce polysemy for the sake of effective communication; scientific discourse, striving to eradicate polysemy altogether; and poetic discourse, based on the cultivation of polysemic meaning and ambiguity. With the help of definitions, taxonomies and mathematic formalism, scientists hope to reduce ambiguities and close the 'gaps' between phenomenon and its meaning by assuring identity of content or perspective for both self and others (e.g. make concepts operational in a transparent manner). In contrast, poetic language encourages discrepancies of meaning and thrives on the use of metaphor. 'From poetry we receive a new way of being in the world, of orientating ourselves in this world' (Ricoeur, 1973, p. 111).

We are very much in agreement with Ricoeur concerning the existence of these two basic types of 'movement' – towards closing and opening differences within our experience of the world – with the observation, however, that *both* hold creative potential. Although we commonly think about the expansion of perspectives afforded by polysemy and metaphor as authentic manifestations of creativity (and poetry, just as art in general, if often a prototypical example of creative expression), there is clearly creative potential in the opposite strategy of bridging 'gaps' and aligning perspectives. This is primarily because, from a cultural psychological perspective, the aim of eradicating difference is at best utopic and its achievements incomplete or temporary; as such, this goal requires great creativity in order to be employed and perfected! Let us think for instance about a scientist's effort to define his/her concepts and operationalise research variables. These acts of alignment between phenomenon and a system of codes and symbols need of course the validation of others, peers and reviewers who try to grasp and comment on scientific work in ways that reveal their own position, expertise and interest related to the issue at hand. This creative and constant exchange and negotiation is even more obvious in collaborative work, something that the two authors of this chapter experienced at first hand in the process of writing this piece. Since shared meaning is not a given but an achievement, clarifying one's perspective is triggered and stimulated by dialogue with the other and, in the writing stage, by reading and rereading the text itself as it develops over time. This experience has also reinforced our belief that the two movements described above are *cyclical and tangled* in every type of work, be it scientific, artistic or ordinary activity, as our present chapter plays (ideally) the double role of ordering existing content and keeping it open, making it available for new, creative interpretations.

Minding the gap(s): concluding remarks

In this chapter we have argued that the theory of creativity can be rethought along cultural psychological lines in ways that are fruitful for addressing core questions within the psychology of creativity: a) where does creative expression originate

from and what is its developmental history? b) how does creativity, in its temporal unfolding, relate to the symbolic function and engage different social positions and perspectives? c) what brings together highly celebrated and more mundane creations, what are the continuities between these two 'ends' of the creativity continuum? The arguments put forward here offer at least some initial ideas in relation to these fundamental issues. We located the origin of creativity within the disjunctions or differences inscribed within a meditational model of human functioning: those between object and sign, self and other, past, present and future. Developing this perspective, it became clear that the process of creativity has little to do with achieving novelty or usefulness, criteria largely referred to nowadays in the literature. Its characteristic feature is that of *negotiating difference and acting upon it* in ways that either attempt to 'close' or 'widen' the multiple 'gaps' inscribed into our relation to the world. This definition applies to forms of creativity across the board, from everyday gestures and acts of communication to the generation of artistic projects, scientific ideas or innovative products.

There are many parallels to be drawn between our proposed bi-directional movement of creative acts and other common typologies used within cultural psychology and also the psychology of creativity. To take an example from the first, we can remember Bakhtin's centripetal and centrifugal forces of language, the former leading to monoglossia and aiming to achieve a unitary language through regulation and discipline of use, the latter embracing heteroglossia and the simultaneous differentiation and coexistence of voices within one and the same discourse. In his words, 'alongside the centripetal forces, the centrifugal forces of language carry on their uninterrupted work; alongside verbal-ideological centralization and unification, the uninterrupted processes of decentralization and disunification go forward' (Bakhtin, 2000, p. 344). This assertion bears a striking resemblance to the direction of closing and opening difference in creative acts. These two basic moves reflect also what in the social representations literature (see Wagoner, 2008) are considered elementary functions of knowledge construction: making the unfamiliar familiar (an act of alignment between new and old perceptions of the world) and making the familiar unfamiliar (problematising existing sign–object relations in order to resignify reality; for more examples see Wagoner, Chapter 2 in this volume). Interestingly, connections can also be made to traditional distinctions in the mainstream literature such as that between divergent and convergent thinking and their role in creative production (Lubart, 2001; Runco, 2007). However, while these processes are focused on the generation and evaluation of ideas, a cultural psychological perspective necessarily grounds them within broader systems of signification and social interaction.

In the end, a direct consequence of adopting this cultural viewpoint on creativity is that the notion of creativity itself expands much further beyond Big-C, celebrated creations and 'infiltrates' everyday life and our moment-to-moment experiences in and of the world. The meditational model proposed here is widely applicable to an extensive range of psychological phenomena; in fact, it defines the emergence and functioning of all higher mental processes. So where exactly does creativity 'stop'? Is all language use or action creative? What is not creative

according to this conception? There are two answers to these questions. On the one hand creativity is present, in *potential*, in all acts of communication and inter-actions with objects and others. 'In potential' means that the differences existing within these interactive situations can always be exploited to a greater extent or in a different manner and, as such, creativity is the characteristic of action but not every action achieves a maximum of creative expression. On the other hand, based on our framework, we can identify the non-creative as the absence of dif-ference achieved by either ignoring it or adopting a pre-set procedure for dealing with it. This claim has a direct educational implication, for, if we want to foster creativity, we need not only to acknowledge difference but also to be mindful of and cherish its multiple and productive 'gaps' in our daily existence.

Note

1 For more details about the history of the brand visit http://www.post-it.com.

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Chapter 2

Creativity as symbolic transformation

Brady Wagoner

Prologue

I had a dream in which I suddenly realized that I had not yet submitted my chapter for this volume. Everywhere I turned in my home was some distraction: Movies were playing in every room; people were drinking wine and enjoying themselves. I found myself in a broom closet with a tiny pen and an enormous piece of paper. I wrote a little and realized that there was nothing on the page. The closet seemed to be shrinking with my frustrations. My elbows were squeezed in next to each other and my knees pressed up against the wall. How would I escape to turn this chapter in on time?

Introduction

This dream was created for the purpose of representing the often difficult process of writing something creative under time constraints and the psychological feelings that accompany it. Under certain pressures, it becomes more difficult to do anything—we begin to question and reject everything that we come up with, in a sort of hyper-rational state. What you just read was the second opening I wrote for this chapter. The first was formal, academic, abstract and a bit dull. The idea for the second came to me while lying in bed, just before I went to sleep.[1] My mind was dimly conscious and much less constrained—it had drifted halfway into the dream world, where new creative potentialities lie. As Freud (1913) described, the dream world has its own language of coherence that operates on the fringes of consciousness, where the formerly separate ideas and images can become fused.

Sleep, however, is not the only state in which this intuitive mode of consciousness comes to the fore. It can also occur in our mundane daily routines, where we are suddenly struck with some profound insight that provides the solution to a problem we have been mulling over.[2] What these states have in common is that it is not so much the discursively reasoning and active ego that creates, but an intuitive consciousness which Nietzsche (1886/1989) thought would better be characterized as 'it-thinks' than 'I-think.'[3] Nietzsche's own aphoristic style, in which a single inspired line has packed into it a multitude of insights, is itself an example of 'it-thinking.' In his recent book, anthropologist Gananath Obeyesekere (2012) observes

that this mode of consciousness has been entirely undervalued in the Western tradition since Descartes, who argued that the only legitimate path to knowledge was through the rational ego that thinks in 'clear and distinct' ideas. In contradistinction, Obeyesekere argues that intuitive knowing is fundamental, and our focus should be on the dialectical relation between rational and intuitive thinking.

The present chapter explores intuitive knowing within creative imagination. Creativity is here understood as the making of novel linkages, combinations and synthesis between different domains of experience. This grows out of a dynamic and expressive relation to objects and images grounded in our embodied activity, but also requires creating distance from the concrete situation in order to return to it with a new perspective. I call this process *symbolic transformation* (Wagoner, 2010), because it involves the *schematizing* of symbolic vehicles and the objects they represent, based on their dynamic and expressive qualities, to generate surprising new meanings. It is because intuitive knowing involves flexible, holistic and adaptive forms, rooted in feeling, rather than 'clear and distinct' forms, as with rational knowing, that it affords creativity. Creativity thus often requires letting the mind move into a mode of consciousness characterized by syncretism, connotation and affective qualities (Werner, 1948). This is not to say that the individual is somehow here in a pre-social state; rather, he or she is working with cultural forms internalized and transformed through his or her own personal history and motivations.

In this introduction I will begin by sketching out the theoretical framework which will be applied throughout the chapter. This framework is borrowed from Werner's (1948; Werner & Kaplan, 1963) theory of symbol formation, already alluded to in Glăveanu and Gillespie (Chapter 1 in this volume). I will, however, elaborate on an aspect of this theory left unexplored there: the notion of the physiognomic, the dynamic and expressive qualities of objects, which provides a platform for creativity to develop. Second, the dynamic schematization that occurs between symbol and object, based on their physiognomic qualities, is illustrated with examples from exercises developed by Bernie Kaplan and an interview I conducted with a self-defined pagan. Third, I situate symbol formation within a social framework, where we learn to automatically make certain links between symbol and object and physiognomic qualities recede into the background. I argue here that we can generate new perspectives on the world by intentionally representing objects within a novel medium, thereby forcing us to pick out new qualities in them. Finally, I show that the appropriation of foreign cultural elements into one's own group can also be considered a creative and transformative process, involving grounding free-floating signifiers within one's own web of meaning. Similar processes are involved in grounding and diffusing new innovations arrived at through intuitive knowing by an individual within a group.

The physiognomic basis of symbol formation

As Glăveanu and Gillespie (Chapter 1 in this volume) highlight, the basic unit of analysis in Werner's theory is a dynamic tension between symbol, object, self and

other, within the dimensions of time. The child begins to distance itself from the world, to open up its temporal horizon and possibilities for action, by using symbols to re-present the world imaginatively and take new perspectives on it. These abilities are grounded in embodied activity within the environment. Typically, objects in the world are perceived in relation to one's dynamic organismic state: a chair or a stump are seen as having a 'sitting-tone,' especially when one is feeling tired. Only much later in development does the world become divided into distinct objective things, contemplated at a distance as forms in space of a particular shape and color. By contrast, it is the expressive and dynamic qualities of objects put in relation to one's active body that provide the basis for children's early symbolic activities, as when the young child uses a broom as a horse in pretend play. The material object is transformed into symbolic object by relating to features that can be acted on *as if* it were another object.

Children also invest words and images with dynamic and expressive qualities. In *Symbol Formation,* Werner and Kaplan (1963) present a wealth of evidence for the argument that for symbols to be meaningful they must be embodied within organismic activity. They point out that repeating a word over and over again—severing the bond between symbol and organismic state—leads it to lose its meaning. Likewise, in a clever experiment, Kaden, Wapner and Werner (1955) showed that subjects adjusted their estimate of an object's position (higher or lower in relation to their eye level) based on the directional dynamics of the object: a hand pointing up as well as the words 'climbing' and 'rising' were seen *below* the neutral eye level, while a hand pointing down and the words 'falling' and 'plunging' were seen *above* it. This experiment aptly demonstrates that the dynamic and expressive features of the object enter directly into its perception. The sounds as well as letters that make up words take on the qualities of what they represent—for example, the word 'smooth' sounds and looks smooth, just as the word 'heavy' sounds and looks heavy. To quote Shakespeare, "That which we call a rose is never so sweet by any other name."

Werner (1948, 1978) calls these dynamic and expressive qualities 'physiognomic,' which he contrasts with 'geometric-technical.' The latter is characterized by objective properties, such as form and color, whereas the former sees objects as having 'faces' or *physiognomies*. The perception of faces cannot be adequately described in purely objective characteristics, such as eye and skin color, roundness, etc.; rather, we see faces as expressing anger, joy, or tiredness and gazing in a particular direction. At the most primary level of perception, objects are not thing-like but face-like; however, Werner stresses that physiognomics is not derivative of our perception of faces but developmentally earlier, making it possible. To take an example of physiognomies from another context, red is not simply a color in the optical spectrum, but can express, at an embodied multimodal level, passion, living, burning, and strength. Likewise, a 'weeping willow' takes its name directly from the physiognomic qualities of its branches. In *Comparative Psychology of Mental Development*, Werner (1948) provides an abundance of evidence that children, 'primitive' cultures as well as artists (e.g., Kandinsky)

are particularly sensitive to physiognomies. A child recognizes the coat hanger as 'cruel,' a pointed object as 'shooting,' and a cup on its side as 'lying down.'

It is a mistake though to assume the physiognomic is not also a part of a 'developed' adult experience, even if it is less vivid there. Rozin and Nemeroff (1990) experimentally demonstrated that physiognomies can also permeate into adult reality. Subjects watched as a scientist poured sugar into two empty bottles. Subjects were then asked to place a 'sugar' label on one bottle and a 'cyanide' label on the other. Despite having seen sugar being put in the bottle and arbitrarily labeling it themselves, subjects were extremely reluctant to drink from the bottle labeled 'cyanide.' The very word 'cyanide' transforms the substance into a poison. Magical realism, pervasive in many cultures around the world, is merely an instance of the more general process by which words become meaningful through being invested with physiognomic qualities. Whereas there may be an arbitrary relation between word and object in terms of external form (à la Saussure, 1959), the inner experience of the word must be non-arbitrary for it to be meaningful.

Physiognomies by themselves, however, are not creative (this requires distancing between symbol, object, self, and other; Glăveanu & Gillespie, Chapter 1 in this volume), but provide a platform for creative imagination to develop. Vygotsky (1990, 1994) described imagination as developing out of children's pretend play, such as the broom used to represent the horse. At this early stage, children still rely on the material objects of their environment to scaffold their imagination (see also John-Steiner, Chapter 3 in this volume). Later, the objects of the environment are replaced by mental images, which can be internally manipulated based on their physiognomic qualities, acquired through our history of interaction with them. Imagination then becomes a higher mental function that works in collaboration with thinking, where it is linked to inner speech. Vygotsky often implied that material objects become redundant at this stage. We do not need to follow him this far. Material objects can still provide an important source for creative imagination (Tanggaard, Chapter 8 in this volume; Costall, Chapter 4 in this volume). Many cultural environments are constructed precisely in order to stimulate the creative imagination beyond the confines of the particular place. Chinese gardens, for example, are often filled with complexly shaped rocks that visitors are invited to contemplate, opening their minds to a world of imaginary forms found in the rocks' physiognomies (cf. imagination generated by forms suggested in an inkblot—e.g., Bartlett, 1932).

The creative imagination: two illustrative examples

In this section, I will provide two illustrative examples of how images and materials have physiognomic qualities that are utilized, in an act of spontaneous imagination, when they become symbols for representing an object. Bernie Kaplan, the co-author of *Symbol Formation*, developed a number of unpublished exercises for stimulating the creative imagination and exploring the psychological dynamics

of symbolic representation.[4] These exercises require opening oneself to a kind of intuitive knowing based on the physiognomies of objects. One exercise requires representing character types, emotional states, and members of a family as expressive lines. Another aims to construct dreams in waking life by representing a life tension (e.g., guilt for having an affair) in different contexts (e.g., a pub, the beach, on an airplane). Yet another exercise focuses on representing celebrities as furniture, items of food, vehicles of transport, animals, musical instruments, etc. Let us use this last exercise as an example and ask "how would you represent Madonna within the medium of furniture?" Through an act of spontaneous imagination, Madonna is symbolically transformed into a squeaky, heart-shaped bed with red, wrinkled satin sheets. How is this possible?

We can try to dissect the physiognomies that enabled this transformation. I associate Madonna with love and lust—she wears clothes that expose sexual areas of her body (breasts and legs), sings sexually loaded songs ("like a virgin"), and takes many sexual poses (pelvic thrust, licking dancers, and 'grinding' dances). A bed is a symbol for sex because that is where most sex takes place—spatial and temporal proximity. But not just any bed will fit Madonna. For instance, a white cot would not do, because it is associated with plainness, innocence, conformity (e.g., the army or school cots), and the mundane activity of sleep. I fit other physiognomies to the form of Madonna, which have also been spun to the medium of furniture. The color red brings to mind red roses, hearts, flushed skin—all linked to romance and sex by spatial and temporal contiguity. Satin is smooth and sensuous to lie on, especially when naked. The connection is made through nakedness and sex, as well as the smooth feeling of another's body next to one's own. Through the process of associating Madonna to furniture, the meaning in the one creates new meaning in the other and vice versa. Madonna is turned into some sort of sex fiend, while other parts of her character are ignored: a loving mother or talented artist? Similarly, beds are turned into places of pleasure, while their more 'practical' significance—getting a good night's sleep—is ignored. Both ideas complement each other and develop a relationship by picking up certain aspects in the other.[5]

At around the same time that I was introduced to Kaplan's creative exercises, I was doing a little study in which I interviewed self-defined pagans about what the 'divine' meant to them. These interviews illustrate how fuzzy concepts—such as divine, God, liberal, etc.—take on meaning through their embodiment in different contexts. One interviewee happened to have a stretchy plastic material called Gak with her, which she spontaneously used as a symbol to represent the divine. She put Gak between her figures and said that we all took on different forms but we were all made of Gak and connected by Gak. The manipulation of the material object enters directly into her creative elaboration of her abstract philosophical position (cf. Tanggaard, 2013). Shortly after, the same participant offered a second representation of the 'divine' through concrete images taken from science: she said, "I can see it in a cat-scan." To her, we are all matter and energy and thus at the subatomic level we are the same. Our bodies, which are merely a compilation of these substances, are constantly exchanging matter and energy with the

world around us, connecting us to everything. The same abstract notion is represented through two different mediums, which results in subtle differences in meaning. Gak is literally connected to all things with same simple form. By contrast, connection at the subatomic level, through indivisible pieces, presupposes a discontinuity between all things. The continuity takes place on a higher level of organization, where separate pieces of the universe are exchanged between all things. The same person attempted to articulate the 'same' idea through two different mediums, and ended up expressing subtly different meanings.

Thus far, our focus has been primarily on how individuals creatively play with the gap between symbol and object in their dynamic schematization. This process is syncretic and intuitive rather than analytic, or at least begins that way. As with Tanggaard (2013; Chapter 8 in this volume), physical materials can be used directly in this process as a medium for new ideas, as we saw with the manipulation of Gak to express a cosmological vision. As Tanggaard points out, even when materials are not physically present, our history of relations with them is still internally active. That is one reason why our imagination of satin sheets, for example, can be easily used to represent certain sensual qualities. What has not yet been clearly thematized is the social framework within which we relate to objects and images. Objects carry with them a fringe of sentiments and associations particular to a cultural group. As described in relation to language, above, growing into a culture involves investing its objects with dynamic, expressive, and felt qualities that are at least partially shared by the group, in order to coordinate activities with others—Costall (Chapter 4 in this volume) has discussed this in terms of 'canonical affordances.' For instance, we learn to invest immense value in the paper (i.e. currency) we exchange for goods; when traveling to a new country with a different currency, one often has the feeling the money is fake, because we have not yet given it the physiognomic qualities of value. Similarly, almost any object can become sacred in a culture, if socially situated as such.

Making the familiar unfamiliar

We are socialized to associate objects with certain activities and place them among a set of other objects. The notion of 'the sacred,' for example, may serve to unite a range of different objects and activities, while simultaneously keeping other 'profane' things at a distance. This happens through the construction of affective fields, also discussed as social representations (Duveen, 2007; Valsiner, 2003; Wagoner, 2008), which regulate one's flow of experience and connect it to a wider social framework. Members of a group may not even be explicitly aware of these affective fields but they are guided by them nonetheless. The connections between symbol and object become automatic, whereas early in socialization they may be experienced more explicitly—physiognomic qualities come to the fore in children's experience and move to the background in adults. This developmental dynamic is crucial for creativity both ontogenetically and microgenetically, where physiognomies impact our immediate and initial contact with the world. This section will focus on

techniques for breaking the automatic linkages made within a social framework in order to make new linkages and thus create new perspectives on the world.

We can reopen the gap between symbols and objects by intentionally representing something within an unconventional context and exploring the new physiognomic qualities and meanings that come to the fore. Elsewhere I have called this process "making the familiar unfamiliar" (Wagoner, 2008), as it is the mirror image of the primary function given to social representations, "to make the unfamiliar, or unfamiliarity itself, familiar" (Moscovici, 1984, p. 25). The literary critic Kenneth Burke (1935) much earlier labeled the process "perspective by incongruity." Through it we can get distance from our usual ways of knowing and action, so as to explore new directions. Burke gives the example of taking a lion out of the conventional category of cats with the expression, "that big dog, the lion." We begin to see lions in more dog-like fashion—new physiognomic qualities surface. In a deliberately provocative manner, Burke also suggests we should think of education as "trained incapacity." We normally associate education with the development of new skills, knowledge and opportunities. But Burke points out that it also limits possibilities and in some ways makes us rather stupid, believing and following ideas that are quite clearly misguided from the perspective of the uneducated person.

Theorists of metaphor have also argued that all knowledge is ultimately rooted in analogical modes of thought. They make a distinction between "dead" and "living" metaphors. Dead metaphors are those ways of thinking that we cease to recognize as metaphors but rather take the assumptions they come with for granted. Lakoff and Johnson (1980) give the famous example of *argument is war*, which structures such statements as "Your claims are *indefensible,"* "His criticisms were right *on target*," and "He *shot down* all of my arguments" (p. 5). They have us imagine instead the unconventional metaphor of *argument is dance*. Here the coordinated and aesthetic dimensions of the practice come to the fore along with other previously unacknowledged qualities. A living metaphor thus has the potential to revive our creative capacities of seeing the world afresh, to stimulate the imaginative exploration of new possibilities (Ricoeur, 1977).

Much has also been written on the role of metaphor in the development of scientific models (e.g., Black, 1962; Hesse, 1966). For example, the Rutherford-Bohr model of the atom makes an analogy with the solar system: The nucleus like the sun is at the center, and electrons like planets orbit it. The model must then be rationally tweaked so that it better fits the phenomena. For instance, electrons are allowed to jump orbits, whereas planets do not. Thus, the metaphor works through intuitive knowing to open up our perspective, but must then be worked through rationally at the next step to close it once again so as to create an ordered system. This shares something in common with the Geneplore model of creativity (Ward, Smith and Finke, 1999), in which we first generate possibilities and then explore them. However, unlike the Geneplore, the present cultural psychological framework has much more to say about the cultural dimensions of generating novelty through symbolic incongruity.

I have sometimes asked my students what animal best represents the concept 'freedom.' The most frequent response is a bird. Of course, they have in mind a

prototypical bird, such as an eagle, based on its agile and high flight. But in order to sever this automatic link, I follow it up by saying, "you mean a chicken?" which they immediately and emphatically reject. I am persistent and ask, "What might 'chicken freedom' be?" This requires them to do additional representational work to spin together two objects normally kept separate. Perhaps they begin to think of "freedom" in ironic ways by elaborating the image of "free range chickens," which are only free in comparison to how tiny the cages are that chickens are kept in on battery farms. Or freedom becomes lack of worry or concern, as the chicken is not plagued by either its past or future. Possibilities abound.

On the topic of chickens and representation, I am reminded of a clever art piece I saw at the Pompidou Centre some years ago. The artist had put a packaged chicken inside of small coffin made to fit its proportions, but in every other way resembled the kind one finds in a funeral service. By re-presenting the packaged chicken within this context we learn to see it not as food, but as a living thing that has died.[6] It is now something that we should feel sad about. Most people would probably be reluctant to eat chicken out of a coffin rather than off a plate. But I think the meaning transfer goes in both directions. The artist may also want us to think of our death practices in a new way. Before being put in the coffin, corpses have fluids drained out, others pumped in and a wide range of cosmetics applied. Perhaps we become like packaged chickens in death!

Lastly, certain kinds of humor can be understood as the creation of symbolic incongruity. Consider the following humorous analogy: "Her hair glistened in the rain . . . like a nose hair after a sneeze." We construct a scene of romance and beauty, which is then re-presented in the context of bodily fluids and disgust. The sudden contrast between the two contexts, normally strictly separate, generates humor. I remember a commercial that did something similar: a man and a women are on a romantic carriage ride, which we are led to believe will culminate in the man proposing to the woman. Just as he is about to do this the horse farts. Another example brings the point home: "The ballerina extended one slender leg en pointe . . . like a dog at a fire hydrant." The elegant, refined and high-culture activity ballet is brought down into the context of basic animal physiology. These analogies construct a new and amusing way of relating to images, which normally automatically symbolize romance and elegance for us. T.S. Eliot was a master in developing such images; for example, we owe to him the poetic expression "The snot green sea." Through humor we defy normal expectations and represent something in an unexpected way. In this way it can be very creative.

Creativity in the transmission and transformation of culture

By intentionally representing something in an unconventional context we are able to open up new possibilities of meaning making and take new perspectives on the world. I called this "making the familiar unfamiliar" and drew a parallel to the process of "making the unfamiliar familiar," which occurs whenever something

new enters a social group from outside it. While the former aims to open possibilities for meaning, the latter aims to close them by giving an object that is unanchored in one's symbolic universe a relatively definite meaning there. Foreign cultural elements begin as free-floating signifiers, which must be given a setting and explanation within a recipient group if they are to become meaningful. These processes were most famously investigated by Frederic Bartlett (1932), who experimentally demonstrated that a foreign story (e.g., the Native American story *War of the Ghosts*) would come to look increasing like an English story when it was reproduced by Cambridge undergraduates—'hunting seals' became 'fishing,' supernatural elements were rationalized or omitted, the proper names were forgotten, the style was smoothed out, and narrative structure made more definite. In an effort to make the story meaningful his subjects ended up 'conventionalizing' it.

Bartlett's (1932) experimental demonstration of 'conventionalization' in cultural transmission was further developed with ethnographic examples of the diffusion and reconstruction of folklore, decorative art, and the alphabets. In each case we see the growth and change of cultural forms as a function of the groups they enter. Moving beyond Bartlett, let us consider an example of how the Indian god Ganesh was reconstructed in European culture. Figure 2.1 presents Ganesh as he is typically depicted in India (left) versus his depiction in Europe in the sixteenth
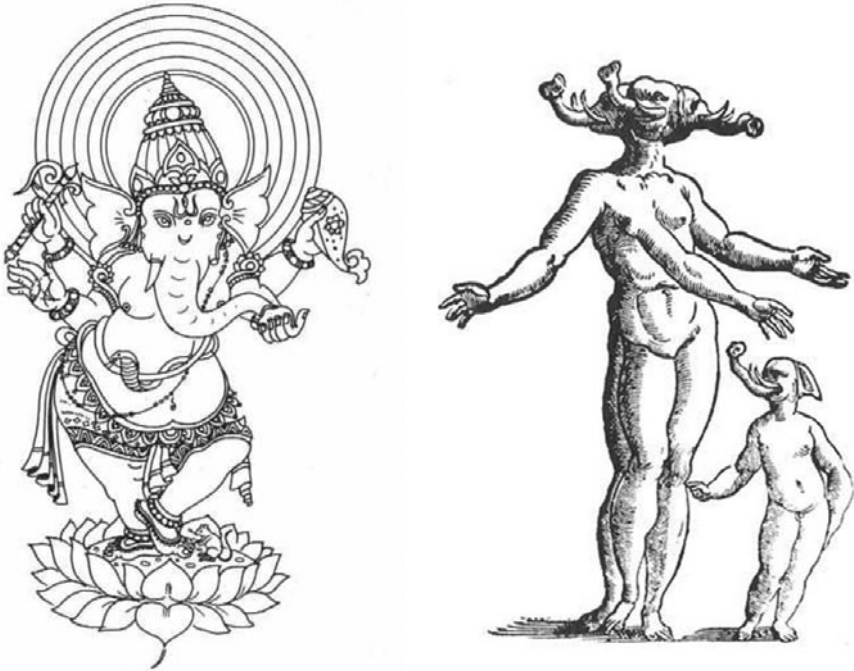

Figure 2.1 Depiction of Ganesh from India (left) and Europe during the Renaissance (right) (reproduced with permission from Mitter, 1992, p. 29)

century (right). In India, Ganesh is rather corpulent, while deities in Europe are conventionally represented as being well built; he is dressed in clothing and holds objects that have little significance to Europeans, which all disappear in the European depiction; and he is accompanied by a rat (his vehicle)—rats are often fed outside Ganesh temples. In Western tradition, rats and deities cannot be represented together—they are symbolically incongruent; instead, children accompany deities, a common motif in Christian art. Thus, in this we see how Ganesh is spun to the cultural conventions of Europe when he is re-presented there.

Processes of resignification can be found when cultural elements travel between groups as well as when new ideas are propagated within a group. In relation to the latter, consider the story of Muhammad's revelation and the founding of Islam: the story goes that Muhammad had gone to a cave on Mount Hira to meditate. One night while he was sleeping there he was suddenly awoken and told to 'recite' (*iqra*) by the Angel Gabriel. He protested that he could not recite as he was not a *kahin*, one of the ecstatic prophets of Arabia. However, on the third command he began to recite what would become the Quran. Afterwards Muhammad was himself unsure about the meaning of the terrifying experience—was it a demon or an angel that had come to him? At this time in Arabia, poetry was believed to be inspired by demons. But when Muhammad described the experience to his wife, Khadija, she immediately recognized it as a revelation from God and thus became the first convert to Islam. What we see here are two competing explanations for the experience within the group (i.e., inspiration by angel or demon), which must be intersubjectively negotiated between people.

Thus, what might begin as an intuitive and passive knowing (à la meditation or revelation) is at the next instance actively placed within objective culture, the rational framework of the group. There is also a controversial episode in which, during a revelation, Muhammad recognizes three indigenous deities, known as the daughters of Allah, as worthy of worship. This would have certainly appeased some of the local population believing in them. However, soon after this he received a further revelation that said that the earlier revelation was not from God but a demon, thereby revoking its message by locating it within the group's web of meaning. In this example we observe the three dimensions of Glăveanu and Gillespie's (Chapter 1 in this volume) model: (1) resymbolizing an experience within a group's web of meaning, (2) renegotiation of its meaning between people within a culture and (3) a reevaluation of experience at a later point in time, based on (1) and (2). Clearly, creativity is a dynamic and transformative process that works within and between personal and collective culture. In other words, it is an ongoing process distributed within the social and cultural environment, while at the same time passing through the subjectivity of the people involved.

Whenever new ideas emerge within a group they must be framed so as to connect up in some way with other cultural ideas; intuitive forms must be rationally worked into a group's cultural framework, if they are to gain acceptance there. This process can also be seen in the Buddha's meditation experience, analyzed in detail by Obeyesekere (2012). According to the myth, after renouncing both

the life of luxury and extreme asceticism, the Buddha meditated under the Bodhi tree, where he received a number of visions: first, he recollected in vivid imagery the manifold of his own hundreds of past lives; second, he had a vision of human beings' continual death and rebirth, passing away and reappearing; and third, he discovered the nature of error and the four noble truths of Buddhism. Obeyesekere (2012) points out that there is a transition here from a highly imagistic passive thinking, with parallels to consciousness in dreams (where physiognomic qualities are central), to a more discursive and rational consciousness where those images are elaborated into a doctrine that can be communicated to others.

Thus, we see here a flexible, intuitive, and associative form of knowing being elaborated into a rationally ordered form. It is not that the first form is somehow pre-social, but rather that cultural meanings have been transformed into something deeply personal and subjective. This is in turn again transformed at a rational level, so as to fit it into the forms and framework of an intersubjective community. Creativity is present in both the internalization or subjectification phase, where different objects and meanings freely coalesce and combine, as well as the externalization and objectification phase, where subjective imagery must be given order and structure to be communicated to others. These correspond to the gaps between object and symbol, as well as person and other in Glăveanu and Gillespie's (Chapter 1 in this volume) distributed model of creativity. Although my examples here come from stories of spiritual visionaries (i.e., Muhammad and the Buddha), these processes are much more general. For example, in science, Kekulé discovered the structure of benzene after having a daydream vision of a snake biting its own tail. We all have had the experience of trying to translate a personal and idiosyncratic vision or idea into something that can be communicated to others and are aware of how creative transformations can occur in the process of translation.

Conclusion: human life as creative imagination

The work of the creative imagination constantly transports us beyond the world of sensation through symbols (see also John-Steiner, Chapter 3 in this volume; Jovchelovitch, Chapter 6 in this volume). Simple objects and mundane experiences can come to represent existential and cosmological truths. Consider this example from Fritz Heider's autobiography, in which a dejected stranger is brought into the guest house Heider is staying in and begins a conversation with the keepers:

> She brought out a warm supper and tried to make the stranger comfortable. He and Lisa were soon exchanging views on the meaning of life. He was rather dejected and said, "It is best to be dead; then one has peace and quiet." Lisa became all excited and said, "No, no. After death begins a fuller and more complete life." "Perhaps, perhaps," the Russian answered. "But down here it is not very nice. Everybody is miserable." And so they went on discussing death and happiness. Just then a moth fell into the soup, and he said:

"See here, how it dies. Happy moth!" But this moment the moth got out again and flew away. Lisa laughed triumphantly and said: "You see, a new life. A new and better life! Don't give up hope too soon!"

(Heider, 1983, pp. 65–66)

What would in another context be a simple annoyance of having an insect fall into one's soup becomes here a rich existential symbol of life, death, and rebirth. The moth is experienced in part *as if* it were a human being struggling with its life. These poetic links are made by connecting up a feeling pattern of one experiential domain with another. In this chapter, I have discussed this process as one of dynamically schematizing objects and symbols based on their physiognomic qualities. I have also suggested that we can generate surprising new meanings by dropping an object into a new context and intuitively seeing what results.

A similar model of the creative process that also centers on emotion and metaphor has been proposed by Lubart and Getz (1997). They describe how emotions provide the basis for making linkages between different elements in memory and metaphor generation. While sympathetic to their overall approach, there are three important differences to the present approach: (1) the creative process needs to actually be studied as a *process*, rather than simply looking at the outcomes of associations; (2) by focusing on elements and their associations we tend to lose sight of the whole concrete person's rich experience; and (3) this person is also part of an ongoing social and cultural process. Even highly idiosyncratic personal visions cannot be separated from the wider system of meanings, albeit they reappear in a form that is channeled through the life history of the particular person. Creativity, however, not only involves working with materials that are social and cultural, but a person also becomes socially and culturally situated through their productions (e.g. situating Muhammad's revelation as inspired by angel or demon).

This can involve existential conflicts of deciding whether to disseminate one's message when it is likely to place one on the margins of society. Not only are creative products evaluated, but also the people associated with them. Creativity often works on the borders of different frameworks of knowing, bringing one cluster of meanings to bear on another. The person who does so is often considered an outsider or half-member by others in the recipient group. Major innovations and innovators are frequently first laughed at and become accepted only through their persistence, consistency, and flexibility (Moscovici, 1991). In short, other people are always present in the creative process, whether they are physically present or internalized. They are used to unpack intuitive insights and bring them into an intersubjective community, where the creative person is situated and must struggle to be accepted.

Epilogue

Light bursts into the little closet from above—there is no longer a ceiling. I look down at my body to find four hands working furiously with several pens. I refocus

my attention upward and realize I have ascended through the space in the ceiling and am floating through the sky, four hands and all. The hands stop writing and begin smoking cigars. I begin to descend over a familiar house. In an instant, I rocket through the chimney to deliver a wonderful present to the book editors—this paper.

Dedication

This chapter is dedicated to the late Bernie Kaplan, whose exercises in imaginative thinking and conversations together have inspired the thoughts presented here.

Notes

1 There have been numerous accounts of creative insights coming at the boundary between sleeping and waking. For example, psychology's own forerunner G.T. Fechner got the idea for his vision of psychophysics, which unites matter and spirit through the mystery of numbers, while lying in bed.
2 The four-stage model of the creative process would label this stage "illumination," which would be preceded by "preparation" and "incubation," and followed by "verification" (see Wallas, 1926; Guilford, 1950; Lubart, 2000). This chapter will adopt a much more dynamic and social-cultural account of the process than the four-stage model.
3 Although it was an improvement, "It-thinks" was still not quite right for Nietzsche (1886/1989) in that 'it' still grammatically implied there was some subject doing the thinking.
4 I had the pleasure of being one of Bernie's last students. In the last year of my BA degree, I took his seminar "Dreams and other products of the imagination" and also regularly met at his home to discuss psychology with him.
5 Similar processes have been discussed in more cognitive accounts of creativity as selective, conceptual combination (Ward, 2001). These approaches, however, often miss the strong grounding in the emotional and cultural life of people.
6 It is interesting that meat is often given a different name than the animal it comes from—for example, beef from cows and pork from pigs. This can be thought of as a symbolic distancing device to separate the meat from animals with more human-like qualities. Chickens, ducks and other birds are already thought to be distant from humans within our system of meaning, though it might not necessarily be so in other cultures.

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Chapter 3

Creative engagement across the lifespan

Vera John-Steiner

In this chapter, a Vygotskian framework to creativity is presented which, once his diverse writings are integrated into a cohesive body of ideas, emerges as a systems approach. Rather than focusing on a single aspect of innovation, such as the person or the product, in this broader dynamic approach, according to Kozbelt, Beghetto, and Runco (2010), "creativity results from a complex system of interacting and interrelated factors" (p. 29). To study the entirety of a system requires diversity of methods and focus. The emphasis of this work is on a developmental presentation of how socially mediated creative activities are practiced at different phases from childhood to old age. In addition, the findings from documented lives of creative contributors are used as a lens to examine everyday creative endeavors.

Crucial to such a perspective is Vygotsky's central notion that humans are profoundly interdependent. As this is the guiding theme of his writings, it applies to creative endeavors as well, contrary to most contemporary studies which focus on the traits, motivation, and skills of individuals who have made recognized contributions to our Western culture. Vygotsky does not deny the role of individuals, but probes the social, creative construction of the self, which emerges through interaction with more experienced others and the internalization of the consequences of those encounters. Culture and history provide the specificity of the interactions across and within generations (Glăveanu, 2010). As these themes are richly explored in this volume, I will concentrate primarily on the developmentally diverse modes of co-construction of new knowledge. The objective of this chapter is that of linking diverse Vygotskian inquiries into play, meaning making, dialogue, and, most of all, creative collaboration. By doing so, the frequently fragmented literature of cultural-historical studies of creativity is integrated to provide evidence for the emerging new theoretical paradigm developed in this book.

Play and creativity

It is widely believed that childhood play and creative activities are linked. A powerful motivation for play is the realization of growing children that their desires

cannot be achieved in reality, so they seek to realize them through their imagination (see also Jovchelovitch, Chapter 6 in this volume). A very young child is impatient and wants to obtain gratification immediately. But during the preschool age a child enters "an imaginary, illusory world in which the unrealizable desires can be realized, and this world is what we call play" (Vygotsky, 1978, p. 93). In highlighting the importance of play, Vygotsky wrote,

> In play a child always behaves beyond his average age, above his daily behavior; in play it is as though he were a head taller than himself. As in the focus of a magnifying glass, play contains all developmental tendencies in a condensed form and is itself a major source of development.
>
> (1978, p. 102).

An important aspect of play is the way in which children use object substitutions. A stick becomes a horse, a wooden block can be "a car, a bed, or even a play character" (Smolucha & Smolucha, 2012, p. 68). Role playing provides children with exploring their world and temporarily taking on the power of adults, whom they imitate with exuberance.

Symbolic play has been studied primarily from an individual point of view, but Gőncű and his coworkers have examined the diverse ways in which "neither motivation nor the content of play comes from the individual alone. Taking this experiential feature of children's play seriously suggests that the affective antecedents of children's symbolic play stem from the interactions with others accumulated across time and are culturally situated" (Gőncű & Gaskins, 2011, p. 52). In describing how young children co-construct their play with their partners they emphasize what I (John-Steiner, 2000) have referred to as complementarity, namely that each partner brings his/her own experiences, values, knowledge to the joint activity while also maintaining a shared commitment. This feature of symbolic play is crucial to our argument that while an activity may appear to be carried out in solo form, it is embedded in many experiences which are shared. A distinction between the social and individual is a complex one, because it is frequently drawn based on the physical presence of others. But in analyzing the concept of social more deeply, it becomes apparent that the choice of themes, settings, and objects included in solo activity has social roots. Many authors have selected "playing doctor" as one example of symbolic play in Western communities. In making such a choice, they refer to a social practice that is part of the children's experience and where the objects that they use or symbolically interpret, like in giving "a shot" to a doll, have been drawn from culturally patterned practices. These early activities are the roots of the imaginative reshaping of emotionally or dramatically significant events in the participants' lives. They form an important beginning of what Vygotsky referred to as the ability to abstract oneself from a concrete situation and to change it creatively (1931/1998).

In addition to emphasizing the central role of imagination in play, Vygotsky also writes of the emergence of rules and their importance (see also Baerveldt

& Cresswell, Chapter 7 in this volume). When a child imagines herself to be the mother holding the doll as the pretend child, the rules that govern the acts of maternal activity like providing comfort, fulfilling the child's immediate needs, come to govern her way of enacting the maternal role. Laura Berk (2013) explains Vygotsky's approach as follows: "Make-believe assists children in using symbols, especially language, as tools for overcoming impulse and managing their own behavior. At the same time, because children's imaginary scenario requires them to follow social rules, imaginative play continuously demands that they act in socially desirable and responsive ways" (p. 45).

An excellent example of how these two aspects of play are applied is revealed in St. John's (2006) carefully documented study of young children's cooperative music making. The participants were 4- and 5-year-olds attending a semester-long music class. Their interactions in singing, moving, and instrument explorations were carefully analyzed (ibid.). In one of the episodes in these videotaped sessions, St. John (the teacher-researcher) played an excerpt of "Cloudburst" from the Grand Canyon Suite by Grofe. The children decided to engage in a movement activity inspired by the music.

> The children were given scarves and were asked to move "as the music tells you." The recording was a gentle song about the wind. As a boy twirled his scarf in a circular fashion, another child suggested that a tornado was approaching; the boy began twirling the scarf vigorously as he turned in circles, forming the tunnel shape of a cyclone. Returning to the singing circle, one child relayed to another. "Not all storms have tornados, you know." This activity led to the creation of a weather story in which props as well as instruments were employed.
>
> (St. John, 2013, p. 96)

Some of this early socio-dramatic play and music making shows how young learners explore their way into the larger world by using what they have experienced with others and the rules implicit in those experiences. They also rely on their creative fantasies as they dramatize their own stories, movements, and music. The St. John study focused on the children's imaginative use of instruments and how they transform these by building upon each other's innovations. Her focus on the social aspects of musical play and the way in which participants invite each other to expand their range of innovations of the teacher-presented task was a consequence of her Vygtoskian theoretical stance. This is an important issue in the study of play, which has traditionally focused on the interaction between the individual child and play materials. *The Vygotskian theoretical lens on the social sources of development provides a way to notice and explore previously neglected aspects of play*. If St. John had followed the traditional approach, she would have analyzed the same episodes by focusing on each child separately, ignoring the social facilitation and expansion of each participant's contribution. Instead, she proposes that:

Children are natural collaborators, building on each other's strengths to heighten their experience: honoring the child's interpretation of teacher-delivered material requires an environment where the freedom to explore and discover is fostered, a teaching practice that encourages the child's natural proclivity to create meaning and share experience, and a way of being that trusts the child's agency in her/his own learning. When the child's engagement and interactions become the curriculum, collective creativity and collaboration flourish. Shared ideas evolve into unimagined learning as children scaffold the experience for each other.

(2006, p. 255)

In cross-cultural studies of play, adults in Western contexts try to interpret and extend children's symbolic play, while children in other cultural settings negotiate with each other about the modes of representation and themes of their activities (Gőncű & Gaskins, 2011, p. 52). Though these are important differences, they support the notion that play is ever present and socially mediated. The link between play and creativity is imagination, which Vygotsky (1987) conceptualized as internalized play developed in conjunction with others. He further wrote, "The very foundation of the activity that we refer to as imagination is an introduction of something new into the flow of our impressions, the transformation of these impressions that something new, an image that did not previously exist, emerges" (p. 339). These early images (as well as other forms of representation) are built upon in later creative work. One account of this process is by Mozart. He experienced a rich and varied life of immersion in music, even at an early age. Some suggest that this immersion contributed to his great fluency in composing. In one of his letters, he wrote,

When I proceed to write down my ideas, I take out of the bag of my memories, if I may use that phrase, what has been previously collected into it the way I have mentioned. For this reason the committing to paper is done quickly enough.

(1975, p. 56).

The notion of "the bag of memories" is not limited to Mozart. Poets, painters, cinematographers refer to their early imaginative experiences as a continuing source for their creativity. The Swedish director Ingmar Bergman recalled, "When I was ten years old and I operated my first magic lantern – with its chimney, its petrol lamp, and its constantly repeating films – I found the above phenomenon exciting and mysterious. Even today, I feel in myself the nervous excitement of childhood when I realize that I am actually an illusionist . . . " (Sarris, 1969, p. 35). These recollections provide a strong argument for the long arc of creative development, which includes the internalization of shared improvisations, cultural artifacts, and collaborative play.

Apprenticeships

While the earliest beginnings of creative activities are connected to childhood play and fantasy, sustained contributions require the mastery of the tools and content

of a discipline. In *Notebooks of the Mind*, I've suggested that the personal interest and caring of knowledgeable adults are crucial for the development of the young artist or scientist. In scientific biographies, we frequently find parents who encourage their children's interests in pursuing answers to interesting questions. But most rural and low-income schools lack the facilities to expand and build on these early interests, and it has taken recognition of a national shortage in certain fields to try to remedy this situation through innovative programs. While hands-on experiences are crucial in strengthening young people's preparation for scientific careers, biographies remind us of the importance of special relationships between mentors and novices. The great French biologist Louis Pasteur had an undistinguished career in rural French schools. His peers valued his skills in drawing which revealed a keen sense of observation. It wasn't until he attended a regional college at Arbois that "his headmaster noticed that his observational skills were of significance beyond his interests in art. The relationship between Pasteur and this master sparked a new development in his life. His enthusiasm for scientific work increased as a result of this attention, and an important career was launched" (John-Steiner, 1985, p. 48). While emphasizing these one-to-one connections in the development of specialized knowledge leading to sustained scientific work, it is important to remember that these relationships are embedded and nourished by a large social network of peers, teachers, and colleagues, and that contemporary scientific work requires elaborate structures with division of labor and complementary skills among colleagues. This aspect of creativity often has been neglected, even when examining the early years of well-documented lives in the sciences.

While in some cases mentors are family members or teachers, others include individuals who are not in face-to-face interaction with the learner. These individuals I refer to as "distant teachers" (see also the case of Wiinblad in Tanggaard, Chapter 8 in this volume). In the context of this volume, it is not surprising that many of us share Vygotsky as a distant teacher. One example of the impact of a distant teacher is that of the great Spanish cellist Pablo Casals, who started every morning by playing the Fugues and Preludes of Bach. As a student in Barcelona, the discovery of Bach's cello music was a defining experience of his adolescence.

> This was the great event of my life . . . One day, quite by chance, I came across the *Six Suites* of Bach in one of these musical shops. I was thirteen then. I wondered what could be hidden there, what mystery lay behind the words: *Six Suites for Cello Solo*. I did not even know they existed, neither did my teacher, and no one had ever spoken to me about them. It was the great revelation of my life. I felt immediately that it was something of exceptional importance. On the way home I hugged my treasures: I started playing them in a wonderful state of excitement, and it was only after twelve years' practice of them that I made up my mind to play them in public.
>
> (Corredor, 1956, p. 27)

In his diverse and highly successful career, Casals became a mentor and a distant teacher to many others, including the great contemporary cellist Yo Yo Ma.

Musical apprenticeships provide a particularly interesting paradigm for the inter-nalization of a legacy (both in instrumental performance and composing) and the development of new interpretations. In a study of musical education in Finland, Wirtanen and Littleton (2004) interviewed ten classical piano students whose studies dated back to when they were six years old and who had experience with both male and female teachers. Once students have mastered the most challenging pieces of the classical repertoire, then they embark on the road of developing a musical identity of their own. The authors view this process as the "interweaving of tradition (as represented in and mediated through the guidance of the teacher) and the student's own creative interpretations. Interpretation is thus characterized as involving subtle negotiation and the joint construction and agreement of shared meaning and understanding" (p. 31).

In an interesting expansion of one-to-one mentoring, highly skilled teachers can both focus on their individual students as well as build on the interaction of the mentees with each other. The American composer Aaron Copland described in his autobiography his years of study with Nadja Boulanger in Paris. She nur-tured new music while also teaching the full history of composition. "Technical skills – counterpoint orchestration, sight reading – were second nature to her. She believed in strict discipline and worked hard herself" (Copland & Perlis, 1984, p. 62). The atmosphere that Boulanger created also exposed the young composers to the musical innovations of influential modernists. A balance between tradi-tional practices and innovation is not restricted to composition. It is an important feature of chamber music and orchestral participation. In a book on his life as a first violinist of the Guarneri Quartet, Arnold Steinhardt describes their musical complementarity. He evokes their effective interdependence, the way in which their performance is built upon their thorough knowledge of each other's style, temperament, and commitment (John-Steiner, 2000). Some of these features of playing together are also present in orchestral collaboration among musicians. Of particular interest to the study of creativity is the way in which young performers introduce innovations while their more experienced co-participants sustain the more enduring characteristics of a particular orchestra. These differences ensure a dynamic equilibrium between cohesion and change through intergenerational interaction.

Such fine-tuned and intergenerational interaction is not limited to music. It char-acterizes apprenticeship learning in a great variety of settings including machine shops, tailoring establishments, and bakeries. In families practicing diverse trades, skills are transmitted from generation to generation. But with each new cohort experiencing changing technology, novel approaches are woven together with the known. Innovation requires mastery of a tradition with the flexibility that leads to improvement in existing practices (see also Baerveldt & Cresswell, Chapter 7 in this volume, for an account of the generativity of traditional norms).

In rural communities, many skills and innovations take place when par-ents and children work side by side. Shirley Brice Heath (2012) has docu-mented family interaction over three generations and found that with increasing

commercialization of childhood activities, children's shared activities with their parents have decreased dramatically. This finding raises some serious issues of the necessity to provide time and space in schools for apprenticeship learning and peer collaboration. It's in these contexts that children can build on their families' funds of knowledge and introduce their own imaginative constructions influenced by their generation's experience with historical and technological change.

In music and science, the importance of intergenerational mentoring and apprenticeships is broadly recognized. It is significant in all areas of human endeavors where each generation builds upon the collective knowledge base of previous ones. This process of internalization is slow, and many young people do not receive the support and encouragement to build the self-confidence needed to go beyond habitual modes of thought. Our focus in creativity research has been on famous individuals whose lives have been richly documented. In that process, we have neglected the more pervasive truth that creative problem solving is ever present in the daily endeavors of human beings. The choice to pursue a career that is risky and uncertain in its possible outcome, as is the case for individuals committed to innovation, requires, in addition to emotional support, scaffolded interaction with more knowledgeable others. This does occur in many work situations, and creativity is not limited to those who have committed themselves to a profession that requires it. But our psychological literature lacks documentation of the many faces of apprenticeships, which take place in schools, homes, and work settings – unrecognized.

A focus on the community as a site of apprenticeship learning characterizes the work of some cross-cultural researchers. Patricia Greenfield has examined innovation in weaving practices among the Zinacantec Mayans in Chiapas, Mexico. Her ethnographic research was started in the late 1960s and continued into the twenty-first century. She shows how traditional mother-to-daughter transmission of weaving and practices in pattern making has established a repertoire of garments which remained relatively unchanged for long periods of time. But concurrent with many economic changes, and with commercial activities growing in some of the Mayan communities, the younger weavers have started to make many innovations, including incorporating printed patterns from Mexico City. They also now use sewing machines in addition to looms, and they rely on their imagination while honoring some aspects of tradition. Teachers tend to be younger; frequently they are peers or older siblings rather than the mothers. These changes have led to shifts in family dynamics.

The spread of these new forms of the traditional art of weaving in these communities is compared by Greenfield to creative changes in pottery making in the American Southwest. In both settings tourism and the impact of outside institutions are resulting in more emphasis on individual variations. But while these changes are dramatic, there is also an effort to honor traditional forms of these different crafts. Museums and scholarly publications play a significant role in testing the authenticity of this innovative work. As these crafts develop, the reliance on these institutions highlights, once more, the interdependence between socially

distributed knowledge and cultural memory on the one hand, and widespread experimentation on the other. The social-cultural study of apprenticeships provides particularly vivid examples of the ways in which tradition and innovation are woven together in domains and settings as varied as weaving and scientific discovery.

Mature creativity

There is an interesting paradox in the study of creativity from a Vygotskian perspective. The profoundly social approach of the theory known as Vygotskian is most often referred to by his name, thus emphasizing the tradition of the author as the sole creator of a new work. This ignores what several scholars have pointed out – that the cultural-historical approach was co-constructed by a group of collaborators and cannot be ascribed solely to Vygotsky. The importance of this fact was emphasized by Van Der Veer and Valsiner (1993) in their comprehensive study *Understanding Vygotsky*. They wrote, "it is the *intellectual interdependency* of the scientist or artist that sets up the conditions under which novel ideas or expression can come into being" (p. 303); "the emergence of a new idea takes place within an individual's mind while he is participating in (immediate or deferred) social discourse. Hence, the personal achievement of novel ideas is intellectually interdependent with the socially available and culturally organized 'raw materials' – concepts with heterogeneous meaning . . . both the 'means' (meanings) and 'needs' (goals set by the individual in the given task setting) are at first suggested to him socially" (p. 395).

While this reality is widely recognized by the cultural-historical community, members of this group have difficulty overcoming our shared socialization into Western-oriented institutions which emphasize individual agency. Even while recognizing the importance of the "trojka," Vygotsky, Luria, and Leontiev (later joined by additional colleagues both men and women), we are still guided by our habits of thought and speech as we refer to their ideas as owned and authored by a single individual. We know, but often forget, that this group of colleagues "participated in discussing, spelling out, and writing up the initial assumptions of what is termed Vygotsky's cultural-historical theory" (Stetsenko & Arievitch, 2004, p. 71). The authors describe how these collaborations took many forms including conferences, letters, research, and shared clinical and administrative activities. Vygotsky's legacy was made possible by the devotion and courage of his co-workers. The collaborative practices that they use so effectively are hard to implement in contemporary academic institutions, which are stable and highly institutionalized work sites and where individual merit is rewarded.

In this section of the chapter, I will draw primarily on the literature of creative collaborations, recognizing, as argued throughout these pages, that solo activity is always imbedded in a network of social connections, products, and communities. In addition to this theoretical recognition, creative collaborations provide an opportunity to study covert processes in a more accessible communicative form.

Imaginative leaps are shared by drawing, improvisational music, verbal examples, and exchanges, and thus provide useful artifacts for the challenging study of creativity.

Moran and John-Steiner (2003) have proposed that carefully planned collaboration is particularly effective when established paradigms of knowledge are contradicted by newly emerging facts, which require a profound restructuring of the existing framework. This process is an example of the difference between stable perspectives which exist in the present and unexpected findings which point to a future restructuring (Glăveanu & Gillespie, Chapter 1 in this volume). It is these transformations that benefit most from the multiplicity of perspectives, skills, and temperament that collaborative pairs and groups represent. One well-documented example of such differences was Marie and Pierre Curie. Their research on radioactivity required the knowledge of chemistry, physics, and medicine. Pierre served primarily as a physicist and Marie, although she was trained in mathematics and physics as well, was the chemist in their partnership. They supported each other's deep devotion to scientific research and jointly published their findings. Their daughter Irene Joliot Curie described her parents' complementarity. "He was an excellent experimenter . . . [and] also a thinker . . . The thought of my mother was more often directed toward immediate action, even in the scientific domain" (John-Steiner, 2000, p. 39). Others described Marie as a "thinker-doer" while Pierre was characterized as "a thinker-dreamer who reveled in broad reflection on nature" (ibid.). They also complemented each other in their temperaments: he was more cautious and retiring, and she was more outgoing and determined.

A more contemporary collaboration took place between the physicist Geoffrey West and the chemist James Brown of New Mexico. Their work on scaling (size-related variations in metabolic rates showing that as a plant or organism increased in size, it did not double the energy required but operated on 3/4 power scaling relationship) received international attention. Their disciplinary complementarity was important for their research as they investigated scaling over a variety of domains. They developed effective routines for writing, even though their styles differed. Over time, West modified his occasionally "flowery" style while Brown's terse approach was also relaxed. In first drafts they focused on their disciplinary area, as related to scaling, and eventually integrated their text into cohesive form. These adaptations are important in long-term collaborations. They are also at work in most joint human endeavors.

Documented collaborations are of interest as they provide information about the division of labor that characterizes most social activities. But when authors refer to such a specialization in the context of large projects, they seldom comment on the dynamic changes that make effective division of labor possible. Some of the dynamics that cut across major creative projects, innovations, as well as work practices are illustrated in the examples above. Differences in skills, perspectives, and temperament are one of these features. These are easy to identify in celebrated collaborations, but they are also at work in day-to-day joint efforts. For instance, teams of builders rely on each other's varying experiences in applying

solutions to a new challenge that arises unexpectedly in the midst of what appears to be a routine task.

In examining scientific endeavors, we speak of analogy playing a crucial role in new discoveries. But analogy is pervasive in its salutary effect. Reliance upon analogy was frequently mentioned by mathematicians and scientists in their efforts at breaking out of routine when solving a difficult problem. This strategy works in a wide variety of situations including daily activities. Organizing space to optimize it for efficient use of work tools by a scientist, a dentist, or cook is one example. Creating task-related work zones analogically applies an effective practice from one context to another. By observing and examining the highly developed skills of experienced thinkers, a broader range of insight is found in everyday human practices. Thus, it is helpful to focus on individuals whose accomplishments are recognized and whose ability to cooperate in joint endeavors is part of honing their own skills. In emphasizing such analogies, the dichotomy between transformative creativity (big-C) and everyday creativity (little-c) is overcome.

To identify these analogies I rely upon an analysis performed by Robin Oppenheimer (2011) seeking common elements in successful creative collaborations specified by eight researchers. The majority of authors emphasized the *dialogic process*, during which ideas are exchanged, new solutions are proposed, criticism is provided, and revisions are suggested. Dialog is used in a wide variety of activities, whether leading to historically significant creative accomplishments or as part of human adaptation which requires imagination and perseverance. It is an important aspect of teaching and learning where the asking and answering of questions contributes to a shift from passive transmission of accepted ideas to active participation.

Another feature of creativity when conducted in collaboration is *shared vision*. The forging of a common view of why a project is important and what contribution it may make to human welfare is essential in long-term efforts. While diversity of perspectives, skills, and temperament enriches joint activities, and is frequently mentioned by collaborators, it can be divisive without the glue of a shared vision. The sociologist Michael Farrell describes the collective action planned and executed by a circle of women who spear-headed the women's rights movement in the nineteenth century. "At times they were known as the 'Ultras' because they advocated positions that went far beyond accepted conventions, even within their own network of social reformers" (2001, p. 205). The demands of an action program that stretched the limits of the social system in which they lived required close personal ties. This connection enabled them to envision major societal change and to agree on a political strategy as well as hone their skills in public speaking, writing, and organizing. The close personal friendship of Elizabeth Cady Stanton and Susan Anthony was an ever-present resource for a group that took enormous chances in their public and personal lives. Over the years, Anthony supported Stanton's already established beliefs. They worked closely together to further develop their shared vision. Their relationship of forty years illustrates the role of the division of labor in an effective collaboration. Stanton wrote the

speeches, and Anthony delivered them. As in many of the documented collaborations, when partners work together over a long period of time, they start mastering each other's skills, and they become more interchangeable. Such varying forms of interdependence are not limited to historical (or big-C) collaborations. They characterize daily cooperation as well.

In order for personal development and change to take place during partnerships, it is important to dismantle economic and social hierarchies and move towards more egalitarian relationships. Oppenheimer includes this process of change among her features of creative collaborations. Such a dismantling is also important in various workplaces. Hospital nurses have claimed that the discrepancy between medical decision making by doctors and their own close observation of patients' symptoms and needs is counterproductive. Instead, they have proposed a more egalitarian process where their knowledge and information be shared more effectively with the doctors in order to achieve the best medical results.

Effective parenting is a context in which the intergenerational hierarchy between parents' power and responsibility and children's dependency slowly flattens as children become more independent and resourceful. In family situations where roles are flexible, relationships may deepen and diversify and decision making becomes a more democratic process. By experiencing egalitarian partnerships, it may become easier to trust others in school and work contexts. In these more relaxed and comfortable environments, parents can pay attention to their children's non-verbal cues, which communicate feelings and conditions that the children may not be able to express verbally. Family life is one of the most significant settings for instantaneous insight, problem solving, imagination, and innovation, and a place where life creativity (Zittoun & de Saint-Laurent, Chapter 5 in this volume) dwells.

Mutual respect and trust are additional important features of documented creative collaborations, as noted by Oppenheimer (2011) and John-Steiner (2000). These characteristics of relationships are the most frequently mentioned features of joint endeavors in science, performing arts, inventions, and personal relationships. Respect and trust are needed, as they offer a form of protection and support when people venture away from familiar routines. This is particularly important in contemporary society, where so many of our interactions and activities take place in the midst of fierce competition.

Summary

In this chapter, as in most of this book, the traditional focus on the individual creator and on historically significant creative contributions is reconfigured with a focus on jointly constructed and socially supported development of novel solutions and outcomes. Such innovation thrives on the meeting of traditionally honed knowledge and culturally and technologically changing practices. An example of such a meeting is taking place among school reformers, where teacher-centered

practices are colliding with the proposed introduction of instruction using electronic tablets. It remains to be seen whether truly new forms of teaching will emerge from the confrontation of two such different approaches.

When a gap appears between habitual solutions and new challenges, a willingness to improvise is facilitated by dialog, playful exploration, and sustained apprenticeships. The importance of social interaction and the impact of a committed teacher's passion for learning are essential features for a socially mediated education environment. This chapter provides several examples where children's creative experimentation is supported. It also emphasizes the frequently hidden role of apprenticeships in mastering a new domain and providing the observation, support, and the strategically timed intervention needed for generating new knowledge. This form of fine-tuned social learning is ignored in a culture enamored with the image of the solitary genius.

We also lack the language for capturing the dynamic between socially embedded and individually executed new constructions. When we speak of Vygotsky's theories of creativity we refer to the results of an intellectually interdependent working community surrounding a leading voice. In trying to reformulate the social dynamics of creative endeavors, I do not mean to minimize the contribution of the committed, highly trained, creative person. But in the mainstream literature on creativity, the portrait of the solitary, individual "genius" dominates a complex process where the individual artist or scientist excels in knowing how to use socially constructed resources for the construction of the new. By focusing on what is only part of the creative process, we habitually lose an understanding of the interdependent nature of this basic human endeavor.

I have argued elsewhere that a person is a subset of human potential at a particular historical period. To realize the total innovative possibilities at a certain time and place, the individual or the group engaged in creative activities needs to master existing knowledge and artifacts, engage in dialog, and accept emotional and intellectual support by collaborators, as shown in some of the examples described above. Well-documented creative activities of experienced thinkers provide a model for the use of imagination in everyday problem solving. These two ends of a continuum, and the many stages in between, can build a culture of creativity if the myth of the solitary genius is dismantled. In finding an effective balance between the individual and the social and by recognizing the interwoven nature of this complex process we can come closer to the realization of a world where creative solutions proliferate over harmful simplification. Creativity, in all its forms, is built over generations. In studying creative trajectories, we honor its longevity, complexity, and promise.

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Chapter 4

Canonical affordances and creative agency

Alan Costall

This chapter is about James Gibson's concept of affordances, and what *it* was meant to afford, namely an alternative to subject–object dualism. Paradoxically, Gibson's (1979) concept of affordances has been criticized not only for being so hopelessly open ended and subjective that it is vacuous, but also, conversely, for being so rigid and objectivist as to afford any *creative* role for human agency.

I argue that a distinction should be made between "affordances in general" and "canonical affordances," the latter mainly relating to human artifacts. In the first case, the affordances are not predefined but open to the individual user, whereas "canonical affordances" are "objective" or "impersonal" in the sense that they are not relative to any *individual* agent, but relate instead to shared social practices. A chair is "for sitting on," regardless of the whim of any individual user. Its meaning seems to be simply *there* in the object itself, but, of course, 'its' meaning also ultimately presupposes the existence of human agents. But to what extent can human artifacts, with their own predefined "canonical affordances," afford *creative* agency?

Subject–object dualism

According to the rhetoric of science – though, emphatically, *not* its actual practice – there is supposed to be an unbridgeable gulf between objectivity and subjectivity. This fundamental assumption of a dualism between the objective and subjective has three rather serious implications.

First of all, it makes a mystery of our very existence in the world. Curiously, some scientists celebrate this mystery as a well-established *empirical* discovery, as in the following curious argument by the British psychologist Richard Gregory:

> it used to be thought that perceptions, by vision and touch and so on, can give direct knowledge of objective reality [. . .]. But, *largely through the physiological study of the senses over the last two hundred years, this has become ever more difficult to defend.* [. . .] ultimately we cannot know directly what is illusion, any more than truth – for we cannot step outside perception to compare experience with objective reality.
>
> (Gregory 1989, p. 94; emphasis added)

Secondly, the dualism of the objective and the subjective also makes a mystery of science as a human, worldly activity. This dualism of the subjective and objective can seem plausible when we think of science as 'finished' – a complete and self-contained body of established facts and theories. However, when we try to understand science as an ongoing human project, then we can see that subject–object dualism, and its radical 'subjectification' of human subjects, undermines the 'conditions of possibility' of science. How on earth is science getting done? How *could* human subjects actually conduct objective physiological studies of the senses, to take Gregory's example, if we really are all locked within our own subjectivity? Arguments that appeal to "physical reality" to subvert human experience are, as Donald Hebb (1980, p. 38) nicely put it, "self-consuming."

Finally, there is also the mystery of psychology itself as a possible science. For, in this case, the very 'object' to be known is itself subjective, and, according to the objectivist rhetoric of science, the mind is simply *so* subjective to be beyond the reach of scientific understanding. Psychology, in this view, could only be regarded as the science of the unscientific.

Almost without exception, psychologists have, if they have bothered at all, tried to deal with the *consequences* of subject–object dualism, rather than the dualism itself. For example, both Watson's behaviorism and modern neuroscience have attempted to reduce the subject to an object, at least at the level of their rhetoric and self-deception. And cognitive psychology has, over the last few decades, simply vacillated between objectivism and subjectivism. A remarkable exception was James Gibson (1904–1979), one of the few major figures within mainstream psychology to challenge subject–object dualism.

The myths of subjectivist introspectionism and objectivist behaviorism

Within psychology, subject–object dualism has been underpinned by a historical myth, largely invented by the behaviorist J. B. Watson, about the introspectionist study of consciousness eventually giving way to behaviorism (Costall, 2006, 2012). In fact, introspectionism never dominated scientific psychology, and the so-called behaviorists were *never* consistent in their self-proclaimed commitment to radical objectivism in *practice*. As even Watson conceded, consciousness is "the instrument or tool with which all scientists work" (Watson, 1914, p. 176).

By the 1950s, James Gibson was already attempting to introduce new concepts to undermine Watson's dualism of consciousness and behavior. This includes Gibson's definition of perception as contact:

> *Perception [is] not defined in terms either of consciousness or of behavior, but only by using a metaphor which implies both: an individual is in 'contact' or in 'touch' with the environment.* [. . .] The essential part of the perceptual process goes on whether the individual is reacting to his environment or is merely contemplating it.
>
> (Gibson, 1959, p. 458; emphasis added)

I will concentrate on Gibson's concept of "affordances," which was an explicit attempt to go beyond subject–object dualism. My purpose is not to suggest that this concept – *as it stands* – is the solution to all our troubles, but rather to identify some of the issues and serious confusions that have surrounded this term, many of which concern questions of creativity, innovation, and of persistence and change. Affordances are not *stimuli*. They are not causes – at least, not in the Newtonian sense of efficient causes (see Hocutt, 1974). They *resource* human agency. The question I now want to address is whether affordances can also resource *creative* human agency.

Gibson's definition of affordances

Gibson's earliest anticipation of the concept of affordances appears in his first book, where he refers to "simple use-meanings or meanings for the satisfaction of needs such as are embodied in food-objects, tool-objects, dangerous objects, and what Freud called love-objects, the parents being the first instances of the latter" (Gibson, 1950, p. 199). He claimed that these "use-meanings" have to be regarded from a biological viewpoint as primary, in contrast to the standard topics of perceptual research: the mere shapes, colors, motions and distance of things (Gibson 1950, p. 198). Nevertheless, the book itself was based on a stark dualism between surfaces and meanings, and the emphasis was upon the former (Costall & Still, 1989).

Gibson introduced the term "affordance" in his second book, *The senses considered as perceptual systems* (1966):

> I have coined this word [affordances] as a substitute for values, a term which carries an old burden of philosophical meaning. I mean simply what things furnish, for good or ill. *What they afford the observer, after all, depends on their properties.*
>
> (Gibson, 1966, p. 285; emphasis added)

However, it is mainly in Gibson's writings published in the 1970s that his attack on the dualism of subjective and objective is most evident:

> An affordance cuts across the dichotomy of subjective–objective and helps us to understand its inadequacy. The affordances of the environment are facts of the environment, not appearances. But they are not, on the other hand, facts at the level of physics concerned only with matter and energy with animals left out.
>
> (Gibson 1977, pp. 69–70)

Gibson, here, is rejecting the idea that affordances can be defined in physicalist or objectivist terms, and without reference to the animal in question as an *agent*:

> [An affordance is] a combination of physical properties of the environment that is uniquely suited to a given animal – to his nutritive system or his action system or his locomotor system.
>
> (Gibson, 1977, p. 79)

> [The physical properties that constitute affordances] have unity relative to the posture and behavior of the animal being considered. So an affordance cannot be measured as we measure in physics.
>
> (Gibson, 1979, pp. 127–8)

Unfortunately, Gibson did not leave us with a nicely sorted-out concept of affordances. His presentation was sketchy, inconsistent, and misleading. It was not entirely his fault. It is extremely difficult to distance oneself from existing dualisms without being misunderstood as opting for one or other side of that very dualism – think of Wittgenstein or Ryle in relation both to mentalism and behaviorism. Indeed, Gibson's own attempt to distance himself from subject–object dualism itself can sound decidedly awkward: "an affordance is neither an objective property nor a subjective property; or it is both if you like" (Gibson, 1979, p. 129).

Gibson's problems with affordances

Some commentators on the concept of affordances, most notably Donald Norman, have added further confusion to an already confusing concept (Norman, 1989; cf. Torenvliet, 2003). At the risk of adding to their number, I want to suggest that there are five fundamental problems with Gibson's own account of affordances.

1   Having presented the affordances as a blatantly *relational* concept, Gibson (and some of his closest followers) nevertheless also insisted that they are independent of 'us' (cf. Costall, 1981, 1995, 2003; Katz, 1987; Noble, 1981, 1991).
2   To the extent that the relational basis of affordances has been acknowledged, the relation has been presented as involving 'us' not as agents but rather as mere perceivers or observers.
3   Then there is Gibson's claim about the perception of affordances. According to Gibson, "The central question for the theory of affordances is not whether they exist but whether information is available in ambient light for perceiving them" (Gibson, 1979, p. 140). This claim was surely self-defeating. It downplays the issue critical to subject–object dualism about the *existence* of affordances. (How could something that did *not* exist be 'directly perceived'?!). And it also implies that we can, in general, discover the affordances of things merely by *peering* at them, without interacting with those things ourselves, or relying upon the mediation of other people (cf. Costall, 1995; Bærentsen & Trettvik, 2002).
4   Gibson's and most other treatments of affordances have also been remarkably *dyadic* – focused upon just a single agent and a single object. Yet many

objects function only in relation to other objects, e.g., nails in relation not only to hammers but also wood. And in many cases, of course, other people are also involved in one way or another.

5   Last, but not least, there is Gibson's *refusal* to accept that "man-made" affordances pose their own special theoretical issues (Gibson, 1979, pp. 129–130). (The term "man-made" affordances was coined by the compilers of the index of Gibson's last book, Ed Reed and Rebecca Jones, see Gibson, 1979, p. 322). Although closely connected with all the others, it is this problem that most directly focuses our attention upon the very possibility of *creative* action in relation to everyday objects and their *already predefined, 'given' meanings*.

The reification of affordances

Important criticisms of Gibson's concept of affordances began to appear very soon after the publication of his 1979 book, though many of these early criticisms have been either forgotten or else recycled, largely unacknowledged. The relational status of affordances, after much debate, is now widely accepted. Here I want to focus upon the issue of the "open-endedness" – or otherwise! – of affordances, and hence also of the possibility of their *creative* use.

According to James Cutting, among many others, the concept of affordances is just so open ended as to be vacuous. He gives the example of the affordances of paper:

> To be sure, it does not afford flying to Baghdad upon, but the exclusion of a large domain of behaviors does not diminish the fact that an infinity remain.
>
> (Cutting 1982, p. 216)

Cutting was right to identify the potential open-endedness of affordances. However, this open-endedness is, in my view, the crucial theoretical point, and not a reason to give up! First of all, the concept encourages us to stop thinking in terms of external and controlling 'stimuli' that are supposed to be imposed upon the person as a *bodily* passive, stimulus–response machine and, instead, take *agency* seriously. After all, only agents, and emphatically *not* stimulus–response machines, can relate creatively to things. Affordances are *resources* for agency, not "efficient causes." But the concept also helps us to recognize the fundamental existential point that although it is indeed the case that we can do a *limitless* number of things with any thing, we cannot do *anything* with anything. People simply starve when there is no food around. And, as Vlad Petre Glăveanu has nicely put it (in his comments on this chapter), "even creative action is impossible without constraints."

However, Gibson's concept of affordances has also been criticized for *not* being open ended enough – for being, instead, too static, too universal, too ahistorical, and too objectified. For example, George Lakoff, who was otherwise very sympathetic to the thrust of Gibson's ecological approach, nevertheless objected

that "the Gibsonian environment is monolithic and self-consistent and the same for all people," and that his approach "cannot make sense of experiential or cultural categories" (Lakoff, 1987, p. 216). In this view, affordances are just 'there' – and have been there from the beginning of time – rather than continually coming into being. Along the same lines, Bill Noble accused Gibson of the "fallacy of objectification" – "the lodging of the affordances (utilities) of objects in [an] objectivated world" (Noble, 1991, p. 204).

In relation to the topic of the present book, it was John Shotter, however, who most forcefully criticized Gibson for downplaying the *creative* role of the individual agent:

> the beings in Gibson's world are depicted merely as observers, not as actors, i.e. not as beings able to provide for themselves, by their own actions, conditions appropriate to support their action's continuation. They may move about, but they do not act; thus rather than "makers", they are presented merely as "finders" of what already exists. Such a view, I would argue, fails to recognize the peculiar form-producing character of activity in a biological and social world; it fails to assign a proper role to time and to processes of growth and development.
>
> (Shotter, 1983, p. 20)

So, according to Shotter, *everything* is in flux: "an affordance is only completely specified as the affordance it is when the activity it affords is complete" (Shotter, 1983, p. 27). Curiously, one thing, for Shotter, that is emphatically *not* in flux is his enduring conviction about the *ephemerality* of meaning!

> *Real* meanings, the meanings that actually influence and shape our actions *in practice*, are ephemeral. They are "only once-occurrent events of Being" (Bakhtin, 1993, p. 2), and are thus not things that we can capture in representational theories; they are not things that we can itemize and talk *about* in isolation from their surroundings.
>
> (Shotter, 2009, p. 223)

The open-enededness (or otherwise) of affordances

How could Gibson's concept of affordances afford such divergent critical reactions? Is the concept of affordances too open-ended to be *useful*, or else too prescribed to allow any space for creative agency?

The resolution of this apparent contradiction is, first of all, to question Gibson's refusal to distinguish between man-made affordances and affordances in general, and then his tendency to generalize unwittingly from the *special* case of man-made affordances to affordances in general. Curiously, Bill Noble, in his critique of Gibson, was actually drawing upon George Herbert Mead's account of how – *under specific historical conditions* – meanings *can* become objectified.

As I kept pointing out to him at the time, objectification should not to be rejected as a *general* fallacy, but, in the case of humanized nature, recognized as a fact of human life. The meanings of "man-made" affordances do *become* objectified, or to use Mead's own term, "impersonal" (Morss, 1985).

Contrary to Gibson's own claim, "man-made affordances" do raise new issues about norms, conventions, and shared practices. They are related to 'us' not as a plurality of individuals but as a collective. However, in my view, this is no reason to abandon the concept of affordances, as some critics have claimed, but rather to develop it further into the domains of the normative and the representational (for a fuller discussion of creativity and cultural normativity see Baerveldt & Cresswell, Chapter 7 in this volume).

I coined the term "canonical affordances" to capture the fact that many of the objects surrounding us have a single, definitive meaning (Costall, 1995).[1] For example, a chair is for sitting on, whether or not anyone is sitting on it, or using it instead to ward off an attacking lion, or standing on it to change a light bulb. *One* sits on chairs. And so – *it would seem* – in the case of man-made affordances most of their users are not, after all, makers or creators but recipients of already established meanings.

So is creativity restricted to the domain of 'wild' rather than 'tamed' affordances? I want to argue that the issues of innovation, improvisation, and individuality do not go away even in relation to "man-made" affordances (see also Glăveanu, 2012):

1 When we are using an artifact in its canonical way, such as a chair, the *ways* we might sit on that chair can be diverse. Usually, there is a lot of 'play' in the way we use the object (Keller, 2005; John-Steiner, Chapter 3 in this volume). Only in certain circumstances, such as at school, or when learning the Alexander technique, are we required to sit up "properly" (Mixon, 1991).

2 The way that a new device is taken up collectively can also involve a good deal of play (see also Jovchelovitch, Chapter 6 in this volume). Huatong Sun (2012) has recently discussed the diverse ways in which mobile text messaging has been used in different cultural contexts. In some cases, the ways in which users take up a new technology can itself shape future designs of a device. The old Sony Walkman was initially designed and advertised for couples sitting down and listening together, not for lonely joggers (du Guy *et al.*, 1997).

3 Research in psychology suggests that people can be very poor at noticing the alternative affordances of common objects. I am thinking of the research on "functional fixity," where people must use an object in a non-standard way to solve a problem, and also the tests of "lateral thinking," where they are required to think of the various possible uses of an object, such as a brick. However, I suspect the results may largely reflect the conditions of testing. In everyday life, we are usually very effective in co-opting objects in non-standard ways into our ongoing activities, for example, catching a spider under an up-turned glass. In fact, some objects, notably paper clips, are hardly ever used in the canonical way (Petrovski, 1993).

4   Then there is what psychologists call "pretend" or "symbolic play," where an object is treated as though it is something else, such as pen becoming co-opted as a make-believe rocket. As Alan Leslie has pointed out, pretend play is, on the face of it, a curious paradox: "The perceiving, thinking organism ought, as far as possible, to get things right. Yet pretense flies in the face of this fundamental principle. In pretense we deliberately distort reality" (Leslie, 1987, p. 412). When you think of it, this paradox is even more puzzling in relation to the play of young children, which is flourishing just at the time they are supposed to be trying to 'get *things* right'! Yet, the very awareness of the '*real*' affordance of the play object might itself be a *positive* resource for adopting a playful attitude. Picasso's playful "bull's head" sculpture works precisely because we can see it is constructed out of a bicycle saddle and handlebars.

5   Finally, there is the problem of simply getting things *wrong*, of misunderstanding what something is *for*. And this is not always creative. The staff of customer service departments have good cause to be paranoid, as in the following case of a customer's curious complaint that the retractable coffee holder on his new computer was no longer working: "The 'coffee holder' turned out to be the built-in CD-ROM drive which the user had co-opted in all innocence as a tray for holding his cups of coffee, creating some damage to the equipment and also to his dignity" (Williams & Costall, 2000, p. 93).

Objective meaning

I have pointed out some of the ways we are able to 'go beyond' the canonical affordances of things, not in order to downplay the importance of these standardized meanings, but to highlight the badly neglected problem, within psychology at least, of how they emerge and are sustained. As Cintia Rodríguez (2007) has argued, developmental psychologists, of all people, have been taking the standardized meanings of things for granted, as though they are simply *there* as 'natural signs,' rather than situated within a network of social relationships.

   Canonical affordances matter in a fundamental way, because they help constitute, in relation to the activities in which they are involved, contexts of stabilized meaning. Hannah Arendt has put this point wonderfully well:

   It is [their] durability which gives the things of the world their relative independence from men who produced and use them, their 'objectivity' which makes them withstand, 'stand against' and endure, at least for a time, the voracious needs and wants of their living makers and users. From this viewpoint, the things of the world have the function of stabilizing human life, and their objectivity lies in the fact that – in contradiction to the Heraclitean saying that the same man can never enter the same stream – men, their ever-changing nature notwithstanding, can retrieve their sameness, that is, their identity, by being related to the same chair and the same table. In other words, against

the subjectivity of men stands the objectivity of the man-made world rather than the sublime indifference of an untouched nature, whose overwhelming elementary force, on the contrary, will compel them to swing relentlessly in the circle of their own biological movement, which fits so closely into the over-all cyclical movement of nature's household. Only we who have erected the objectivity of a world of our own from what nature gives us, who have built it into the environment of nature so that we are protected from her, can look upon nature as something 'objective.' Without a world between men and nature, there is eternal movement, but no objectivity.

<div style="text-align:right">(Arendt, 1958/1998, p. 137; see also
Csikszentmihalyi & Rochberg-Halton, 1981, p. 16).</div>

Jens Mammen has also stressed this point, and with explicit reference to Gibson's concept of affordances:

> When we speak of artefacts [. . .] the question is closely related to the individual object's history, i.e. why it was made, why our family has this object at all. There must be a reason that it was made, and that we have it. The object has 'a secret', and the adult or older child has the key. The infant not only directs his or her attention towards the object's affordances, e.g. that the cup can serve as a toy, which could be called its subjective meaning, but also towards its objective meaning, its 'reason'. In fact the word 'cup' is linked to the objective meaning and not the subjective. Thus a society with objective meanings is a precondition for language, and on the other hand language is a vehicle for communicating and securing objective meanings in the individual mind and in society.
>
> <div style="text-align:right">(Mammen, 2008, p. 26)</div>

Furthermore, as Mammen rightly points out, "objective meaning" can extend beyond artifacts:

> In a societal frame of reference also natural kinds as trees, cats and stones, and even properties as colours and forms, become embedded in the web of objective meanings and are labelled linguistically.
>
> <div style="text-align:right">(Mammen, 2008, p. 26)</div>

However, Mammen, on these grounds, then *contrasts* Gibsonian affordances with such objective meaning. I am arguing, instead, that Gibson's concept of affordances should be *extended* to objective meaning precisely in order to hold onto its relational logic. Otherwise, we are left with a dualism between Gibsonian affordances that are both subjective and material, and a quite separate realm of the normative that is, presumably, both objective and *immaterial* (see also Sinha, 1988, pp. 32–34). Unfortunately, this dualism is abundantly clear in much of the research on so-called material culture, where the meanings of things are attributed solely to how they are 'represented' either individually or culturally. The nature of the things themselves is

dismissed as irrelevant (cf. Hutchby, 2001; Jones, 2004; Knappett, 2004). Keeping hold of the relational concept of affordances will also help us avoid the mistake of supposing that the objective meanings of things are simply 'there' in the objects. Only *subjects* can be objective! (Macmurray, 1961, p. 28).

In my work with Emma Williams, we found, contrary to the standard "Theory of Mind" accounts, that children with autism do have difficulties tuning into the objective meanings of things (Williams & Costall, 2000; Williams et al., 1999, 2005). This is not just a consequence of poor communication with others, but also itself a potential source of disrupted communication because of difficulties in establishing shared contexts of meaning. With my colleagues at Portsmouth, I am now studying how contexts of shared meaning are established in the everyday routines of 'bringing up' children. Such everyday routines have been neglected by developmental researchers in the past precisely because they are routine and hence not really an aspect or reflection of 'cognitive development.' Yet, contrary to the assumptions of influential approaches to child development, including the Vygotskyan approach, babies are already immersed in a world of canonical affordances *before* they acquire language. And, of course, this has to be the case, because the acquisition of language itself presupposes an established framework of shared meanings in which the canonical affordances of things must play a crucial stabilizing role (Burkitt, 1998; Rietveld, 2008).

Conclusion

> It is part of intelligence to seize new opportunities and to face new hazards; to be, in short, 'not a tram, but a bus'. What I am describing is not something that is peculiar to a few distinguished persons.
>
> (Ryle, 1979, p. 121)

Researchers into creative agency need to take *things* much more seriously (see also Tanggaard, Chapter 8 in this volume; and Glăveanu & Gillespie, Chapter 1 in this volume, for a discussion of the generative 'gap' between objects and symbols). Psychologists have been taking the world of objective meaning too much for granted, and failing to "see how the sensuous world around [us] is, not a thing given direct from all eternity, ever the same, but the product of industry and the state of society" (Marx & Engels, cited in Parsons, 1977, p. 160). How objective meaning is established and sustained is a fundamental theoretical problem. And, for the purpose of this book, it is a problem that can be reformulated as a puzzle about creative agency. Given the human gift of not staying on the rails, and not *even* keeping to the same bus route, how do *the* meanings of things nevertheless manage to maintain their remarkable quality of objectivity – of seeming just to be *there*?

Note

1 I coined the term "canonical affordances" in response to Chris Sinha's claim that the theory of affordances is "a Trojan horse within the Gibsonian epistemology" because

of the "socio-cultural" status of many affordances, e.g. cars, or even rocks as objects of geological study (Sinha, 1988, p. 132). He argued that the *canonical* status of such objects could hardly be grasped through "direct perception." As I have been arguing in this chapter, Gibson's claim that affordances can be directly perceived is a serious distraction from the fundamental question of their *existence*. In fact, Gibson defined "direct perception" by contrast with so many different senses of "indirect perception" (including *socially* mediated) that it became completely incoherent (see Costall, 1988, 1990).

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Chapter 5

Life-creativity
Imagining one's life

Tania Zittoun and Constance de Saint-Laurent

How people become unique persons is an ever-renewed puzzle for any observer of human life. Somehow, in the complex sets of social and cultural constraints that reduce margins of freedom, each person is actually the author of his or her life. Each trajectory is unique, and can be recognized by its specific melody (Zittoun *et al.*, 2013). This uniqueness, we propose, can be seen as resulting from *life-creativity,* the process of creating one's life-paths. To better understand it, we will first examine the relation between creativity and development, then propose to consider imagination as the heart of the creative process. We will treat imagination as a three-dimensional developmental process, and define the conditions under which it might be acknowledged as creativity. The case study of Rachel, going through her teenager years, will ground our proposition and further discussion. This exploration, we hope, will contribute to our understanding of the developmental aspects of creativity.

The development of life-creativity

Far from the myth of the lonely genius, a sociocultural approach to creativity invites us to see how people invent new solutions in the midst of the complexity of their lives, shared with others, in worlds of culture. Without recapitulating the classical debates within the studies of creativity, we will agree with Glăveanu and Gillespie (Chapter 1 in this volume) that:

> Creativity thus emerges as a communicative, interactive and intersubjective process of negotiating differences within the tetradic relationship between self, other, object and sign (in their temporal expression) in order to successfully participate in a shared physical, social and symbolic world. Creativity means *acting on* self and world, on objects and signs, and manipulating them always in and through action and communication with others.
>
> <div align="right">(p. 11, emphasis in original)</div>

Sharing the genetic perspective adopted here, our proposition is to examine how creativity shapes people's life trajectories. More specifically, we wish to observe

the dynamic of life-creativity as people develop, and with it, the emergence of trajectories themselves.

Creativity and development

There have been various attempts, in mainstream psychology, to articulate creativity and development. According to a substantial review (Sawyer *et al.*, 2003), the domains of creativity and developmental psychology were disconnected until recently. In the 1970s, studies examined the specific creativity of children, its development, and its potential reduction or support in formal education (Sawyer, 2003, pp. 3–5). Later, studies measured how creativity correlates to personality profiles and other psychometric measures, hoping (in vain) to predict exceptional developmental outcomes. In the 1980s and onwards, studies started to examine the processes of creativity (Sawyer, 2003). These three tendencies, mainly based on correlational approaches, are still present. Another key developmental question is how creativity develops throughout life. It has been addressed by authors interested in the creativity of artists and creators, trying to understand its evolution and its causes (e.g., McAdams & Logan, 2006; Romaniuk & Romaniuk, 1981). Psycho-biographies of great men and women have also highlighted their creative component (Erikson, 1993a, 1993b). However, most studies of creativity in the life-course are non-developmental: they compare the creative capacities, or the outcomes of creative processes, at different ages. As such, they basically miss the core of a developmental science: the temporal, unfolding nature of living – the fact that time is irreversible, that organisms or psyche constantly change, and that they have to adjust to an environment itself constantly changing; in addition, that development is not additive, but is made of on-going dynamic reorganizations (Valsiner, 2000). Finally, most current studies on creativity tend to focus on exceptional creators rather than daily creativity (the so-called *big-C* rather than *little-c*, see also Glăveanu & Gillespie, Chapter 1 in this volume).

One of the reasons for the lack of interest regarding processes, rather than the outcomes, of creativity, and in particular 'exceptional' outcomes, might be the politicization of creativity research (Paletz & Murphy, 2008). On the one hand, countries attempt to enhance creativity in order to stimulate industrial and economical productivity (e.g. Cho, Chung, Choi, Seo, & Baek, 2013). Creativity has become a good, to be cultivated through educational means, which explains the explosion of creativity research in education or the workplace (Beghetto & Kaufman, 2010; Davies *et al.*, 2013). On the other hand, this focus on how to increase creativity cannot be understood without a consideration of the value attributed to authorship in most post-modern societies (Hanchett Hanson, 2013).

Two aspects render the study of creativity difficult. First, there is a theoretical problem, illustrated by the contradictory results of studies examining the relationship between creativity and development, due to the divergent definitions and uses authors have of either notion (Paletz & Murphy, 2008; Sawyer *et al.*, 2003). Second, there is a normative aspect to the study of creativity: in most studies

creativity is seen as necessary good, yet authors often fail to make explicit what it is good for (yet the question of what is considered as creative and what value is attached to it in a given sociocultural context goes far beyond what could be approached in this paper; for a review, see Banaji, Burn, & Buckingham, 2010).

Taking into account these difficulties, we first will present the processes of creativity which we are interested in. Second, we will consider that if creativity has a certain social value, what others will say about the projects one has for the future, about the creative potential of the person, how life decisions should be taken, and so on, will be part of the creative process. Moreover, in Western societies, where individualism has been raised to the status of collective representation (Farr, 1991), the perceived novelty of the life-path chosen may be considered of uppermost importance to ensure the singularity of the subject.

Life-creativity as sociocultural process

A developmental perspective demands, first of all, the flow of time to be considered as irreversible (Valsiner, 2002). Actions can never be undone, and even non-action is a change; yet time passes. From a first-person psychological perspective, people experience duration, which has been described alternatively as infinitely short or on-going present (Bergson, 1938; James, 2007). Yet because people have semiotic capacity, they are constantly connecting past events with the upcoming present, or anticipating the ever-coming next moment on the basis of their past (Vygotsky, 1986). This proleptic capacity (Cole, 1996, 2007) is mainly supported and sustained by traces of past experiences which have become signs, thanks to the means offered by the sociocultural environment.

From this perspective, the semiotic function, the capacity of using signs, allows humans to take distance from experience (Vygotsky, 1986) – from experien*cing* to holding in mind, or observing action, to complex forms of reasoning. Using signs results partly from personal experiences, where recurrent actions are progressively generalized, as well as from the semiotic organization of our environment – how people call things, but also how they choose clothing, arrange space and buildings. All these forms of human externalization call for interpretation – and doing so, we internalize, reconstruct, and transform in our bodies and mind what we experience. Conversely, our interpretations, based on our past trajectories, are unique, and potentially transform the environment (Valsiner, 1998, 2007). Most of us are facing the daily unpredictability of life. Whether one has to decide what to cook for dinner or where to go on holiday demands a moment of daydreaming (see also Tuomi-Gröhn, 2008). 'Life-creativity' can thus be defined as a way to create a life-path, a 'possibility thinking,' which demands "refusing to be stumped by circumstances but being imaginative in order to find a way around a problem" (Craft, 2000, pp. 3–4, quoted in Banaji *et al.*, 2010, p. 29). Life-creativity is thus the contrary of automatism, or constrained repetition. Like most forms of creativity, it demands leaving the safe shores of the here-and-now and the known to plunge in the unknown, consider options, or imagine possible ways. Finally, it

can be considered as "complex socio-cultural-psychological *process* that, through working with 'culturally impregnated' materials within an intersubjective space, leads to the generation of artefacts that are *evaluated* as new and significant by one or more persons or community at a given time" (Glăveanu, 2010, p. 87, our emphasis). Life-creativity differs from creativity, as it is connected to the definition of life-paths. We will first examine its core processes, and then its evaluation.

Imagination as a creative process

Vygotsky saw *imagination* as the psychological process at the heart of creativity (see also John-Steiner, Chapter 3 in this volume). Greatly read in the literature of his time, Vygotsky developed a conception of imagination as *expansion* of experience in the short scale of a daily life or the large scale of humankind. He saw creativity and imagination as two aspects of the same phenomenon:

> It is precisely human creative activity that makes the human being a creature oriented toward the future, creating the future and thus altering his own present. *This creative activity, based on the ability of our brain to combine elements, is called imagination or fantasy in psychology.* [. . .] *But in actuality, imagination, as the basis of all creative activity*, is an important component of absolutely all aspects of cultural life, enabling artistic, scientific, and technical creation alike.
>
> (Vygotsky, 2004, pp. 9–10, our emphasis)

This invites a closer examination of the process of imagination, little theorized in psychology (less than in philosophy, e.g. Dokic, 2008; Kind, 2005), although it opens an alternative route to creativity. Following Vygotsky, we will consider it here as the psychological process at the heart of creativity.

What is the creative process in life-creativity?

The temporal nature of our existence implies a constant mismatch between our understanding of the world and the way it is given to us – both evolving at their own pace. This mismatch, difference (Glăveanu & Gillespie, Chapter 1 in this volume), gap (Pelaprat & Cole, 2011), or disjunction (Zittoun & Cerchia, 2013) can be seen as what triggers imagination as well as creativity. The process of imagination then needs to be fed and supported. From within, it is supported by "needs and drives [that] trigger the working of the imagination" (Vygotsky, 2004, p. 29). The materials used by imagination are taken from a person's stock of experiences and memories and from surrounding available semiotic elements. Extracted and isolated, they may be dissociated from their complex background, yet it does not mean that they are turned into static and decontextualized units. Indeed, imagination is always imagination of an experience (Gendler, 2011; Lyons, 1986; Vendler, 1984) and therefore more than the simple mental manipulation of images: signs,

meanings, emotional valence, and other forms of cultural, social, historical, and psychological impregnations, will remain and can potentially be themselves the elements of experience that imagination will work on. The materials used will "move, change, live and die, and this dynamism guarantees that they will change under the influence of imagination" (Vygotsky, 2004, p. 26). After their systematization, they can finally be crystallized in new ways. Altogether, imagination appears as exploration of possible alternatives – it is a loop away from the here and now, into other times, places and worlds, before coming back enriched to the here and now – an *expansion* of experience (see also Jovchelovitch, Chapter 6 in this volume; Zittoun & Cerchia, 2013).

As a sociocultural and developmental process, imagination is also constrained. First, if imagination allows for dissociations and associations between elements to be drawn on multiple bases, permitting a never-exhausted creation of new ideas, it also entails that the limitations brought by their impregnations may hinder imagination, and that things such as social values and norms, psychological blocks, material restrictions, and so on, will not disappear during the process. Second, imagination has also the level of complexity and reasoning that the person is capable of; its development is closely related to the accumulation of experience (Vygotsky, 2004) and to concept formation (Vygotsky, 1931).

Within these constraints, we propose to see imagination as loops by which the person disconnects from the on-going flow of experience and explores an alternative or potential world. Imaginary loops can take various shapes and directions, which can be described as deployed along three dimensions, or in a three-dimensional space (Figure 5.1): (i) along a temporal dimension – we can imagine the past (both the one we experienced and the one we never knew) and/or imagine the future; (ii) more or less distanced from concrete situations – based on simple observations, or using highly elaborated (more abstract, differentiated, or generalized; Valsiner, 2007; Werner & Kaplan, 1963; Zittoun, 2006) notions or ideas; (iii) more or less distant from 'reality' – from simple considerations of concrete alternative to the elaboration of complex parallel imagined worlds. Finally, as a loop, it allows the person to come back to the 'real' starting points, yet changed by that imaginary episode. Imagination allows our self-promoted, and very often
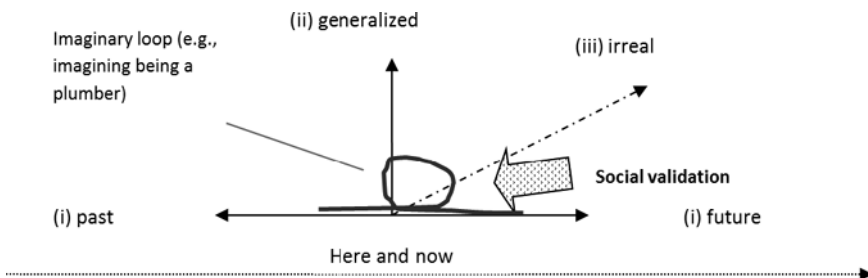

Figure 5.1 Life-creativity: imaginary loop and social evaluation

culturally guided, zones of proximal development (Vygotsky, 1931, 2004). As such, imagination can change our emotional experiences, our relationship to others, aspects of our identity or perception of others on us, possibilities of actions, and also, because of the processes involved, it can change our thinking capacities themselves (Zittoun & Cerchia, 2013; Zittoun, 2014).

What is the 'product' of life-creativity?

Defining imagination as the process that may lead to the creation of life-paths does not however entail that all work of imagination can be considered as creative. If imagination is *per se* necessarily changing the person, the idea of creativity implies a normative stance – an evaluation by self and others.

First, if what triggers the process of creative thinking is a need or a disjunction to be worked out, this starting point does not all of a sudden disappear when creative thinking begins. The 'evaluation' of the ideas produced can intervene at any point, and the work of imagination can in turn interrogate, modify, or delegitimize what initiated it, or simply surprise us and provide unexpected solutions to unexpected questions. In the case of life-creativity, trying for instance to decide on a career path can lead one to contemplate the idea of becoming a writer, to then decide that it might not be a realistic aim and therefore does not fulfil the objective of 'having a career.' In turn, one may realize that after all her desire is not to 'have a career' but to do a job that she might find fulfilling and meaningful. Identifying our most important desires and needs, beyond the social demand of choosing a vocational or educational orientation, and finding realizable ways to fulfil them is indeed part of what is at stake in life-creativity.

This observation points to a second feature of imagination essential to creativity: the possibility it gives to evaluate ideas by imaginatively exploring them, to not only produce alternatives but also to consider them in turn. Evaluation is indeed an important part of the process of creativity (Johnson-Laird, 2005), which implies that imagination is not a 'disconnected from reality' form of thought and that feedback from one's material, psychological, social, historical, and cultural reality are necessary to the development of 'objectives fulfilling' ideas.

Third, creativity itself demands another evaluative dimension. Its normative aspect can be seen as related to the perspective of others on a person's thoughts or actions (Glăveanu & Gillespie, Chapter 1 in this volume). Similarly to the fact that some artefact might be judged as 'creative' – often synonymous to 'novel' – by a person or a community having a certain perspective, life-creativity is actually dependent on the acknowledgement – or non-acknowledgement – of social others. Hence, one might wonder if the choice made by the person who engaged in a personally meaningful job – becoming a writer – rather than a 'career,' can be considered as creative, when it is judged negatively by all his relatives, friends, and community.

In other words, imagination, the process at the heart of life-creativity, might in itself bring in new perspectives. Having imagined what it would be to be a plumber

and excluding that option does actually change the person. The person's experience can be expanded through this imaginary exploration, even though there is no observable result of that exploration. However, when talking about life-creativity, one needs to consider the evaluation of others on actions or thoughts undertaken, in that particular historical and cultural moment.

Life-creativity in adolescence

Adolescence is classically seen as period of important changes in the life trajectory. Without reviewing here what is probably known by most readers, adolescence is usually considered as the psychosocial transformation of a person following, or accompanying, important physical changes due to puberty (Perret-Clermont, Pontecorvo, Resnick, Zittoun, & Burge, 2004; Steinberg, 2005). Adolescence can be defined as a period of many transitions, characterized by an opening and diversification of the young person's spheres of experience (Zittoun, 2012) – access to secondary school or vocational training, new leisure and friendships, etc. (Jackson, 1995). Adolescence brings the person to new responsibilities, and requires progressive emotional and social distancing from parents. It is a period during which the person might engage, concretely or on a more mental plane, in many try-and-fails (Erikson, 1959, 1968). Such explorations aim at defining or transforming her identity, knowledge, and capacities to act, feel, and move, and the sense and orientation she confers to her trajectory. If imagination is precisely the process by which such explorations take place, then it might play a key role in adolescence – and this is where we are looking for life-creativity.

Data: *Romans d'ados*

As the production of longitudinal data is difficult and costly, and many data sets are underexploited, we decided to use existing public material, which in addition allows grounding theoretical discussions (e.g., Gillespie, Cornish, Aveling, & Zittoun, 2008). The series of four documentary films called *Romans d'ados* (*Teens novels*) (Bakhti, 2010) follows seven teenagers in Switzerland, from their 11th to their 18th birthday. They are visited regularly by the crew in their families (minimally four times a year) and, when they agree, at school, in the work place, or with their friends. The edited film follows the parallel evolution of the seven youngsters, in 4 DVDs corresponding to one and half to two years each. A fifth DVD provides additional information (initial casting, family and young people's reactions after seeing the films). The film series was shown on national television in 2010, in national cinemas, and later in international festivals. In addition, the young people have participated in numerous TV shows and social events. Some can be found online and are treated as an additional data source.

These seven young people are four young girls and three young men and they all live in the same small town of a large, French-speaking region of Switzerland (26,000 inhabitants). No explicit background is given, but all adolescents are from

low to upper middle class; half of the families are divorced, and only one young man will go on to higher education, which corresponds to local repartitions.

A documentary is not raw data; it has been created by a film director with a scenario, an interview grid, and an editing project. In the beginning, each child is asked about who he or she is, about her interests, dreams, and projects. Later, the crew gives the young people a small camera to be used as diary. The film uses these rushes in parallel with interviews and visits to the young people's living spaces, and interviews with their families and sometimes their friends. Typical experiences they are asked about concern first romantic relationships, or first sexual experiences. The evolution of school or vocational projects is generally traced, and most of the young people's leisure activities as well as steps toward financial independence are shown. Finally, in the last period, each 18-year-old is shown rushes from the interview made when he or she was 12, and asked to comment on these. Because of these choices, and because of the young people's right to choose how much they show, we have unequal access to each young person's life. Also, in some cases the interviewer's questions appear, yet not in others. Hence the data is not as 'pure' as one could wish. However, the data is interesting for a developmental study because it is longitudinal, clearly situated in its sociocultural context, and based on a theoretically equivalent biographical section (Sato *et al.*, 2007).

Within this data, we have chosen to concentrate on the trajectory of one young woman, Rachel, to be treated as case study (Molenaar, 2004; Valsiner, 2007). While she deals with difficulties equivalent to those faced by others, she is particularly reflexive and quite open about her dreams and desires, which makes Rachel a 'good case'. The data was viewed many times by the two authors, and the analysis was built using atlas-ti and was also theoretically informed. We reconstructed the main line of Rachel's evolution; below we present sequences in which her main spheres of experience appear, as well as where imagination occurs; these are discussed in chronological order. The textual data is for the most part transcribed on the basis of the English subtitles of the DVDs 1, 2, and 3; divergent translations are added in [brackets]. Sequences of the casting (DVD 4) and online material are transcribed and translated by us.

Rachel aged 12: "The dreamer"

Rachel initially appears as a reflexive young girl, describing herself as a "dreamer" often lost in a world of her own – as her teachers and friends would let her know. Her projects are formulated as follows:

> I'd like to become a journalist, a reporter, actually. I would like to go for adventures. And at the same time to be able to write, because I like it very much. [. . .] I like to write very much . . . Oh, I have a diary, I make up stories and I write poetry as well.
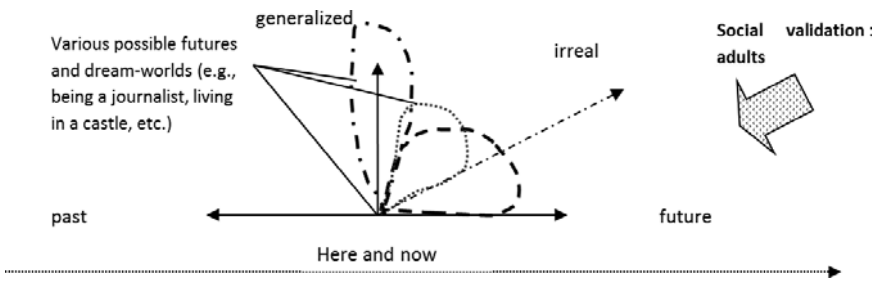>
> (Rachel, 11, DVD 4).

Figure 5.2 Imaginary loop, Rachel 12

Later, interviewed in her room, she adds that she could be a journalist travelling around the world, a pilot . . . This tendency to 'dream' does not prevent her from being engaged in the social reality – we see Rachel going to a theater course, as well as playing computer games with friends. Rachel also has a group of close girlfriends. Finally, Rachel seems to have a very close relationship with her mother. The journalist films a dialogue during which the mother says how much people think they resemble each other, adding "I know exactly what Rachel feels," to which Rachel comments: "It's as if she was in my head reading my thoughts. . . . It's the same for me: I read all her thoughts. It's annoying to resemble your mother like that. [. . .] I don't want to be a carbon copy" (Rachel, 12, DVD 1).

Hence, at 12 years, Rachel is a young woman still very close to her mother (not without ambivalence). In contrast, she develops worlds of her own, in which she "dreams" and invents other "what if" realities. She has ideas about the future, along the lines of adventure and writing. She also reflects about the world and her place in it. In addition, she seems quite aware of her needs to find spaces to develop new perspectives about herself and her world, in her diary, or with her friends.

At this point, we can describe her imagination loops as follows: some are oriented to imagined worlds to which we have no access; many are oriented toward the future, fed by her curiosity and desire to know people (Figure 5.2). The loops are fed with different semiotic sources: probably her exchanges with her mother and friends; different social representations; possibly, in the background of the adventurous project, fictional characters. Such imaginations can be lived freely: adults tolerate them as long as they don't disturb her schooling.

Rachel, 14: Active exploration of new spheres of experience

Aged 14, Rachel enters adolescence more frankly and engages in new spheres of experience. Three aspects are highlighted. First, the film shows her going out with girlfriends, wearing feminine, carefully chosen clothes, and make-up. Rachel

starts by comparing herself to the girl she was earlier, admitting how much she has changed.

Second, she has discovered what she calls the "world of bad boys" – she is dating a boy who frequently is arrested and put in a juvenile detention center:

> I've started to take an interest in the world of bad boys. Sometimes it scares me a bit to be involved in that world. I'm scared of things I didn't used to be scared of. I'm discovering a new world.
>
> (Rachel, 14, DVD 2)

Yet this "world," as adventurous as it might be, is not only an imaginary one. We will learn later that these "bad boys," playing harsh and having a reputation in the local media, are often coming via migration from North Africa and the Balkans. Very soon, people start to worry about Rachel, and call her parents to tell them that their daughter "goes out with a delinquent." (Rachel 14, DVD 2). Eventually, her parents asked her to "put an end to this story," which led her to break up with the boy.

Rachel seems here to have reinvented herself by exploring a new sphere of experience and presenting herself in a more feminine way. These changes do not go unnoticed, especially by her mother, who views them negatively. She does not say much, yet, when Rachel is 18 her mother explains how she felt a rivalry with her daughter. For now, while her relation with her mother is becoming more tense, Rachel's backing out is only temporary: she gets back together with her boyfriend, quite conscious of the social pressure she is under.

Third, Rachel chooses to bring the film crew to the cemetery, where her grandfather has recently been buried. Here she appears more serious and reflexive, explaining that the death of his grandfather was for her the end of her childhood. "When he died, I knew that part of my life was over, and that I'd grown more mature" (Rachel, 14, DVD 2). In that sense, this death appears as a rupture (see also Zittoun, 2007) – important enough for her to question her values:

> I've always been very proud of my grandfather. I had a very special relationship with him even when I was little. I really have the impression that he taught us many things, and that it is thanks to him that I am as I am. And I was always impassioned by his culture, and his charisma, and his good mood. I constructed myself with his image, and I always have been really really proud of the relationship I had with him. I feared that when he would die the family would turn to dust. It is thanks to him that the family is so united, that's his work. I think that that's why he came on earth, I think it was in that role, because really . . . for me thanks to him family is sacred.
>
> (Rachel, 14, DVD 2)

The grandfather appears as a person-resource, with whom she nourished an important relationship – he made her "who she is." We might think that, through

such a visit to the cemetery, she maintains her dialogue with him (Josephs, 1998) and that he will remain an imaginary interlocutor for her.

A direct mobilization of these values appears when Rachel is 15, in a next occasion of rupture – the separation of her parents. Her step-father left their home after a violent crisis, which brought her mother to a state of desperation. Rachel worries for her and for her young sister in her company. The journalist then asks how she reacted, and she answers:

> I thought about it. [I went into my room, I thought about it]. [I told myself that I would] take the matter into my hands. I didn't want my family to break up like this. I wanted to help my mother and my sister the best I could.
>
> (Rachel, 15, DVD 2)

We first see Rachel's suspension of action, before a conscious decision making which seems to draw on the values attributed to the grandfather: the importance of family, and the need to maintain it united when it is at risk. Rachel seems thus to engage in a transition where, after exploring possibilities, she decides to take the role of the "responsible daughter."

Reporting these facts, Rachel also explains what was at stake for her: as her father left the house when she was two years old, "I felt as if I was losing my second father. In case of another divorce, I thought I could never trust a man again. And that my relationships with men were going to be very complicated." It thus seems that in her inner dialogue she had to explore imaginatively all the future consequences of the possible breakdown of her family: going back to the divorce of her parents in the past, now examining the present, she might learn not to trust men, and from this "lesson of life," in the future not trust men. Thanks to the happy ending of this crisis, Rachel does not have to develop such a life-philosophy. On the contrary, she learns something else:

> It was hard but positive. It has shown us that not everything's perfect in the life of adults. . . . My mother was a good example: she worked a lot on herself, she was very brave. I find that reassuring for later. I'm entitled to make mistakes.
>
> (Rachel, 15, DVD 2)

If Rachel's loops at 12 seemed detached from reality, this loop, at 15, is clearly drawing on past experiences – her father's leaving, the grandfather's values – projected upon the future – what would be a life where men can never be trusted – to the present, where it has real consequences (Figure 5.3). In the present, it changes her role in the family – now she is the strong one, in charge of preventing it from falling apart, comforting her mother and sister; for this, she has to find the right way – the words to say, the gestures to do – a learning in itself; and finally, it brings her some new understanding about life – one can, as her mother did, learn from one's mistake.
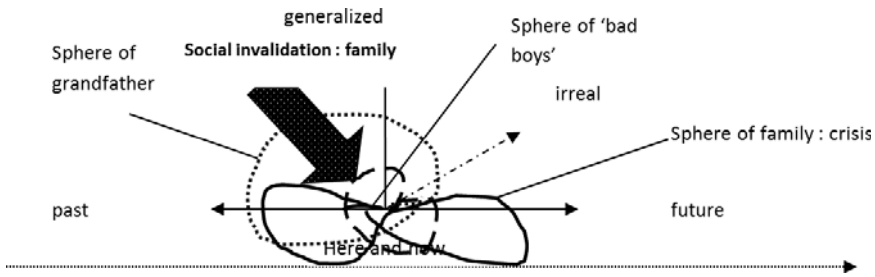
Figure 5.3 Imaginary loop, Rachel 15

This loop brings her to develop another part of her identity; beyond the young woman experiencing her femininity, making her mother uncomfortable, she also takes on the role of family cement, as her grandfather did. It is positively valued, and brings her closer to her mother. In the following years, we see Rachel moving back and forth between these two aspects of her identities, depending on the sphere of experience she is in. If abandoning her childish look for a more feminine one helped her to integrate a new sphere of experience – satisfying, maybe, the strong desire of discovery she expressed at 12 – such a change was obviously less welcome at home. Presenting herself as family cement may therefore be a way to solve the issue, while making of her an adult, identifying with her grandfather, and not a little girl identical to her mother.

Rachel, 15: Becoming a "disgrace"

Perhaps knowing that one can make mistakes, Rachel pursues her explorations in the sphere of "bad boys." At 15, Rachel announces:

> I . . . made love with a boy. A boy who . . . A bad boy. [And I think that] he told all his pals and they told all their pals. [. . .] They build the image of people, particularly the girls. You're either a good girl or not. In this case, I'm not . . . I'm a disgrace [I am really a shameful girl]. They like what I do, but it's a disgrace. I'm an easy lay. [. . .] My girlfriends said to me: "Rachel, [lower your eyes]. Always stick with us now. If one of the bad boys looks at you in the street, lower your eyes . . . [. . .] But I won't lower my eyes. I'm not the type. I'll try to get over it, but there's lot of pressure.
>
> (Rachel, 15, DVD 3)

To which she comments, in her reflexive way:

> Being ready to make love with a boy shouldn't have such heavy consequences [. . .] I didn't think about the consequences it would have. Now I really regret it, it is true I should have thought about it, and it is a little bit my fault.
>
> (Rachel, 15, DVD 3).

This time, Rachel "felt ready to make love with a boy" and engaged in a new experience. Making love at 15 was in itself a change from her previous affirmation when explaining her imagination of her first love: "I thought I'd do it at 18 or when getting married." In itself, bringing a future project closer to the present should not be a problem. However, rather than a positive exploration, in this particular sphere of experience, the meaning of her first sexual experience becomes inversed, due to the gaze of the significant others – "the bad boys".

As a result, this experience is turned into a rupture – the dreamy Rachel becomes a public "disgrace." This calls for new sense making, for which she uses as resource what she has learned from her mother's experience, the capacity to go through mistakes – "I'll try to overcome it." Hence, even in this bleak reality, Rachel is oriented towards the future.

Rachel, 16: No future . . . or still?

Aged 16, we see Rachel in two different spheres of experience, holding contrasting discourses. On the one hand, she appears working in a nursery, enjoying it very much and appreciating the children's sense of humour. On the other hand, she comments on the sphere of womanhood in which she and her girlfriends live, which is fed by MTV's images of "girls wiggling their bottom," and constraining girls to focus on "appearing as fresh and as sexy as possible." She also explains that this rough imagery brings girls to talk "like guys" – in a crude way about sex, as a mode of protection (Rachel, 16, DVD 3), and that this way of talking obviously is different from what her mother knew; she eventually also looks back at her recent first sexual experience: "I sometimes regret it, saying to myself that I'd like to be a virgin still. To have something to look forward to . . . that's all" (Rachel 16, DVD 3). Rachel contradicts her former feeling of readiness; overwriting the sense she conferred on the situation in the past, she turns it into a non-mature act which annihilated her past imagination – that of waiting for the right man. One might say that the 'crudity' of her sphere of experiences shattered a much more romantic idea she might have had of what a first love might be – two spheres of experience fed with different symbolic resources, on one side the poetry and literature of a young girl, and on the other images from MTV. The result of this confrontation is the loss of "having something to look forward to."

However, this is not where it ends. Still the same year, Rachel reports a trip to the Algerian desert. We are shown dream-like pictures of Rachel walking on the sand dunes, under a bright blue sky, covered from head to toes in a solar orange turban and djellabah, looking like an oriental princess. Here she comments:

> I went to the Algerian desert in Djanet. It was a shock at first, because it is very different from here. For me North Africa is the most beautiful region in the world. It was my dream to visit it. I discovered the Tuaregs. I was very impressed. I went to the desert with an Algerian guide. I discovered my grandfather behind this man's traits. I'd never seen such a wise and intelligent

man since my grandfather. I followed him everywhere throughout the trip. It helped to keep up during the hikes. In the evening I told him stories near the fireside. I looked like a Tuareg because I was wearing a turban. I was with them all the time and I felt so at ease with him. It was the same for him. When I had to leave, we hugged and cried. We still call each other. I know for sure that I'll marry an Arab. I'm very drawn by the Muslim culture. I only go out with Muslims. I don't even try to, it just sort of happens. I know I'll get married the oriental way, when the time comes.

(Rachel, 16, DVD 3).

Although not much is said about this trip's organization, it can be seen as opening a new alternative sphere of experience because of the initial 'shock' it provoked (Schuetz, 1944). The trip is 'real,' yet seems fed with Rachel's past imagination of the future: that of a traveller – in the desert à la Saint-Exupery – and of a storyteller. She also draws on the figure of her grandfather to inhabit the guide and her relationship to him.

Altogether, this sphere of experience seems to operate as a restoration of Rachel's trajectory, reconnecting past, present, and future. First, where her closeness to "bad boys" was connoted negatively, she can now fully acknowledge her fascination for the Muslim world to which they were associated, with its positive values. Second, by making of her Algerian guide a character similar to her grandfather, she can connect the two worlds that make up her life: they are both governed by the values of 'wise and intelligent' men. She now can navigate more freely between them, where the values of one were previously not welcomed in the other. Moreover, whereas her recent past experiences seem to annihilate the future, this experience seems to plunge into her past imaginary life and connection to her grandfather, to open a new imagined future of a possible oriental marriage (Figure 5.4). Where her difficult experiences at 15 had left her with nothing to look forward to, the transformation of her interest in "bad boys" into one for the Muslim world opens up a future where she does not have to be "a disgrace" and can live the romantic story she had previously imagined. In that sense, this trip, as a loop in an alternative reality, really seems to bring a new richness in Rachel's life, who can reformulate her identity and confer a new sense to the situation.
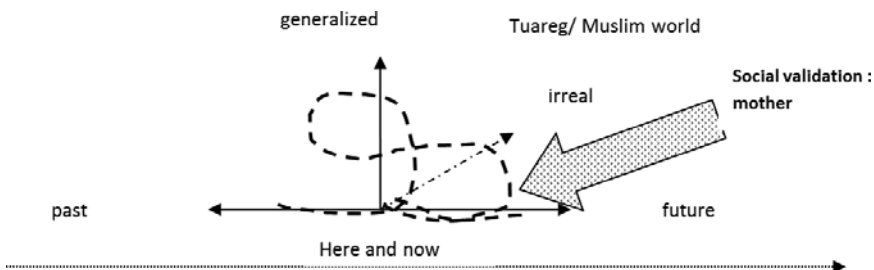

Figure 5.4 Imaginary loops, Rachel 16

The following year, Rachel engages in further retrospective examinations, acknowledging the difficulties of her previous years. Her mother prepares an oriental dinner for her 18th birthday, knowing her daughter's love for this universe, which her girlfriends attend. Hence, this Muslim/oriental sphere of experience, half real, half imaginary, is now acknowledged by the mother and friends and seen as possible enrichment of life. What used to be a problematic social universe for the mother – causing her to worry and ask her daughter to put an end to a relationship – has been turned into one that can be positively valued and thus included in the family sphere.

Synthesis

The case of Rachel can now be reread in more systematic terms, focusing on the evolution of her life-creativity. Aged 12, Rachel's imagination opens up a large diversity of alternative realities and possible futures, without implications, which seems to be tolerated by adults as childish. At 14, Rachel opens up new spheres of experience which, while being real, are inhabited with a strong emotional and imaginary intensity: the world of "bad boys" and "girls" – either seeming quite focused on the present moment, having an exploratory quality, but not much distance. Both will be negatively evaluated by the family. In contrast, the imaginary loop opened by the memory of the deceased grandfather displays more general values and, rooted in the past, points toward possible lives. This is then accentuated in the next years: her choice to have her first sexual experience confronts her with a very strong social invalidation. In parallel, the new sphere of experience, the trip to Algeria, allows remobilizing and threads together the world of the "bad boys," now generalized into Orient, and the world of her grandfather. Here, the imaginary loop gets more distance, and explicitly connects the past and possible futures. Rachel's subsequent interests both for traveling and "oriental culture" are now validated by her environment.

Hence, imaginary loops occur constantly and have different fates; although they are often dependent on each other, only some become active in guiding further life-paths. Here, we emphasize the double validation that turns imagination into life-creativity. In the case of Rachel, imagination seems to become life-creative when, on the one hand, she herself acknowledges them as such in her reflective loops, and, on the other hand, these are also accepted by her meaningful others in various spheres of experience. Holding her "bad boys" world, first against her parents' approval, only became creative – in the sense of opening new life-paths – after having been transformed under the internalized gaze of the grandfather, and accepted by her mother and friends.

To conclude: What we learn about life-creativity

In this chapter, we considered creativity as it applies to the generation of one's own life-trajectory. Life-creativity, we proposed, is imagination used in one's life,

to such extent that it is positively validated by self or others; thus, it can generate new life-paths.

Our goal in starting this exploration was to contribute to a developmental understanding of life-creativity. Using longitudinal analysis, we considered development in two mutually dependent aspects. On the one hand, we had a glimpse of how life-creativity itself develops – from a free and unbound imagination to, as people acquire a symbolic responsibility due to their transition to adulthood, a socially evaluated practice. Our case study also suggests a progressive transformation of imagination loops, described along a three-dimensional model, along time – progressively taking more distance, becoming more differentiated, and more integrated as they better articulate past and future, the imaginary and the real. Of course, how general this evolution is in the life course would have to be further enquired into. On the other hand, our exploration also suggests that development itself proceeds from people's imagination, which opens possible and alternative spheres of experience and life-paths, expanding lived experience beyond actual constraints, but of which only some will be pursued in the socially shared reality, where, exposed to the others, they will become the person's actual life-trajectory.

Acknowledgements

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The creativity of the social

Imagination, development and social change in Rio de Janeiro's favelas

Sandra Jovchelovitch

> The capacity to imagine other worlds is [. . .] the very foundation of the sociality of modern human society.
>
> (Maurice Bloch, 2008, p. 2056)

Milgram (1974) famously suggested that the most important contribution of twentieth-century social psychology was the discovery that it is not the type of person, but the type of situation she is in, that determines how she will behave. Cultural psychologists have shown that human behaviour is culturally organised, its development dependent on the culture and structure of the situation. Evolutionary psychologists have shown that reproducing life is a ruthless process dependent on natural environment and competitive advantages. For many human communities the power of the situation is not a theoretical but a lived truism: favela-dwellers in Rio de Janeiro speak of the 'appeal of the world' to describe the dangers that their immediate situation poses to the routes of socialization of their children and to the simple tasks of ordinary life. Situations are facts for the psychological subject; they impinge on persons with a constitutive force, and for people living in poverty this is particularly true.

However, we know that some 40,000 years ago humans started to free themselves from immediate and concrete situations (Bloch, 2008; Harris, 2000). At around this time, they started to use artefacts as props; tools that had been simple and repetitive suddenly became ornate and exploded in complexity, art started to appear in caves and complex objects became part of burials, indicating belief in a life after death (Bloch, 2008). Using the emerging capacities of the imagination, they connected the visible and the invisible, human and animal, life and death and created what Bloch called a 'transcendental sociality'. Roles and relationships between people, spheres and objects crystallised beyond immediate transactions, producing a continuously imagined structure sustained by a modality of thinking independent from the concrete situation.

Freeing thinking from the immediate situation is an essential aspect of the imagination and, as I shall argue in this chapter, a central requirement of creativity and change in public spheres. As a socio-cognitive asset that frees the self from immediate environments, the imagination enables humans to go beyond the

immediate present and play with possible realities. It is central for understanding agency (Gillespie, 2012) and the origins of culturally organised behaviour (Cole, 2007). And crucially for my aims here, it showcases how the simultaneous dependency and independency of mind and reality, individual trajectory and community, inner and outer world is at the basis of creative acts (see Glăveanu & Gillespie, Chapter 1 in this volume) and a condition for the freedom of thought.

In the operation of the imagination we can see that even when it is at its most free-from-the-world, the mind depends on the world and relates back to the world. This complex relationship underlying creative processes is particularly illuminated by human experiences of resistance and action for change, which require at the individual and social level a capacity for dreaming and imagining other worlds under circumstances that heavily direct the mind otherwise. Difficult life conditions constrain life experiences and creativity, but imagining has historically been a way of freeing oneself and one's community. For instance, Martin Luther King's 'I have a dream' speech is partly an evocation of the reality of a given situation, its harshness, injustice, brutality and what entails for the 'veterans of creative suffering', those 'battered by the storms of persecution and staggered by the winds of police brutality'. But the speech is also convocation for putting that creative suffering into action and not letting the situation take over, an evocation to dream of a different future not-yet become. This simultaneous evocation of the situation and convocation for its undoing mobilises action for building utopian futures and changing public spheres. It connects the present to the past and to the future, shakes tradition and the status quo and projects a new situation into the horizon of a community. Imagining something new in broad daylight is practical because it offers the self an imagined niche in which it can be an agent and propels action towards a future that is desired and believed to be right (see Zittoun & Saint Laurent, Chapter 5 in this volume). Imagining the future scaffolds creative action in the present and at the same time initiates the actual creation of new futures.

'I have a dream' became one of the most important political speeches of the twentieth century and greatly contributed to redefining America. It showed that the imagination is not only cognitive and psychosocial but also political, in so far as it builds new identities and visions, fuels collective action and propels the 'impetus for more action' (Vygotsky, 1971, p. 252). And in addition to these properties displayed at the time of its enactment, a speech such as 'I have a dream' lives on as objectified imagination that continues to resonate and propel action today: it becomes a narrative that travels in time and offers itself as reality material for other imaginations. This consolidated force stems from its being both a powerful description and a powerful dismissal of a terrible situation, from its taking its core elements from the reality of an unjust world and reconfiguring it by building cognitively, socially and emotionally new representations of things to come (Jovchelovitch, 2007). It makes the speech evocative almost everywhere and its dynamic transcendent of the original context in which it emerged. Indeed it can still be found today in the everyday practices and representations of many black young favela dwellers in Rio de Janeiro. There, as in so many other places

around the world, the speech is used as a creative story that can forge new stories for those who use it and carry on telling it.

In what follows I discuss these issues by linking the imagination to creative experiences of human development and societal change. I revisit the work of Vygotsky and Winnicott on the imagination and discuss movements for social change in the favelas of Rio de Janeiro, where grassroots organisations are using the imaginative resources of culture, identity and sociability (Simmel, 1950) to create novel forms of collective action and rewrite trajectories of self and community. I wish to show in particular how favela communities deal with contextual adversity through creative imaginations: they take up and recombine multiple elements of the immediate situation – hardship, discrimination, the experiential memory of slavery, all permeated by strong sociability – to transform them into languages of joy, art and celebration that enable healing, resistance and intervention for change in the public sphere. I discuss these experiences as creative practices of the imagination to show that: 1) they free thinking from the reality of the situation but do not disregard it; rather, they creatively transform it; 2) they heal and protect the self by offering safety and containment in an imagined potential space that expands horizons, self-esteem and positive attachment to others and community; 3) they connect the combined security and daring of the potential space to wider public spheres and therefore are required for changing the social. I conclude by showing that the freedom of the imagination depends on the emotional sociality of self–other relations and is fundamentally related to sociability. By playing, dreaming and imagining, favela dwellers in Rio de Janeiro rewrite stories of destitution, loss and human suffering and open individual trajectories to new forms of self–other relations, instigate novel forms of collective action and positively project themselves and their communities into the wider public sphere of the city.

The imagination frees thinking

Both philosophy and psychology position the imagination between the inner and the outer world, between the subject's experience and the reality of the external world (Vygotsky, 1994, 2004; Pelaprat & Cole, 2011; Sartre, 1940/2010; Warnock, 1994; Zittoun & Cherchia, 2013). Being so close to the great Cartesian problem, it is not a surprise that its validity as a way of knowing has been continuously questioned. Vygotsky was aware of this problem when he established his theory of the imagination as the basis of all creative activity (see also John-Steiner, Chapter 3 in this volume). His effort was to show that far from being that which does not correspond to reality and is not true, the imagination is profoundly related to what is the case and it is in how it relates to what it is the case that it needs to be assessed and understood.

Vygotsky maintained that the imagination is the process whereby the brain takes up known elements and uses and combines them in new ways: 'this ability to combine elements to produce a structure, to combine the old in new ways [. . .]

is the basis of creativity' (Vygotsky, 1994, p. 12). The emphasis on the use of known elements and the combinatorial is important to appreciate that the imagination is both about reality and about what thinking does to reality. It is about how the new comes out of the old: the old is reconfigured by the active transformation of the established reality of our experience and accumulated traditions (see also Baerveldt & Cresswell, Chapter 7 in this volume). Defined as the ability to use and combine in new ways what is offered by reality, the association between the imagination and reality can be unpacked in four basic ways, which reveal the operational laws of the imagination and how the creative combinatorial ability gradually develops.

First and foremost, the imagination is built on real experience, which constitutes its most important foundation. Even fantastic creations emerge out of elements of experience, however remote and removed they may appear to be in relation to reality. They are new combinations of what is available in a person's life and in the world she has access to. For example, children living in extreme hardship represent their lives through drawings that are strikingly dependent on the concrete stimuli they encounter in everyday life, revealing that agency is present but circumscribed by the limits of their situation (Campbell, Andersen & Mutsikiwa, 2013). In communities exposed to poverty, the range of stimuli and opportunities for gaining access to diversity in experience is limited and this limitation correlates with how the self is imagined and individual trajectories are narrated. The wider the situational horizons, the wider are the horizons for the self, its identity and socio-cognitive capacities (Jovchelovitch & Priego-Hernández, 2013; Sennett, 2011). This is the first and most important law regulating how the imagination operates, which defines its range and possibilities. Thus, Vygotsky states:

> The creative activity of the imagination depends directly on the richness and variety of a person's previous experience because this experience provides the material from which the products of fantasy are constructed. The richer a person's experience, the richer is the material his imagination has access to [. . .] All else being equal, the richer the experience, the richer the act of imagination.
>
> (Vygotsky, 2004, pp. 14–15)

Here, the link to education and policy is important, because theory and research show that enlarging experience and stimulation constitute a strong foundation for the development of a person's imagination and, with it, her overall cognitive capability and emotional health (for a comprehensive account of the ontogenesis of the imagination see Harris, 2000; see also John-Steiner, Chapter 3 in this volume).

Second, the imagination is built on the experience of others, who communicate and share with the self the situations that the self has never seen or experienced. Other people are foundational for the imagination as the narrated reality and experience of

others becomes integral to the life of the self and part of its own reality (see Zittoun & Saint Laurent, Chapter 5 in this volume). Absent objects and worlds are made present by social experience, by language, fairy tales, legends and all forms of narration and communication that connect and, by the same token, construct the minds of self and other. Through the imagination, the experiences, stories and voices of others come to inhabit the life and experience of the self. Thus a novel, a song or a simple conversation can create new perceptual combinations and take thinking into new directions, enlarging its horizons and removing it from the immediate situation. Here narrative is central because story-telling is a cultural artefact that mediates between selves and between self and the spatial-temporal environment while at the same time exercising the playful, the fantastic and the utopian. Story-telling and narratives of a future not yet become act as mediators between the self and the environment of now and tomorrow. This operation of the imagination, Vygotsky notes, is essential for all mental functioning and human behaviour because it also broadens a person's experience: 'he is not limited to the narrow circle and narrow boundaries of his own experience but can venture far beyond these boundaries, assimilating, with the help of his imagination someone else's historical or social experience' (2004, p. 17). Our relating to absent objects and states that do not exist is resolved by the imagination and its grounding in the sociality of the narrative function. We are separate beings but not irrevocably shut inside our own minds, and the efficacy of narration for building up the imagination shows it. It also connects the imaginative to the specific ways in which self–other interactions take place, to the quality of attachment and the nature of stories that are available for self.

Third, the reality of emotional life drives the imagination, and projects in its operations the affective states of the self. There is feeling in how images of absent objects are conjured up and combined to transform elements of the immediate and lived experience. In fact, the role of emotions is central and defined by Vygotsky as the fuel behind the combinatorial process. It is emotion that drives how separate elements of reality are combined and associated. However, as much as emotion drives the imagination, the reverse is equally true. The imagination drives emotion, it can awake feelings of sadness and joy, hope and despair; it can make people cry and laugh. This Vygotsky calls the law of the emotional reality of the imagination, which shows yet another facet of its association with objective reality. This law is evident in art as it is in the process of meaning-making more generally (Wagoner 2010; see also Wagoner, Chapter 2 in this volume for an illuminating discussion on the physiognomic qualities of objects). Imagining coalesces perception, thought and emotion because we cannot separate what we see and touch from what we feel when we bring these things together in sense making. This combination of thought, feeling and perception is *par excellence* the realm of the symbolic and of the potential space, which I discuss later. It explains why thinking alone can speed the heart beat and make people cry, why the non-reality of an imagined state of affairs contains a tremendously real and evocative capacity, which is at the very basis of the development of the symbolic function and all artistic experience.

The fourth basic way in which imagination and reality intermingle is in the objectification of the imagined, which condenses reality and imagination into one. The imagination becomes itself reality as it crystallises into objects, tools, technologies and all kinds of cultural artefacts. It acquires material form and, as objective reality, completes the full circle of transactions between the creative ability and the reality of the world (see also Glăveanu and Gillespie, Chapter 1 in this volume). As objectified reality, the imagination also enables human sociality to transcend the immediate transactional and create the transcendental social (Bloch, 2008). The transactional social involves the here and now of human interactions and associations, which are linked to individuals, to the present and to the immediate environment. Imagining creates a transcendental sociality that allows humans to escape the moment and the action/thinking span of any one individual to establish themselves as objects through groups and roles that endure in time. A dual sociality that is both transactional and transcendental is a unique achievement of the imagination. In this sense, Vygotsky's fourth basic way of demonstrating how the imagination and reality associate is not too distant from Durkheim (something Bloch himself acknowledges) and Moscovici, who considered social representations to be both transactional and transcendental, i.e. they are transactional ways of world-making as well as concrete symbolic environments that transcend transactional relations and appear as objectifications in the social world (Moscovici, 1988).

The imagination thus both draws on and constructs the reality of experience, emotion and other people. It opens up thinking by linking up the emotional and the experiential life of the self to wider emotions and experiences coming from the world of others. Its basic combinatorial mechanism connects all these through meaning and sense-making, simultaneously regarding and disregarding the immediacy and concreteness of situations. The imagined and the objective feed each other and coalesce in all cultural objects and in the transcendental social, taking us back and at the same time departing from the reality of situations. The present is linked to the past via known experience, and to the future via its freedom to conjure up the not-yet. All of this makes the imagination a pervasive, fundamental and basic operation of thought and action rather than a separate and specialised cognitive function of the mind (Pelaprat & Cole, 2011; Harris, 2000; 2006).

The freedom entailed by the imagination is therefore productive for the relationship between cognition and the reality of the world. It builds the absent and the not-yet by dealing with the present in the here and now. Its mode of operation shows that its function is less about the presence or the absence of an object and more about what the mind does and can do to the object, be it present or absent. That is the crucial feature of the imagination and that is why it is also essential for social change and for linking and separating self and world.

Life at the edge: the favelas of Rio de Janeiro

In an effort to explore agency in contexts of deprivation we investigated pathways of socialisation and resistance to exclusion in the favelas of Rio de Janeiro

(Jovchelovitch & Priego-Hernández, 2013). We found that cultural activities, psychosocial support and the imagination were central processes underlying agency and capacity building in the favelas, used as tools to resist social exclusion, regenerate public spheres and construct positive futures for young people at risk of drugs, violence and drug-trafficking wars. As in Martin Luther King's speech, the creative languages of the favelas frequently sing the unjust, difficult, reality of the world and through art, emotion and collaboration, make a call for its undoing.

Favela communities are ecosystems of great cultural and psychosocial complexity, where the raw beauty of Rio de Janeiro's natural environment co-exists with contradictory human experiences of poverty and belonging, violence and conviviality. Located around the hills and surrounding mountains of the Atlantic rain forest, favelas command some of the best views of the city and are home to much of the music, dance and overall culture of Brazil. Yet, despite their importance for the economy and social functioning of Rio de Janeiro (Souza e Silva, 2009), the sharp social separation between the favelas and more affluent neighbourhoods is part of the city's imagination, sustained by social representations that systematically discriminate and stigmatise favela-dwellers. Indeed, we found that social representations of favela life constitute a remarkable theory of self-context relations, where the experience of the self is predominantly framed by 'the appeal of the world'. The 'appeal of the world' mixes the prejudice and discrimination found in negative social representations of the favela with the tough and matter-of-fact institutional ordainment imposed by the scarcity of state services and support, the dominance of the drug trade in favela territories and its historical war with the military police in the city. To live in the favela, to be of the favela and to grow up in the favela means to take for granted the stray bullets, the police invasions, the hardship, the stigma, sorrow and daily struggle.

In this context of adversity, segregation and social psychological complexity, there emerged in the early 1990s bottom-up initiatives of young, mainly black, favela-dwellers that resulted in hybrid social movements and NGOs. While these groups are acutely aware of the 'appeal of the world' and refer constantly to the dangerous aspects of the harsh reality in which they live, they are equally focused on alternatives to this 'appeal', expressed in practices of sociability, play and cultural creativity, which transform their reality into something else. Our research studied the life trajectories and methodology of work of two such hybrid organisations, AfroReggae and CUFA. We found that contrary to many external organisations that 'intervene' in favela communities, the life trajectories of activists and leaders are homologous to those of favela-dwellers and constantly used as stories of individual and social change, conveying narratives of solidarity, resilience and care. These new actors were born, grew up and continue to live in the favelas. They challenge dominant representations through their own life stories, which are constantly told and used as tools for giving visibility to the invisible and bringing to the foreground underground sociabilities that are hidden away by stigma and urban segregation. These experiential narratives transform the 'appeal of the world' and reposition the visions, perspectives and experiences of favela-dwellers.

A combined agenda of attention to individual trajectories, sociability and artistic activities enacted in workshops, cultural entrepreneurship and wide partnerships is used to re-signify pain and discrimination, subverting negative representations of favela-dwellers and establishing bridges and mediations between different neighbourhoods of the city. These new actors have been described as the most important innovation in the recent history of the Brazilian public sphere (Ramos, 2006) and our research corroborates a growing body of evidence that points to the uniqueness of their identity and methodology (Yúdice, 2001; Ramos, 2007).

The way in which these groups use creative imaginations demonstrates each of the dimensions of Vygotsky's theory: the realities of experience, emotion and other people are combined and recombined to reinvent the 'appeal of the world'. Importantly, they put into evidence the process whereby the 'appeal of the world' can be changed by the freedom of creative acts. They evoke the historical resilience of Brazil's black cultural matrix in order to cope with the present, shake negative representations and project new and more positive ones onto the future of the community. In the next sections I discuss in more detail how these creative imaginations protect the self and change community, by enhancing the agency and freedom of individuals and at the same time connecting them to the public sphere and to projects of social change.

The imagination protects and heals the self

In a highly personal account of what makes the inner core of his creative experience, the British potter Grayson Perry stated during his 2013 Reith Lectures:

> Being an artist is a refuge, a place inside my head where I can go on my own and process the world and its complexities. It is a kind of inner shed in which I can lose myself.
>
> (Perry, 2013)

His statement is not too far away from the words of a 17-year-old favela-dweller who plays the violin in the Orchestra AfroReggae:

> I play to travel in myself, to a place that I go when I want to be alone inside myself; it is my world *out of* my other world. (Emphasis added)

These are descriptions of different forms of imaginative experience – in art and in playing an instrument – in which a protected niche for the self enables it to lose itself and to be 'out of' the world. Both expressions are striking because of their double meaning. To 'be lost' is to be loose and lost, to be free and out of bounds, so that self can venture without limits in a state of freedom where perhaps something can be 'be found'. 'My world out of my other world' expresses a world that is outside but also emerges out of the outside. This paradox of the imagination is essential for understanding the relational basis that enables a safe and protected

space of freedom in which the self can take itself out of the world in order to make sense of the world. This is a required space for the health of the self and at the same time for the construction of its independence as a creative force in the life of the individual and the community to which it belongs. To feel the world close and safe is required in order to imagine oneself away, free from it. This cognitive and emotional possibility arises both from the reality of the self and from the reality in which it is located.

Winnicott's (1958, 1965, 1971) concept of the potential space is particularly apposite to explore the process of dependency and independency, closeness and distance between self and world. The potential space is first and foremost an area of emotional sociality that builds gradually in a zone of intersubjective relations. This sociality scaffolds the developing mind and gently nudges its capacity for playing with perception, reality and illusion. This process results in the work of the imagination and constitutes the ontogenetic basis of human creativity and all cultural experience. Its genesis and development reveal the imagination as a cognitive, emotional and psychosocial structure. Central to the concept is to capture the creative phenomena that occupy the space *in-between* infant and caretaker and, in particular, the manner in which young babies and children engage with a special object such as a rag, a soft toy or a pillow. Winnicott's clinical observations made clear that these transitional objects signify for the child something well beyond what they actually are. Intense emotional attachment to these first special possessions develops out of an imagination that transforms these objects into something else. His account illuminates the importance of imaginative practices for the self and at the same time clarifies how the individual imagination is carved out of a social and highly emotional sphere. Winnicott emphasised three aspects of this process.

First, as important as its symbolic value, is the fact that the transitional object stands for something actual. The imagined object depends on the actual object and if the external object fails so does the internal object; the dependency of the imagined on the real is very central for Winnicott's theory, as it is for Vygotsky's. Thus the psychological challenge posed for children growing up in situations of adversity. Adversity can produce developmental dysregulation and compromise the ability of families to provide support for their young because it jeopardises patterns of care-taking (Repetti, Taylor and Seeman, 2002; Luthar, 2003). If the external object – that is, that which is concrete and real in the situation and immediate experience – is more likely to fail and to be absent, the more difficult it is for the transitional object to fulfil its functions of containing the self in an imagined niche where it can imagine itself away from the context. However, our research in the favelas found that the imagined can also depend on the capacity of communities and bottom-up institutions to provide 'good enough', reliable external objects to be the basis for transitional objects (see also Jovchelovitch & Concha, 2013). In the favelas, NGOs AfroReggae and CUFA do just that, working as parents-by-proxy and offering role models, positive stories and reliable scaffolding for selves exposed to adversity. Indeed, we found that the positive sociality of the

community itself can hold and substitute failing external objects by positive ones, scaffolding selves and sustaining the imagination. This type of scaffolding is not dissimilar to the scaffolding provided by the caring of knowledgeable adults in apprenticeships; indeed it can be conceptually applied to all creative collaborations (John-Steiner, Chapter 3 in this volume). Emotional scaffolding fosters and protects the imagination, infusing creativity with affective qualities (Wagoner, Chapter 2 in this volume).

Second, transitional objects are linked to functional experiences and practically used by babies and children. Thumb-sucking, an external object taken into the mouth, the sound of the care-taker's voice or of a lullaby tune, all of these are functionally used by the child, as a source of comfort, at the time of going to bed, to sooth, to facilitate sleep, etc. Thus, the imagination is functional in relation to reality and it relates back to it in important ways. Reconfiguring objects and situations is not just a 'flight of fancy' but a practical and operational solution for resolving problems at hand and responding to challenges posed by situations. The practicality involved in using transitional objects is important and points once again to the relation between the imagination and reality and the role of artistic and cultural experience in human societies. If the mind were not capable of detaching itself from the given and imagining possibilities that are away from it, the 'old' in Vygotsky's terms would not be ever reorganised and created anew. By using transitional objects that are practical for handling emotional, social and personal needs, children build the basis of all creative, artistic and cultural experience, which, just as transitional objects, innovate and build solutions for individuals and communities. In the favelas this is particularly important, as music, dance and other technologies of the imagination not only provide the operational and pleasurable experience of joint action, but also train and educate, enlarging cognitive and social competences and empowering selves to relate back to the situation and transform its reality. Playing the violin in an orchestra is just one of the many other forms of cultural expression involved in AfroReggae and CUFA workshops and activities.

Third, transitional objects rely on the quality of the relationship between child and care-taker. Adults who 'agree' to see the object as special, sustain the imagination of children as if it were real, and by this relational token, enter a primary social contract that grants to the developing child the first experiences of agency and power over what is real. Granting reality to the illusion of the child is what matters: from the perspective of the child, the experience is real and embedded in positive attachment and positive sociality. Caring adults willingly and enthusiastically join children in their imaginary constructions and share their imagination: they pretend that it is real and in this joint action adults give but also receive back the lost gift of pretend play. These first experiences and their subsequent history demonstrate the interconnection between cognition and self–other relations as well as the relevance of the latter in the ontogenetic roots of creativity and of all cultural experience. Introducing a positive quality in self–other relations was found to be paramount for positive social development in the favelas, where the

single most important predictor of positive choice-making in the route of sociali-sation is the presence of psychosocial scaffoldings, defined as actions and structures of support that offer positive attachment and reliable holding for the self. Practices of relating vary, from abandonment and violence to positive attachment and reliable support, and this is the case not only in contexts of social adversity. However, there is little doubt that for individuals to be able to detach themselves from the grip of the immediate situation, or 'the appeal of the world', there must be positive relating, either from close family and care-takers or from other positive role models. This positive self–other relating to positive role models – family or other people and/or institutions – is the basis of the potential space that is created in the favelas and the relational cement of the imagination therein developed. As with Vygotsky's theory of the imagination, the Winnicottian concept of the potential space brings the emotions to the forefront of cognitive activity, because it reveals how the development of cognitive structures is intertwined with the quality of the development of the relationship between self and other.

Thus the transitional space between child and care-taker constitutes the very early sociality at the basis of all transitional phenomena – symbols, play, art and creativity. These processes are contingent on the concrete relations between self–other–world and therefore affected by the range and quality of the real experiences that comprise the life of the self. Considered in the context of developmental adversity, they become all the more important and shed further light in what is required for healthy pathways of development. The psychosocial scaffoldings of favela life sustain the creative imaginations of the favelas: they are the actions and structures of support that hold and contain the self, and which are provided by caring adults, cultural identity, social memory, friendships, social movements, NGOs and social projects that co-exist in favela life. These scaffoldings enable individuals exposed to poverty and segregation to reclaim the self as an individual and *social* resource, re-presented anew as worthy of esteem and a decent life, with projects, aspirations and, crucially, a relationship to the future.

The capacity to imagine alternative possibilities and to switch between frameworks, from reality to the imagined and back, comes to play a central role in regulating the internal world of the self and its relations with time, other people and the reality outside itself. This capacity protects and heals the self, placing it in a potential space that offers safety and containment, a secure frame from where it can imaginatively expand horizons and self-esteem. The pain and suffering of discrimination and exclusion, of violence and loss are transformed into songs, dance, protest, stories and, importantly, social action for change. They comprise the raw materials that are given by the immediate situation, but emerge renewed as joy, celebration and communal life in creative content that not only projects a different world but also unbinds the self from the reality of the situation so that it can reinvent it.

Thus, from the early transitional objects of infants, to the symbolic function, to play, to art, to religion, to group formation and creative scientific work, all

creative experience is located in this potential space where self and other both fuse and separate. It explains why the very enclosure of the self in a creative zone is never a-social, and indeed can only be understood as enabled by the social (Glăveanu and Gillespie, Chapter 1 in this volume). The primary sharing of illusions emotionally supports and primes the self, protecting it and expanding its engagement with the reality of the world. It builds the basis for understanding and accepting what is real as well as the confidence to test and venture beyond conformity to what is real. It integrates and by the same token frees the individual trajectory from the immediate reality of the world.

The imagination changes public spheres

So far I have expanded on Vygotsky's four basic ways of the imagination and Winnicott's theory of the potential space to show that the imagination frees thinking and frees the self from the immediate reality of situations. I have shown that the creative work of the imagination is the outcome of a relational space that detaches the mind from the immediacy of situations so that it can return to it with new degrees of freedom, enabling a potential space of mutual and creative transactions between self and situation. That is why I maintain that the central issue of the imagination is not so much the presence or the absence of objects but what the mind does to the object, irrespective of the immediacy and remoteness of the object, or even of how it presents to perception (for a discussion of these issues see Pelaprat & Cole, 2011 as well as Zittoun & Cherchia, 2013). Freedom, something that philosophers have elaborated on but psychologists less so, is the crucial feature of the imagination. Psychologists, both developmental and sociocultural, refer to absences and gaps but rarely directly to the problem of freedom when discussing the imagination. My aim in this section is to address the freedom afforded by the imagination in the experience of sociability, itself an imaginative quality of the social. Sociability, which against all odds is a major asset of favela communities, contributes to heal the pain of a negative sociality and acts directly against it. It does so by recruiting the freedom of the imagination and using it to create change in the public sphere. These include aesthetic, indeed beautiful, changes to the built environment, creative spaces for conviviality and interaction as well as innovative forms of bonding and bridging social capital, which are discussed below.

The concept of sociability was first introduced by Simmel (1950) to describe the playful dimension of sociality. In sociability actors experience togetherness in a 'pure' form, where the sheer pleasure of exchange and conviviality is paramount. This pleasure is enabled by the capacity of imagining a form of social encounter where all 'real' constraints and positions are momentarily forgotten. Sociability is the 'play-form of social life', a zone for the experience of joy and games afforded by social interaction. Defined as interaction for the sake of interaction, sociability has been described as an asset of culture and the substance of social capital, being a factor in improving health, well-being and

leisure (Zaluar & Ribeiro, 2009). A central marker of Brazilian culture, sociability as playfulness is particularly present in favela culture, both as an expression of cultural identity and as a tool for resisting harsh conditions of life. Its bonding and playful energies are deployed in the squares, in the streets and in the small '*botecos*' of the favelas, which are small vending shops where people gather to drink a beer, talk, play music and dance. Such scenes of street sociability are frequent in the everyday life of the favelas and the pleasure and joy displayed by its participants is contagious, attracting people from all walks of life and neighbourhoods of Rio de Janeiro. Research suggests that favela sociability enhances cooperation, trust and bonding social capital inside favelas (Alves and Evanson, 2011; Pearlman, 2010) as well as positive representations and inter-group contact with populations outside favelas (bridging social capital). The local sense of community is well known throughout the city and acts as a positive representation that undermines the segregation and exclusion of favela dwellers. As the play-form of social life, sociability operates as a potential space that imagines sociality 'as if', without social distance and inequality, based on trust, cohesion and playful social interaction.

Through performance and collaborative action these communities recombine and creatively transform the elements of their immediate situation. The social memory of slavery, the harshness, pain and deprivation of everyday life become the beat of Brazilian black ancestry and mixed culture, creatively expressed in the music, the dance and the songs that favelas give to the whole country. This performance, rituals and collective action travel across the city challenging rigid borders and forging bridges that transform the raw elements of the immediate situation into an explosion of sounds and body movement that are highly productive for the community of performers and for audiences everywhere. They subvert dominant representations that see people in the favelas as dangerous, crime ridden and drug related, and showcase the vibrancy and richness of a proud collective intelligence living on the edges of the city. They change identity and challenge stereotypes, enhance dialogue and scaffold the community with the pleasure of the social. Importantly for my discussion here, they free social thinking to imagine a future of change in individual lives and in the public sphere. Such power exemplifies what Perry (2013, Lecture IV, p. 4) described as the 'human mind's amazing capacity to transform traumatic events into gold and into marvellous masterpieces'.

The freedom of the imagination, which is embedded in sociability and in all the potential spaces of creative action, opens the mind and the social to new visions while protecting and healing the self – individual and collective (John-Steiner, 2006). The use of creative performance in the favelas shows that sociability is a massive resource of sociality and that its essence is the freedom of the imagination. That populations living in poverty can be in possession of this resource is perhaps a major lesson in an age that has made financial assets a monologising source of value. The major capital of favela communities – their bonding and bridging social capital – continues to attract and to inspire and is usually seen as an enigma for researchers who compare the favelas with other communities in the

affluent West. 'How can they be so happy?' is a question that I have heard many times while working with Western colleagues in Rio de Janeiro. I suggest that the answer can be found in the stories of human pain and hardship that are nonetheless permeated by the healing capacity of sociability and its daring imagination: human solidarity, no hierarchy and no social divisions. This creative imagining of other stories and other futures provides a lesson for social development as well as a case study for the socio-cultural psychology of creativity and imaginative thinking.

Concluding remarks

In this chapter I have discussed the imagination as a psychological and social resource for individual and social change. I have emphasised the complex and necessary relations between the imagination and the reality of situations, showing that when it is at its most free-from-the-world, the mind depends on the world and relates back to the world. As a socio-cognitive asset that frees self and community from immediate environments, the imagination enables humans to go beyond the immediate present, play with possible realities and creatively change individual lives and public spheres. The work of the imagination showcases the simultaneous dependency and independency of mind and reality, individual trajectory and community, inner and outer world. I have drawn on the work of Vygotsky and Winnicott to show that the imagination a) frees thinking; b) protects and heals the self through the security of the potential space; and c) is at the basis of sociability and is required for social change. Central to my argument has been to show that the freedom afforded by the imagination is ontogenetically grounded in the early sociality of self–other relations and continues to depend on all everyday practices of relation that make up social life. Freedom to imagine underlies creativity and is required for the constitution of creative trajectories, individual and social.

The case of favela communities in Rio de Janeiro provides an illustration of how social creativity offers a space of imaginative freedom that can transform both individuals and communities. Bottom-up social movements and community organisations use the arts, creativity and the imagination to subvert negative representations about the favelas and to empower individuals to rethink themselves and their life trajectories as worthy of esteem and positive futures. These creative processes engage identity, sociability and culture, in particular Brazilian black heritage, to re-signify and transform experiences of segregation and suffering into spaces of conviviality, joy and beautiful performance. These are part of everyday life and distributed in the spatial and cultural horizons of Rio de Janeiro's favelas. Individually, they enable self-esteem and the imaginative construction of alternative pathways for the self. They also re-signify the body through an artistic sensibility that gives transformed expression to experiences of pain, suffering and death. Socially, they retrieve cultural traditions as means for reconstructing persons and communities, constructing bridges for communicating with the outside and for re-signifying zones of war, crime and drug dealing. They expand horizons

and networks of interaction by allowing an enlarged and transformed engagement with others, in the favela, in the city, with the country and with the world.

Both Vygotsky and Winnicott emphasised that freedom to recombine and reconfigure what is the case is only possible when behaviour is not subservient to the situation and stimuli that happen to be present. Creativity requires some degree of suspension of reference to reality and in this sense it connects knowledge and action to the poetic function, to fiction, to classical madness and the rule of metaphor (Ricoeur, 1978; Foucault, 1971). But in creativity this suspension is just the other side of a more fundamental relationship of exploratory reference, which is enabled by the freedom of the mind in the world. This creative freedom, however, is not something that the mind can realise alone; rather, it depends on positive human attachment and sociability that keep it sane and firmly related to the reality of the world. These are structuring facts in post-natal development and continue throughout human life, making plain that the transactions between the developmental, the social and the cultural are central for understanding the human mind (Duveen, 2013). Creative minds are ultimately grounded in how concrete relational practices, situated in time and space, co-construct socio-cognitive functions and future relations with the reality of the world. In this sense, to work through how the historical development of concrete practices of relation impinges on the development of creative processes is an important task.

Understanding that relational practices are the cement of our freedom as well as its condition of possibility is crucial for a cultural psychology of creative processes and, indeed, for any psychology committed to the enlargement of human narratives of liberation and emancipation.

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Chapter 7

Creativity and the generative approach to culture and meaning

Cor Baerveldt and James Cresswell

> A thought may be compared to a cloud shedding a shower of words.
>
> (Lev Vygotsky, 1987/1934, p. 251)

> I am the daughter of Earth and Water,
> And the nursling of the Sky;
> I pass through the pores, of the ocean and shores;
> I change, but I cannot die.
> For after the rain, when with never a stain
> The pavilion of Heaven is bare,
> And the winds and sunbeams, with their convex gleams,
> Build up the blue dome of Air
> I silently laugh at my own cenotaph
> And out of the caverns of rain,
> Like a child from the womb, like a ghost from the tomb,
> I arise, and unbuild it again.
>
> (Percy Bysshe Shelley, The Cloud)[1]

Creativity: from problem to style

In order to expound how we intend to approach the enigma of creativity in this chapter, let us start with two examples of presumably creative conduct. The first example concerns a revealing experiment aimed at demonstrating differences in the way humans and other primates learn to use tools. For this experiment, Nagell, Olguin, and Tomasello (1993) presented chimpanzees and two-year-old human children with a rake-like tool and an out-of-reach object. Two groups of each species observed a demonstrator use the tool in a way that was either more or less efficient in obtaining the object, although both methods would ultimately lead to the same result. Remarkably, human children in general copied the method of the demonstrator regardless of whether it was efficient or not, whereas chimpanzees employed many different methods to obtain the object, regardless of the demonstration they observed. Tomasello (1999) concludes that chimpanzees are very creative and intelligent in using tools and understanding changes in

the environment. Although imitation becomes a clear benefit when others have already come up with adequate solutions to a problem, the lack of an inclination to follow the example of others becomes an advantage when the problem allows for solutions that are potentially more efficient or perhaps more effective than the ones demonstrated by others. Cultural learning and individual learning, convention and creativity, appear to be in an uneasy relation that raises questions with regard to the psychological processes that drive cultural development.

The second example comes not from the realm of functional behaviors in animals or humans, but from the world of fully human cultural expression. Nowadays many young Muslim women in the urban centers of Western society choose to wear headscarves (hijab) as part of their everyday dress. Although it seems obvious on first inspection that the hijab is taken up by those women in a highly creative way, it remains less obvious precisely to what end. Traditionally a sign of modesty and of the seclusion of women, the hijab now seems to serve simultaneously as a modern identity marker, as a sign of religious identification, and as a way to remain virtuous in the eyes of members of one's ethnic and religious community while claiming the freedoms of modern life styles. If wearing a headscarf is the solution to a problem, it is the problem of having to live up to many different normative demands at the same time, while also remaining true to oneself.

In creativity studies, the question of creativity is often connected to the idea of problem solving. Individual creativity has been understood as the ability to come up with novel or unexpected solutions to a problem and to break through the confines of convention. Nowadays we tend to think that the need for novel solutions rises with the emergence of new or unprecedented problems. Our society is developing so rapidly and so unpredictably that we increasingly hear the call for 'creative minds' or a 'new Steve Jobs,' capable of tackling the problems that arise as a consequence of constantly changing social, cultural, or technological conditions. In his classical discussion of the psychology of creativity, Guilford (1950) already referred to employers' laments that graduates nowadays show mastery of techniques, but "are much too helpless when called upon to solve a problem where new paths are demanded" (p. 446). Of course, the fact that a problem is 'new' does not automatically imply that a solution to the problem requires creativity. Many problems that come up in science and technology, for example, also come with clearly delineated procedures or methods for the rational search for solutions. Creativity might be required, then, particularly in the absence of such clearly defined procedures. Like the chimpanzees in our example, the creative minds society is calling for would presumably find themselves in a situation where the *problems* they are facing are new, yet relatively clear and delimited, while the *procedures* for finding adequate solutions to those problems are less clear. Climate change as a consequence increased emissions of greenhouse gases is such a relatively clear and delimited problem that presumably requires great technological and socio-political ingenuity in order to be solved. But can the same be said of our young Muslim women wearing the hijab?

The very notion of a 'problem' implies rational constraints on its solution. Nickles (1980) has argued that it is precisely the nature of those constraints that defines both the structure of the problem and the range of acceptable solutions to the problem. For the chimpanzees in our example those constraints are imposed entirely by their own natural abilities or *effectivities* for behavior in relation to the *affordances* offered by the environment (for a discussion of affordances and their relation to creativity, see Costall, Chapter 4 in this volume). For humans, however, those constraints are overwhelmingly normative. The women in our example see themselves confronted with contrasting normative demands and not just with functional problems. Whereas problems defined merely in terms of natural constraints allow only for a limited range of possible solutions, challenges defined in terms of normative constraints allow for a potentially infinite range, precisely because the norms that define both the 'problem' and the range of acceptable solutions to the 'problem' are not prefixed.

Unlike the children in the above-mentioned experiment, chimpanzees are not bound by any sense of 'getting it right' and in that sense their behavior is less constrained by convention. A chimp faced with an immediate problem regarding the acquisition of food may be very inquisitive and inventive, based on its vast natural repertoire of sensory-motor effectivities. We argue, however, that such a chimpanzee is not truly creative in any human sense of that word. It cannot think 'outside the box,' so to speak, precisely because it lacks the 'box' of cultural convention. Of course, it may be able to discover new affordances of its natural environment, but the chimpanzee is unable to grasp reality in its normative structure, let alone bend, deform, and stylize this normativity. The expressive style of our Muslim women, however, can be understood only if premised against the background of a normative world. Merleau-Ponty (1973) has shown that the hallmark of human expression is what we might indeed call its *style* and that any style is always the *coherent deformation* of a norm or convention (p. 60). It is precisely in such coherent deformations of conventional practice that we find the creativity of human expression. In spite of all their inquisitiveness, chimpanzees lack both convention and style. They may be quite apt at solving particular adaptive problems posed to them by their environment but, unlike humans, they are unable to creatively express themselves and their world. Genuine creativity cannot be understood if we keep focusing primarily on the preferred outcomes of the creative process, the presumed solutions to pre-given problems. Rather, as we will argue in this chapter, such understanding requires that we connect creative expression to its own genetic and generative sources.

Generative normativity

In this chapter we will argue that only by tying the notion of creativity to an expressive understanding of cultural practice will we be able to understand the profoundly cultural basis of human creativity. Such an expressive understanding, we maintain, requires that we bring together the key notions of *normativity*

and *generativity*. The paradigmatic example of an expressive activity that is both normative and generative is of course language, but we will contend that language properly understood provides a paradigm for all creative expression. Rather than through straightforward 'single trial' imitation, normative skills are acquired through practice and training, that is, through repetitive actions or trials in a context of normative correction. Imitation is a process extended in time and as a consequence it always implies a series of creative modifications or a genetic sequence. James Mark Baldwin already recognized this with his notion of *persistent imitation*: "a method of absorbing what is present in others and of making it over in forms peculiar to one's own temper and valuable to one's own genius" (Baldwin 1906, p. 22). Imitation in this definition is not simply reproductive, but expressive and generative. To imitate behavior within a certain cultural practice is to creatively appropriate and coherently deform the normativity of that cultural practice according to the immanent genetic logic that is formative of one's own character.

Unlike fixed forms of behavior, normative skills are generative. They allow us to produce and recognize new forms of the same action and hence to strike a balance between the generic normativity of a cultural practice and the unique demands of this particular situation. Creativity operates within the constraints of convention, but convention itself is renewed as it is taken up in novel expressive styles. Humans are not simply faced with a natural world, but foremost with a historically constituted normative world. Therefore, more even than solutions to problems, their actions and the products of those actions are a matter of 'style.'

Creativity and the generative nature of language

Creativity studies that focus exclusively on the new, the unprecedented, the extraordinary and the unconventional fail to recognize the creativity that lies at the root of all cultural, social, and personal renewal. They fail to recognize, moreover, that what makes both human activity and the products of that activity 'creative' is not necessarily their newness or originality in light of external criteria, standards, or demands, but their ability to renew themselves according to the generative principles that lie at their roots. In that sense creativity is a vital principle at work in all cultural expression, whether it is traditional or novel.

As mentioned above, the paradigmatic case of everyday expression or activity that is capable of creatively renewing itself is of course language. Thinkers from von Humboldt to Chomsky have recognized the inherently generative nature of language. The first remarkable thing about language is not that some people are more eloquent than others, but that every human being seems to have it while no other species does. We argue that something quite similar is true for creativity. Moreover, in our view this is not merely incidental but implies that human creativity and language have the same genetic source. Part of the key to understanding creativity is to first recognize that it *creates* or *recreates* something, not that it creates something unprecedented or extraordinary. In that sense the dramatic re-enactment of a myth in a religious ritual can be as creative as the conception of

a new artistic style, which itself is always a coherent deformation of another style (see also Wagoner, Chapter 2 in this volume). Culture, we might say, maintains its meaning only to the extent that it is constantly recreated in consensually coordinated action, a point that is central in the *enactive cultural psychology* we have proposed elsewhere (e.g. Baerveldt & Verheggen, 1999, 2012). A great dancer or musician can creatively perform the same piece over and over again by generating it anew with each new performance (for an example of re-creation in design see Tanggaard, Chapter 8 in this volume). A great thinker can inspire others to creatively think 'in his spirit,' or to dwell in his style, to think 'his' thoughts, so to speak, even beyond what he may have articulated himself. Their 'genius' lies not in some mysterious individual capacity to express something radically new (although they might indeed express something novel), but in the way they remain connected to the vital sources of human expression in historical and communal practice.

Diderot (2001) tells us the story of Cardinal Polignac admiring an orangutan in the zoo "with an air of a saint John praying in the desert" and saying: "But speak and I baptize you." Depending on how we interpret this anecdote, we could say either that the gap between apes and humans is infinitesimal (it involves merely the word) or that it is, on the contrary, immense (words after all are the power of creation itself). Diderot was a self-professed atheist and if he meant to express the former, he would certainly be in good company nowadays. Apart from this elusive proclivity for language, it seems that evolutionary thinking has broken down rather than reinforced the barrier between humans and the other great apes. But in full recognition of the importance of evolutionary thinking, Vygotsky (1987/1934) already recognized that the possession of words is not simply an added feature of our psychological make-up, but one that radically transforms our psychology. If the orangutan had spoken, its words alone and not the baptism would have renewed its existence. It is this generative power of words that we are interested in here and that we hope to mobilize for a cultural psychological understanding of creativity.

Creativity and the normativity of language

In cognitive psychology the link between human creativity and the generativity of language is nowadays almost entirely associated with Chomsky's generative grammar. Chomsky (1975, p. 61) noted that the language user "on the basis of [. . .] finite linguistic experience" is able in principle to "produce an indefinite number of new utterances which are immediately acceptable to other members of his speech community." The ability of language users to both understand and produce sentences that are new to their experience points at what might be called the creative aspect of language, also referred to with the term *linguistic productivity* (Chomsky, 2006, p. 81, n. 21; also see D'Agostino, 1984, p. 86).

A grammar is for Chomsky a procedure for constructing interpretations for all acceptable word sequences in a particular language (Chomsky, 2006). According

to Chomsky, language users are innately equipped with a schema for constructing such grammars and this schema therefore both characterizes and limits the range or class of all possible languages. In addition to this genetically programmed ability for linguistic productivity, however, Chomsky also recognizes an aspect of language that might be considered as creative in a more expanded sense of that word: the ordinary language user is not only able to produce and understand "an indefinite number of expressions which are new to his experience," he is, moreover, able to do so "on an appropriate occasion, despite their novelty and independently of detectable stimulus configurations" (Chomsky, 2006, p. 100). Unlike linguistic productivity, according to Chomsky this "creative use of language" does not fall under the jurisdiction of science. Chomsky distinguishes between two kinds of issues that arise in the study of language and mind:

> those that appear to be within the reach of approaches and concepts that are moderately well understood – what I will call 'problems'; and others that remain as obscure to us today as when they were originally formulated – what I will call 'mysteries'.
>
> (Chomsky, 1975, p. 137)

According to Chomsky, the creative use of language belongs largely to the realm of mystery. Still, he provides us with something of a working definition of creativity that involves, in addition to novelty and unpredictability in terms of external stimuli, undeniably normative notions like 'value' and 'appropriateness to context' (Chomsky, 2009, p. 68). True creativity, like linguistic productivity, presupposes a system of constraints and governing principles (see also D'Agostino, 1984, p. 88). Precisely the normative nature of those constraints remains unreflected, as Chomsky simply relegates it to the realm of mystery.

For Chomsky, linguistic *competence* is a problem that can ultimately be understood in mechanistic terms, while the normativity of linguistic *performance* will remain a mystery because it belongs to the realm of free human expression (Chomsky, 2006, p. 102). In contrast to Chomsky and traditional cognitive psychology, many cultural psychologists claim that our actions and expressions play out fully in the cultural normative realm and not 'in the heads' of self-contained individuals. Although there are, no doubt, biological constraints on the production of language, language is for cultural psychologists foremost a normative practice. Linguistic competence must therefore involve normative skills and dispositions that can be acquired only in a process of cultural training. After taking vital cues from von Humboldt's genetic theory of language, Chomsky did not take the genetic logic all the way by recognizing the genetic roots of linguistic normativity in historical consensual practice. Only by radically severing language from normative practice does it lend itself to the kind of formalization that can be implemented in a computer or a formal rule system.

Besides the credit Chomsky (2009) gives to von Humboldt for recognizing that language is a system that makes infinite use of finite means, Chomsky also credits

Goethe (1749–1832). In his studies of plant morphology Goethe (1995) proposed the concept of *Urform* in the study of living organisms in an attempt to capture the principle of unity and coherence that characterizes a class of organisms in spite of their variations in concrete environmental conditions. Goethe's *Urform*, according to Chomsky (2009), is a kind of generative principle that determines the class of physically possible organisms (p. 66). Remarkably, it is precisely Goethe's conception of an *Urform* that would come to inform the so-called *genetic method* in cultural psychology.

Particularly Goethe's work on anatomy and plant morphology was concerned with the way in which each living organism is a constantly developing expression of its own 'inner lawfulness.' Goethe understood this lawfulness not mechanistically, but expressively. For Goethe, life in its temporal unfolding is inherently generative. It was through his own creative collaboration and correspondence with his friend, the philosopher, theologian, poet, and literary critic Johann Gottfried von Herder (1744–1803), that Goethe's ideas about the dynamic and generative nature of life would be given a profoundly cultural and historical direction. Herder recognized that the generative potential of language couldn't be separated from creative development in general. To fully appreciate this point we need to recognize that language does not merely 'mediate' our interactions with the world. Rather, *the genetic or developmental origins of language are the same as those that underlie all creative conduct*. Humans inhabit not only a natural world, but also a symbolic world and it is only in this world that we find true creativity (Cassirer, 1923/1953). Understanding the genetic roots of language, we argue, will provide us with key insights into the uniquely creative nature of human symbolic activity.

The creative origin of language

Earlier in this chapter we discussed what seems to be a uniquely human ability to see and constitute the world in its inherently normative structure (see also Baerveldt & Voestermans, 2005; Baerveldt, 2014b). Herder, in his seminal essay on the origin of language, referred to the peculiar human sensitivity for 'getting it right' with the word *Besonnenheit* (reflective awareness) and saw it as lying at the root of our capacity for language (Herder, 2002/1772). Herder argued that language is the natural consequence of a *creative impulse* in human development, rather than a divine gift or an extension of our natural abilities for expression. *Besonnenheit* is the uniquely human disposition to see the world in its irreducibly normative structure, such that each entity and each event, one might say, 'demands' to be called by its 'proper' (normative) name, or to be denoted with the proper words. This insight is echoed by Glăveanu and Gillespie (Chapter 1 in this volume), who follow Werner & Kaplan (1963) in arguing that the seemingly natural link between expressive act and symbolic form is one that is forged in a developmental process. What seems natural is in fact normative and this normative link needs to be established genetically. What this requires on the side of the

developing child, however, is sensitivity to what it means to be corrected. The notion of *Besonnenheit* captures the idea that our actions and expressions carry within them the possibility for their own inadequacy or incorrectness, but also the seeds of their own perfection.

Besonnenheit, we argue, lies at the heart not only of language, but of all creative expression. To clarify this claim we will return to the way Herder (2002/1772) works up to this notion. First Herder announces that he does not intend to postulate some mysterious "language creating ability" (p. 81). Yet, he also observes that animals, seemingly more than humans, seem to be imbued with a natural or instinctive capacity for behavior and with communicative abilities perfectly geared to their situation. Spiders have an 'instinct for art' that allows them to spin their intricate webs; birds have the natural ability to make nests and many animals have a 'language' that is "innate and immediately natural for the animal. The bee hums just as it sucks, the bird sings just as it makes a nest" (p. 80). To use the terms we introduced earlier, an animal's instincts and abilities allow it to pick up and exploit the natural affordances of its environment, but they also constrain the animal to a particular niche. Even though an inquisitive animal, like the chimpanzee we discussed earlier, is able to discover new affordances of its environment, it is unable to be truly creative, not because it *lacks* a creative faculty, but because it *possesses* all that it needs to function in its own world. Animals are by definition adapted to their environment, or else they cease to survive. There is no need for them to imagine or create different worlds.

The creativity at the heart of language, according to Herder, is not a particular faculty or instinct, but rather the dynamic "compensation for a lack." Humans, too, come equipped with natural abilities. However, those abilities, unlike those of animals, do not perfectly gear them to their natural situation. Humans, Herder argues, are always somewhat out of sorts with themselves. They find themselves confronted with needs, desires, and demands that are not perfectly aligned, but give rise to conflict and ambiguity: "With the human being everything stands on the greatest disproportion – senses and needs, forces and the circle of efficacy that awaits him" (p. 81). Almost two centuries later the philosophical anthropologist Helmuth Plessner (1980) would follow Herder in arguing that it belongs to the human condition to never fully coincide with oneself. Whereas animals are always positioned at the center of their relationships with the world, humans, according to Plessner, are 'eccentric' in the sense that they hold a *reflective distance* to the center of their relationships. Indeed, it is this reflective distance, we argue, that in the course of development leads to the 'differences' Glăveanu and Gillespie (Chapter 1, in this volume) identify at the basis of creative expression. We could also say that while animals are naturally 'in tune' with their worlds, humans, again and again, have to 'tune in.' This 'tuning in' is inherently a creative cultural process. Humans are compelled to constantly recreate their worlds and renew their existence and as a consequence they inhabit not merely a natural world, but a symbolic world. Even a relatively stable or traditional culture requires that the

world of common understanding is periodically renewed and re-enacted in ritual, art, language, and other symbolic activities.

Herder recognized that both language and our capacity for reason are realized only through the consensually and historically coordinated activities that are constitutive of community. Although we have focused in this part of our discussion on the pivotal role of language, it is important to reiterate that language is not just an added human faculty, but the total orchestration of all human impulses, desires, and abilities: "the *whole organization of all human forces; the whole domestic economy of his sensuous and cognizing, of his cognizing and willing, nature"* (Herder, 1772/2002, p. 83, italics in original). The ontogenetic development of language therefore refers to the entire formation of our character and mentality and not just to the acquisition of a new mental function.

Human nature as productive lack

Nowadays, Herder's award-winning essay is often seen as merely a predecessor of von Humboldt's much more developed theory of an *allgemeinen Sprachtypus* (linguistic prototype) which itself is mainly remembered as an early, less rigorous version of Chomsky's language-acquisition device. For Herder, however, the human mind was neither a self-contained Cartesian *cogito*, nor a *tabula rasa* to be inscribed by culture. Rather, it was the creative and reflective appropriation and enactment of 'culture,' the active realization of a human nature that yet remains incomplete and contradictory. Language, based on that understanding, can never be the product of a generative mechanism located within a self-enclosed mind, since linguistic generativity, by its very nature, implies an orchestration of all human forces, which can be realized only in the cultural or normative domain.

The positivism of present-day evolutionary thinking sees the human mind as filled to the brim with ready-made solutions to the rather static problems of everyday hunter-gatherer survival and dismisses all else as mere mystification. Herder's remarkable intuition was that creativity is borne not out of a specific adaptive faculty, but out of a lack, a shortcoming, or a disequilibrium, which forces humans to realize themselves in their own expressive conduct and symbolic creations in a never-fulfilled striving for perfection. The expressive/symbolic realm of this striving we inherently inhabit with others. Nothing we express 'means' simply in its own right. Consequently, our creative potential is realized only in and through an ongoing reflective appropriation of the normativity that inheres in our customs and traditions. Herder's understanding of human creativity is a genetic and not a nativist or empiricist one. Whereas the spider spins its web out of a "natural instinct for art," to use again Herder's words, we could say with Max Weber and Clifford Geertz that "man is an animal suspended in webs of significance he himself has spun" (Geertz, 1973, p. 5). The task of cultural psychology, then, is to understand how each person

is a unique and creative embodiment of a significance that exists only in its cultural and historical expressions.

Creative development as *Bildung*

As Herder developed his ideas about the creative origins of language and culture, his friend Goethe developed strikingly similar ideas in his studies of anatomy and plant morphology. For instance, Goethe attempted to show that the growth and metamorphosis of plants requires a *polarity* between vital impulses and productive restraints. Goethe was a holistic thinker and he was the one who introduced the notion of *Gestalt* into scientific thinking to refer to the idea of an organism or an aesthetic expression as an irreducible whole. The idea of a Gestalt as a holistic unity in perception and understanding would later play an important role in different strands of *Gestalt psychology.* Indeed, Gestalt thinkers were among the first to be interested in creativity. Yet Goethe was particularly interested in the *dynamic* aspects of Gestalt thinking and applied therefore an additional notion, namely that of *Bildung* (formation):

> The Germans have a word for the complex of existence presented by a physical organism: *Gestalt*. With this expression they exclude what is changeable and assume that an interrelated whole is identified, defined and fixed in character. But if we look at all these *Gestalten*, especially the organic ones, we will discover that *nothing in them is permanent*, nothing is at rest or defined – everything is in a flux of continual motion. This is why the Germans frequently and fittingly make use of the word *Bildung* to describe the end product *and* what is in process of production as well.
>
> (Goethe, 1988, p. 63)

Bildung as a technical term finds its origin in the study of morphogenesis, but it would acquire a far wider meaning with regard to creative human development through the work of Herder, Hegel, and von Humboldt. Goethe was of course the author who more than anyone gave rise to the genre of the *Bildungsroman* (see Bakhtin, 1986), and hence his use of the term can be associated with the way it came to be used in the German language and outside to denote the process of personal development, self-cultivation, and education. However, it was Herder in particular who gave the term its broad cultural and socio-political use. For Herder, *Bildung* referred both to the process of individual character formation and to the development of a people (*Volk*) as a whole. After him, both von Humboldt and Hegel would develop the notion of *Bildung* extensively in their own work.

Contrary to Hegel, Goethe did not see the polarities of life as mutual negations that need to be mediated and overcome in a higher-order synthesis. Rather, in order to reach maximum creative effect, those tensions need to be maintained and intensified as much as humanly possible. Such intensification requires restraint, discipline, and technical mastery and hence a general cultivation of the character and a

stylization of manners, taste, and aesthetic appreciation. Whereas the Romantics attempted to liberate the elusive creative genius of the individual from the stifling constraints of society and convention, Goethe realized that true freedom could be realized only in a creative harmonization of reason and feeling and in an alignment of one's own character with the needs of society and community (examples of how this dynamic plays out in the construction of life trajectories can be found in Zittoun & de Saint-Laurent, Chapter 5 in this volume).

Creativity as generative simultaneity

After Herder died in 1803, his holistic and generative understanding of language would be further developed by Wilhelm von Humboldt (1767–1835). Humboldt, however, incorporated many influences that included in addition to Goethe and Herder also the work of French thinkers on language and expression like Étienne Bonnot de Condillac (1715–80) and Denis Diderot (1713–84). Condillac was one of the first to recognize the non-rational origin of language in feeling and imagination and the pivotal role of reflective awareness, and was also among the first to see the constitutive role of language in thought. Moreover, in making the connection between language and thought Condillac recognized that language tends to move historically from its creative and poetic roots to a more systematic 'method' for thinking. This process requires that the energetic and creative flow of language be contained or confined, which on the one hand mobilizes it for further creative discovery, but on the other hand also tends to cut it off from its own vital sources. As von Humboldt would come to phrase it after him, although language in its essence is activity or *energeia*, it also requires the historically accumulated sedimentations of already produced meaning – which Humboldt called *ergon* – in order to be fully productive. The operational term in the work of von Humboldt was again that of *Bildung*, which always implied the harmonization of creative impulses and productive restraints, with those restraints themselves being the product of human activity.

Even more important for von Humboldt was the influence of Diderot, who in important ways had already extended the expressivist argument more implicit in Condillac (see Aarsleff, 1988). One of the ideas von Humboldt adopted from Diderot was that of the *simultaneity* involved in generative meaning, as opposed to the *successivity* of the process in which meaning is expressed in speech:

> The state of our soul is one thing, the account we give of it, to ourselves and others, is another. The total and instantaneous sensation of that state is one thing, the successive and detailed attention that we are forced to give it in order to analyze it, to manifest it, and to make ourselves understood, is another. Our soul is a tableau in motion, which we depict unceasingly; we spend much time trying to render it faithfully, but it exists as a whole and all at once. The mind does not proceed step by step as does expression.
>
> (Diderot, 1994/1749, our translation)

Notably, expression is not merely an awkward and deficient manifestation of an already completed inner reality. Rather, between the soul as a 'tableau in motion' and the soul as expressed in language and art exists a *generative tension* or *polarity* and this polarity holds the key to the enigma of human creativity. Much like Goethe, Diderot understood the relation between 'inside' and 'outside' expressively, that is, as a constantly changing relation between meaning as a 'state of the soul' and the demarcating categories of language, which both constrain and complete this meaning in a way that renders it available to others.

Remarkably, von Humboldt (1836/1988) would render 'tableau' in German as *Bild*, thus revealing what for him was a clear connection between Diderot's notion of the mind or soul as a tableau in motion and Goethe's notion of *Bildung* as the constant motion that connects different *Gestalten* or forms of life. The idea of an expressive relation between 'inside' and 'outside' would strongly influence Bakhtin, who read Diderot as well as Goethe and von Humboldt. For Herder, Goethe, Diderot, and von Humboldt the problem of creativity was still connected to the robust subject of modernity, even though they saw this subject as genetically constituted in language and culture. Bakhtin, however, would more radically break with the unison subject of modernity and connect creativity or *poesis* to the dialogical agency of a multivoiced self.

Bakhtin and the polyphony of meaning

Particularly relevant for cultural psychology in its present incarnations is Bakhtin's elaboration of the idea of *generative polarities* in human expression. Bakhtin offers what has been called a *dialogical* account of meaning and generativity. In psychology, Bakhtin's work has become a major inspiration for those who emphasize the inherently dialogical nature of selfhood (Hermans & Kempen, 1993; Bertau, Gonçalves & Raggatt, 2012; Cresswell & Baerveldt, 2011; Baerveldt, 2014a). As such it has also opened up new avenues into the study of creativity and self-expression (e.g. Cresswell, 2011; Karsten, 2014). More recently, cultural and cultural-historical psychologists have come to emphasize that not only the self, but also language itself is inherently dialogical (Linell, 2009; Bertau, 2014; Larrain & Haye, 2014; Lipari, 2014, Karsten, 2014; Baerveldt, 2014c). Bertau (2014) links the dialogical conception of language directly to von Humboldt's energetic understanding of language and development as generativity through duality and claims that the intricate relation between language and self should be at the heart of psychology.

Bakhtin's expressive or poetic understanding of language and meaning is one that involves a *generative juxtaposition* of 'voices' (Bakhtin, 1984). The key notion in Bakhtin's understanding of poetic or generative juxtaposition, however, is that of *simultaneity* (see Baerveldt, 2014a). Bakhtin's understanding of polyphony resonates directly with the ideas of oppositional tensions and generative polarities discussed earlier. Pugliatti (2012) claims that the concept of polyphony must be seen as a twentieth-century development of Keats' notion of *negative*

capability. John Keats (1795–1821), a main figure of the second generation of Romantics, was an admirer of Shakespeare and in a letter to his brothers on 21 December 1817 he wrote:

> [. . .] at once it struck me what quality went to form a Man of Achievement, especially in Literature, and which Shakespeare possessed so enormously – I mean Negative Capability, that is, when a man is capable of being in uncertainties, mysteries, doubts, without any irritable reaching after fact and reason.
>
> (Keats, 2011, p. 48)

Keats' notion of negative capability has for some become synonymous with the mysterious genius of the artist. Bakhtin's proximal influence in this regard was of course not Keats, but Goethe. Goethe's literary work in his later life embodied the idea of creative development or *Bildung* as an organic unification and harmonization of opposing voices and tensions. Goethe rejected the Romantic notion of the mysterious 'genius' of great artists and emphasized instead the importance of restraint and discipline. According to him, the creative impulses at the heart of each human life are not necessarily thwarted by convention. Rather, it is only by maintaining a productive tension between opposing demands and desires that we can freely and creatively express ourselves. Bakhtin, one might argue, maintains the idea of oppositional voices and tendencies in expression, but largely drops the idea of development as an organic unification. Prompted in particular by Kierkegaard's existential account of subjectivity, not Goethe's *Bildungsroman*, but Dostoevsky's *polyphonic novel* became for Bakhtin the quintessential expression of our age.

Polyphony as generative juxtaposition

Dostoevsky was for Bakhtin (1984) the creator of the truly polyphonic novel. Whereas in Goethe's *Bildungsroman* the juxtaposition of opposing characters ultimately served the creative development of the main protagonist, a novel like Dostoevsky's *Brothers Karamazov* does not have a clear protagonist, but expresses instead a plurality of voices. The *Bildungsroman* intensifies its main protagonist by setting him or her up both against opposing or contrasting characters and against the constraining demands of society, yet offers relief in the concept of development. The polyphonic novel, on the other hand, juxtaposes and counterposes its characters in a way that promises no way out, so to speak, yet allows the work as a whole to express a meaning that none of those characters, even in their creative development, could have expressed in their own right.

The poetic or generative nature of Dostoevsky's work lies for Bakhtin (1984) precisely in the way in which he draws his characters together into one 'space,' how he brings them in relations of almost unbearable tension, how he creates, as it were, a moral pressure pot without allowing any escape, resolution, final answers, or even the promise of moral or aesthetic development. It is the simultaneity and

polarity of different voices, different lives, each of them fully embodied and fully compelling, that for us, the readers, opens up into a depth of human meaning that is inexhaustible. Indeed, any finalizing voice or overarching authorial intent would only flatten out this depth of meaning and deprive the work of its ability to creatively renew itself each time it is read. Polyphony is creative expression definitively freed from the tyranny of individual motives vs. social demands. No longer defined in terms of an ultimate moral, aesthetic, or utilitarian 'outcome,' polyphony expresses the creativity of *open-endedness* and the generativity of remaining attuned to a significance that is not merely of our own design.

Conclusion

In this chapter we have argued that language and creativity are entwined because they have a common genetic source. Creative expression inherently plays out in the normative realm. Normativity, however, cannot be understood in terms of standards and conventions that are imposed on our actions merely from the outside. Rather, normativity implies an increasingly differentiated sensitivity to 'getting it right' and an ability to maintain a tension between vital impulses and productive constraints. Genuine norms are generative. Like the grammar of language we acquire such norms as productive or creative abilities or skills, active principles of formation rather than finalized forms or fixed conventions. Human creativity is not a faculty, but the dynamic consequence of a 'lack' or disharmony, a reflective distance to the center of our relations with the world. Precisely because we are compelled to reinvent ourselves and our worlds over and over again do we live in a condition of *responsive unfinalizability* rather than in a world of fixed significations. This is reflected in language as well as in other cultural expressions. Words become formulaic and cliché when they get cut off from the dynamic polarities of lived social experience, which alone allow them to creatively renew themselves. Likewise, cultural practices become empty and stagnant when they are acquired merely as formal procedures rather than as active generative principles. In our view the adjective 'creative' points not in the first place to something that is both 'new' and 'useful' in light of external social criteria and demands, but to cultural expressions that are able to renew themselves because they remain open ended and connected to their own generative sources.

Those generative sources point at human strivings that remain largely ambiguous and paradoxical. To return to one of the examples in our introduction, we may witness young, educated, and successful Muslim women who cover their hair, yet in a way that is meant to be seen, while making up their eyes and wearing designer clothing and sunglasses. We may see those women using the hijab as a sign of resistance precisely against those who are intent on liberating them. The modern hijab, accompanied by an entire style of dress, make-up, accessories, and verbal articulacy is profoundly polyphonic or polysemic to the extent that it is impossible to exhaust its meaning propositionally. Precisely because the hijab expresses so many seemingly contradictory things *at the same time* it becomes both a source

and a sign of cultural renewal, even as opponents see only signs of oppression and supporters see only signs of emancipation and freedom of expression. The hijab serves as what Raggatt (2013) has called an *ambiguous signifier* and it is this ambiguity, as expressed through style rather than statements, that has the potential to give rise to new cultural and personal meanings.

In a world that more than ever is calling for the creativity of freely expressive minds, it is perhaps the greatest irony that creativity is so often seen as an 'outcome' defined in advance in terms of utility, rather than as a generative capacity or an ability for cultural or personal renewal. If, as argued by all authors in this volume, the creative process is inherently a social and cultural one, this is not because others might later validate the products of my actions as 'useful,' but because others are already implied in the processes that allow me to express myself in the first place. If, on the other hand, my actions are genuinely creative, this is not just because they are new or unconventional, but because they remain connected to the social tensions and polarities that initially gave rise to them.

Note

1 In J. Manis (Ed.) (2003). *The complete poetical works of Percy Bysshe Shelley*, Vol. 2 (p. 127). Pennsylvania: Pennsylvania State University (original work published 1820). Also, freely available at http://www2.hn.psu.edu/faculty/jmanis/shelley/shelley-2.pdf.

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Chapter 8

The socio-materiality of creativity
A case study of the creative processes in design work

Lene Tanggaard

> William Morris aimed to break down the distinction between art and art-work, between idea and action. Every human should, in their different ways, create beauty no matter if they were creating a picture, a dress, and furniture. Likewise, every human being should be allowed to be surrounded by beauty.
>
> (Houellebecq, 2010, Danish edition 2012, p. 168)

This chapter takes as its point of departure an investigation of the potentials of looking at processes of creativity from a socio-material analytical point of view. A socio-material perspective underlines that materiality and artifacts are to be seen as substantial components of the process of creativity itself (Tanggaard, 2013a). In relation to current research on creativity within psychology and beyond, this is a rare point. It is still very common to state that "creativity is assumed to be present within every individual, although geniuses are rare" (Zeng, Proctor & Salvendy, 2011, p. 25). The source of creativity is time and again seen as residing within individuals. Furthermore, the result of creativity is often celebrated as a more or less individual achievement, and creativity is still closely aligned with the exceptional and the genius (McDermott, 2006). As recently stated by Moghaddam, much psychological science – and, I would claim, psychological research on creativity – suffers from the 'embryonic fallacy,' meaning that the independent individual is seen as the source and center of psychological experience (Moghaddam, 2010).

This chapter aims at a theoretical and methodological elaboration of the socio-material perspective on creativity. In short, this implies a close observation of how creativity comes into being in the relational space between subjects, objects and signs where people make new things by acting on the difference between what is there and what can be there (Glăveanu & Gillespie, Chapter 1 in this volume). That is: we can find creativity in those spaces where people try to bridge what there is already and what might come into being in the future. As such, the socio-material perspective on creativity is close to the cultural-psychological interest in developmental processes in the relational space between subjects, objects and cultural signs.

Inspired also by the suggestions for social science put forward by Latour (2005), this socio-material rethinking of creativity implies a research perspective which consists in following not only the individual thinking processes or the influence of context on the individual creative process, but more precisely the movements of ideas and the continuous and productive re-associations found in relational spaces during a creative process (Tanggaard, 2013b). To illustrate this, examples from a recently conducted case study of a concrete design process will be presented. Accordingly, the chapter will consider the concrete socio-material outset of creative processes (i.e., a design process unfolding in the relational assemblage of creative hands working with and grasping the creative potentials of pictures, artifact, houses, stories, etc.) and argue that creativity research should begin to study the materialized coming into being of creativity. Methodologically and theoretically, this implies that the researcher should focus on the movements, relations, associations and re-associations involved in creative processes as a main area of interest.

Creativity as an everyday phenomenon

The present chapter recognizes the need to break with creativity research's hitherto dominant focus on either the creative individual (e.g. measures of personality traits or cognitive abilities) or environmental factors inhibiting or facilitating creativity. In other words, the paradigmatic model for studying creativity has, by and large, revolved around the *creative person* and, 'within' the person, a strong emphasis was placed on cognition and individual attributes (Amabile, 1996; Glăveanu, 2010). Instead, what I suggest is that we study the characteristics of creative processes, avoiding the typical distinction between what is human and what is non-human. This would thereby allow us to perceive materials and artifacts as creative actors in what I call the socio-material relational space established between diverse forms of creative actors in real-life creative processes. As argued by Verbeek and Kockelkoren (1998), objects do have inviting properties or intentionality and, to quote just one example from their text "The things that matter": "The use that is being made of technologies cannot be completely understood by looking at the human half of the human-technology-pairing" (p. 36). Things matter.

However, creativity research has long been characterized by other approaches, by what Glăveanu (2010) calls 'He-creativity' and 'I-creativity' respectively. He-creativity is reserved for particularly unique geniuses or historic personalities such as Mozart or Einstein (often men!). In contrast, I-creativity is the idea that everyone has the opportunity to be creative. This latter idea is displayed for example in Guilford's (1950) emphasis on the fact that creativity is a normally distributed ability to reason in new ways. Within the I-creativity paradigm, creativity expresses an individual's ability for divergent thinking, which is in opposition to convergent thinking, the ability to reason logically and answer pre-set questions correctly. In common with much of modern psychology, both tendencies focus on

the (creative) individual and give limited consideration to the materials, objects and environments that make creativity possible.

In contrast to this, a socio-material perspective on creativity involves an analysis of materiality's importance for creativity, understood in terms of things, artifacts and physical conditions. It is based on the premise that the "environment, other animals, objects and artifacts are treated as integral to the enactment of human existence and social life rather than as simply background context or tools" (Fenwick & Edwards, 2013, p. 49). It also involves a certain understanding of the intellectual resources necessary for creative work (for instance, the ability to create new syntheses by combining insights created in various areas, the ability to analytically identify ideas that may be of potential value, and the ability to translate ideas into practice; Sternberg, 2006). These are understood as materialized, embodied phenomena in line with research stressing distributed cognition (Hutchins, 1996), situated learning (Lave & Wenger, 1991; Lave, 2011) and a truly relational understanding of the processes of thinking, learning and creativity (Wortham, 2006; Hasse, 2001; Haug, 2009; Lave, 2011).

Creativity thus occurs when we develop our practices in the space between what is and what is to come – not via isolated thought processes but as part of life itself. In a similar vein, to paraphrase Mason (2003), 'to create is to act in the world, or on the world, in a new and significant way.' Creativity is not mere 'novelty,' the new; it also involves 'value' (see also Oldham & Cummings, 1996; Amabile, 1996; Pope, 2005). In line with the above definition, it is thus vital to define creativity not just as the acquiring of new ideas through isolated forms of divergent thinking among individuals but also as the collective realization of these ideas in meaningful ways within social practices (Tanggaard, 2008).

The trouble with an exclusive and more individual understanding of creativity is that it tends to reserve creativity for the cognitive domain. As stated by Mumford:

> Creative thought has served as a foundation, or reference point, for most studies of creativity. If we do not know how people generate new ideas, it is difficult to place observations about motives, dispositions, situations and developmental change in context.
>
> (2003, p. 111).

However, actual people are constantly engaged in transforming, changing and renewing existing traditions and ways of living their lives and these transformations need not be based on intellectual, cognitive activity or 'new ideas.' Some changes in our lives can be based on old ideas, however odd it may sound in a culture celebrating 'the new' (Bilton, 2007). Indeed, the cognitive, intellectually derived ideas may not even come first when we actually change social practices. Some changes happen without notice and/or through the gradual erosion of current forms of natural/cultural forms of life, changes which may at times be based on divergent thinking, but surely also convergent thinking, routines, habits and

daily cultural practices (for a detailed account of creativity in relation to normativity see Baerveldt & Cresswell, Chapter 7 in this volume).

Materialized becoming

A direct expression of the socio-material understanding of creativity is the fact that design is nothing without materials. All ideas for something new – a new house, a new car, a new piece of clothing – require materials. An architect's design does not become a new house without building materials and without the builders who raise the house and make it habitable. Moreover, although any of the buildings planned by architects are often never built, the designs exist in some material form, e.g. on paper or computer, and were created using material tools. Moreover, the architect creates his design with the known affordances of building materials and, normally, with a particular material in mind (see also Costall, Chapter 4 in this volume). The idea that creativity exists in the dialectical relation between individuals and materials in social practices represents a very real break with the individualized conception that creativity originates from intellectual, cognitive achievements or from individual emotional sources alone. Creativity is, on the contrary, expanded to include the materials that one is working with and that quite concretely comprise that which is created as well as the continually developing creations of the products we generate. As described by Ingold and Hallam (2007, p. 3): "because it is the way we work, the creativity of our imaginative reflections is inseparable from our performative engagements with the material that surrounds us." However, for psychological science to discover this, it requires that we move the study of creativity beyond testing divergent thinking abilities. In this regard, psychology can indeed seek inspiration in studies of design (as in the present chapter) and in architecture.

In a study of the performative roles of materiality for collective creativity among students learning architectural design, Jacucci and Wagner (2007) argue that the "literature on creativity has mostly focused on individual cognitive processes neglecting the influence of material features and the collective character of creativity" (p. 73). They argue that the possible role of materiality rests in its ability to speak to 'multiple senses' and they point to the significance of shared experiences, dynamic interactions and bodily engagements beyond the purely cognitive. Through their participant observations of architecture students, they show how metaphors and diverse materials are an important vehicle for communicating complex ideas and concepts shared among the students. Also, the students select and probe different materials through exploring tactile properties, temperature, smell, moisture and surfaces that carry meaning. That is, the richness and diversity of material features engage and activate our senses: bodily, tactile, olfactory, auditory and visual, as well as different modes of expression.

Moving beyond architecture and design, Vera John-Steiner (1997; Chapter 3 in this volume) also points towards the importance of artifacts for creative activity, based on her studies of letters, notebooks and interview materials obtained

from artists and scientists. Quite literally, notebooks, sketches and outlines, but also different kinds of invisible tools, play an important role in creative work. Thomas Mann, for instance, describes how he arranges these invisible tools: "For writing I must have a roof over my head, and since I enjoy working by the sea better than anywhere else, I need a tent or a wicker beach chair . . . For a longer book I usually have a heap of preliminary papers close at hand during the writing, scribbled notes, memory props . . . " (John-Steiner, 1997, p. 76). It is here that we find the reason for the experience many of us have: It is contact with or resistance from the materials with which we work that causes new ideas to arise. Creativity is fundamentally relational – even if the immediate experience may be that good ideas pop into our heads.

Thus, architecture and design studies, as well as music studies (Lock, 2011) and Steiner's notebook studies, point towards the role of human-made artifacts in creative activity, an aspect neglected or overseen by many psychological treatments of the concept. However, Jacucci and Wagner also point to the fact that materials have a history, communicating preexisting ways of doing, emerge as part of specific activity and become part of performative action in the future.

Re-creating Wiinblad

In the following, I will shortly introduce the case study serving as a basic inspiration in the present context. The study reveals quite vibrantly how the creative process is experienced by the creator and, also referred to by Glăveanu and Gillespie (Chapter 1 in this volume), how the process of creativity unfolds in the 'gap' or disjunction between experiences, events and artifacts (and their context) as they were in the past, exist in the present, and can potentially be developed and used in the future.

As a researcher, during the year 2012 I had the pleasure of being allowed to follow a Danish designer's work creating a new product line (cups, vases and cans) for a recognized Danish design company. This has given me a unique opportunity to study the unfolding and development of a creative process.

The designer, Caroline Abild Jessen, was, a year before, given the task of designing a new hardware product line based on the ideas and concepts developed by the late Wiinblad (1918–2006), a widely recognized Danish artist. Internationally, Wiinblad's works are among the best-selling artworks from Denmark, and he had exhibited his design objects at the Victoria and Albert Museum in London and the Museum of Modern Art in New York.[1]

The aforementioned Danish design company has bought the rights to develop, market and sell products based on Wiinblad's work, and it asked Caroline to help it develop a new product series that was distinctively Wiinblad but fitting with today's customer taste. The series of products is planned for release in 2014 and it will consist of various kinds of everyday cups, plates, vases and biscuit tins.

While he was still active, Wiinblad was an extremely productive artist. He is often described as a colorful, exuberant and humorous artist. He was inspired by an imposing oriental style far removed from the typical Nordic minimalism. In my own childhood home there were, as was the case in many homes in the 1970s and 1980s, many works of Wiinblad hanging on the walls, and his well-recognized and very popular platters were used to serve herring for lunch at weekends.

As such, Wiinblad covered a wide field. On the one hand, he became an accessible artist for many, and he did a lot to democratize access to art and artworks for everybody. On the other hand, he was exotic, and he celebrated himself as such with dinner parties for the then local artist elite at his house in Copenhagen. He was internationally recognized, and he won prestigious prizes for his work. He was anything but ordinary, even if Caroline told me that her visits to his house during the design process revealed to her that his creative approach could be deemed very 'normal,' at least in light of the fact that it seemed to resemble Caroline's own approach.

The set assignment for Caroline has been to find the lines and pattern in Wiinblad's work and, on that basis, to create a new product series whose ideas and point of departure should be clearly Wiinblad. As will be evident, a key consideration for Caroline in this respect has been how she could communicate Wiinblad's colorful, excessive and somewhat childish style while still making the products appealing for today's consumers, and not least among them for those families who would potentially purchase these products.

Accordingly, Caroline's main focus has been on how she could make the line of products available to as many people as possible. One could say that Caroline has been concerned with realizing the vision of making art obtainable for everyone, as mentioned by Morris and Houellebecq in the introductory quote.

As an author of Caroline's story in this context, I have had a somewhat similar concern. Mine is not to make art accessible to as many as possible, but more to break down the distinctions between high art and everyday art, not least regarding the descriptions of the making process. I guess that what Caroline's design processes reveal is that they sometimes resemble art, meaning creating something out of sheer inspiration, bearing the personal touch of Caroline's own style, while at other times they resemble craftwork, trying to follow the tradition and style already laid down by Wiinblad. Likewise, in a comparative case study of new product design consultancies conducted by Gotsi, Andropoulos, Lewis and Ingram (2010), the authors show how creative workers often experience inner conflicts. On the one hand, 'creatives' desire to see themselves as distinctive in their artistry, passion and self-expression, nurturing an identity that energizes their innovative efforts. Yet, daily pressures to meet budgets, deadlines and market demands encourage a more business-like identity that supports reliable performance. This requires the workers to manage possible *identity tensions* related to both differentiations and integration strategies, adopting both a creative and a

business identity, and to work towards a more synergistic meta-identity as "practical artists" (Glăveanu and Tanggaard, 2014).

Researching the creative acts of redoing Wiinblad

What was Caroline's creative process and how did it proceed?

Since March 2012, I have had a series of informal meetings with Caroline, following her considerations and reflections concerning the process of design.

It was, as it is often the case in real life, almost by chance that we happened to meet. Caroline was originally educated as a textile designer, and she had designed, among other things, bed linen for IKEA, but she was also a photographer and this is what brought us together in the first place. Actually, one of my book editors introduced me to Caroline at a book fair in Copenhagen in November 2011. The book editor thought we might have something to talk about as she knew about my interest in creativity. Caroline had been doing some photos for a book on show at the fair, so we met and talked over a cup of coffee, sitting in the midst of hundreds of books.

However, it was not until spring 2012 that I discovered that Caroline might be able to help me understand the process of design from a research perspective. To top it all off, a reinterpretation of the works of Wiinblad necessarily involves the dialectics between past and present, between what is old and what is new, which has always caught my interest as a researcher exploring processes of creativity (Tanggaard, 2010; 2013a). Accordingly, my main question has been: How does Caroline manage to balance the old and the new in her design processes and what kinds of considerations, reflections and actual work processes are involved?

The above question resulted in me asking Caroline if she would help me illustrate the process of creativity and, even if she was initially a bit surprised (who would be interested in that?), she said yes. Soon I bought a digital recorder which I gave to Caroline and my task for her was quite simple: "Record whatever comes into your mind concerning the process of working with Wiinblad. Use the recorder to reflect, while you are working. Do it whenever you feel like it and have time available." This resulted in 25 recorded moments (lasting from 3 minutes to 25 minutes) of reflection, often recorded by Caroline while she was doing other things like driving her car or walking around in Wiinblad's house.

My intention in giving Caroline the recorder was to get as close as possible to design reflections initiated by herself (and not by a particular research question that could potentially drive her in other directions). On the practical side, it was also relatively easy for both me and her. Because we had known each other from before, I trusted that Caroline would be able to reflect quite spontaneously, without me having to travel a long distance to hold face-to-face meetings and obtain her reflections on tape.

Returning to Wiinblad

So, how are we to get more insight into the socio-material perspective on creativity through a concrete study of a design process? What are the roles of artifacts

and materials in Caroline's process? How does she work? Where does she seek inspiration?

What struck me immediately, when listening to Caroline's voice and stories, is that the design process can almost be compared with an anthropological field study where Caroline is slowly gaining an insight into the life of the man whose artistic heritage she is now partly (others do the same) administering and redesigning. She kept visiting his house, searching for pictures in the cellar, and she found portraits, selected motives and recognized patterns with which she could work.

In the following, selected digital recordings from Caroline will be presented (in my slightly revised form, making them ready for textual presentation). They illustrate steps in the design process from June to July 2012. I will then analyze and discuss these with a particular emphasis on the materialization of the process of design. We begin in June 2012 with Caroline's reflections about having been taught for the first time how to engrave and paint on glass, learning more about this material and its possible role in the new design series.

> *First day, June 2012.* It has been a fantastic day. I have learned so much about glass, how to engrave and paint on glass, inside, outside and on a three-dimensional plane. I have been taught by a very experienced glass artist from Holmegaard (a Danish quality glass company). I have seen huge stores of material. My head is full of techniques. I visited Wiinblad's house for three hours. I am completely overwhelmed. I am extremely privileged to be allowed to visit such a private place as we did and to have the opportunity to develop his concepts. The amount of his creativity is extreme. I thought it was an orderly house, but there were books all over the place, he had his own library, it was a hullabuloo (crazy) house and all the workshops there, the studio, all the models still being there. The entire process of design was present. Things I could not stop looking at, his faces of women. It is something we have lost in our minimalistic present, poetry, a story, something very sweet. It is a very romantic world. He did not watch TV. It would have destroyed his world of fantasy.
>
> *The day after.* It was really fantastic to visit the house. It made me find my arguments for making the series of products colorful. Wiinblad had a passion for children. It is not going to be a series of products for grown-ups. I would like families to buy the products, and they don't prefer blue and white. There need to be colors all over. After the crisis, we need colors; everything is black and white at the moment.

As the transcript makes quite evident, Caroline was keen on making a colorful design and the argument for choosing a design full of colors was directly inspired by visits to the house of Wiinblad, recognizing how signs of his world of fantasy were still present everywhere. Choosing a particular focus seems to be based on a concrete, materialized outset. However, it is also based on

the need for creative breaks and air, as shown in the following passages from Caroline. Furthermore, we learn how important the first moves in design can be for the rest of the process, the first sketch or the first aesthetic move, as Caroline put it. What is also vividly illustrated by Caroline is how deeply relational the design thinking process seems to be, with Caroline constantly trying to put herself in the customers' shoes, seeing the potential design from their perspective. Let's follow Caroline in her next reflections and then move back to the theoretical analysis towards the end.

The 3rd day. I have been in Copenhagen for three days and seen more than 6,000 pictures. My head is full and I cannot think. I need to wait and only look at it again when I'm ready. At some point, you need to see something else to find out how to challenge materials, patterns, graphically, everything. I must select 1,500 pictures to work with. I'm not complaining about sources of inspiration, but I need to make some choices and for that, I need air. It requires that I watch something completely different. I must go shopping and talk to other people. In this case, it can work in the back of my mind but, at the moment, I need air, it is always like this after the research phase. I need to demolish, to remove and put aside, to add more details, to reflect.

The 4th day. I'm about to make my first aesthetic move. I have been letting off steam. The first move always sets the tone for the rest. It influences the rest of the collection. I choose what I find is beautiful and nice to look at, the naïve, the flowers, the big eyes, the stories between people communicating something, the organic, the powerful, the circular.

The 5th day. I have moved on with the first sketches, the pictures have been printed. I'm looking for stories, rhythm, dynamics, strokes which may indicate where to put the first lines on the cups. The customer will need to immediately recognize that this is Wiinblad. I'm looking for what is big or small, the flickering parts, something familiar and something strange. I'm also testing the colors, searching for transfer, getting all the details in place. He was a man of details, but I also need to find out if it can be done on porcelain or ceramics. It is also a matter of money, and ceramic is more expensive. There will be many women and stories and I'm considering if the cups can be harmonized with the chopping board, the vases in glass and different versions of it. Very many things are up in the air at the moment and I simply need to just get started. It's a heavy road to travel, but I'm hoping to have my first version ready tomorrow to show it to my boss.

24 June. It's a day of crisis. I did begin with the patterns on the cups, but it looks as if I have just plastered Wiinblad all over the cups. It is nice, but it is not good enough. I'm blocked. I need to start at another place or put it aside for a moment. How can I make it more exciting and new? I

must seek coincidences, the uncontrollable. Mistakes which I might use, old sketches put aside, something to fool around with. It may take 100 years but, at the moment, I'm looking for mistakes and failures because these places are often places for new thinking, but it takes many years to recognize this.

26 June. Many things have happened. My boss has allowed me to work with the colors, and she actually suggested that we visit his house again and look at the 'pantone' colors and take more pictures. We also talked about fragmentation, and she asked me to do what I preferred. This project is going to be much more different than I initially thought. I thought it would be different depending on the colors and the technique, but I guess I'm about to create something really new. It is going to be a Bjørn (Wiinblad) and Caroline hardware set, I'm about to combine the whole lot. It is resembling more and more my normal building patterns process, via my inspiration from Asia and furthermore, I will give it my own touch. Today, it has become a Caroline and Bjørn set – amazing.

4 July. I'm feeling bad, because I have not yet cracked the code. I have not found the new style. I guess I have to visit a desert island and just paint. The code will first be cracked when I begin drawing.

15 July. Three weeks ahead of me when the task is simple: draw. Now we know what to do. I have taken the works of Wiinblad and painted them so that they fit the new products. There is going to be a presentation in August. I think I have cracked the code. I'm cutting bits and pieces, but it works. I'm underlining Wiinblad while bringing it into a new context. I'm adding and subtracting, placing branches, birds and summer birds as decorations, but it is still his birds. I'm placing people in a wood, added a bit more to the women's hair. I'm drawing so that things stand out more clearly. I'm moving closer, working with the colors. I'm creating new universe, but it is still Wiinblad. The big task for me it to frame a new universe, respecting and underlining Wiinblad while still giving it my touch.

On 3 September 2012, the new product series was approved by the design company, awaiting the response from the market.

Analyzing design

Human and material actors are surely mutually related in the story of the design process revealed above. Even if the human subject, materialized in Caroline's voice, is still central, it is evident how Caroline counts on many other actors in the process; from the customers, to pictures found in Wiinblad's house, patterns, stories, etc. and she does indeed follow the traces of many kinds of actors. The process also seems to have a zig-zag character (Sawyer, 2013), moving back and

Figure 8.1 Caroline during the creative process

forth, encountering obstacles, finding inspiration, needing time to breathe, finding the appropriate balance between what is old (defining the tone) and what is new, what 'is' Caroline and what 'is' Bjørn, what is art and what is craftwork. For Caroline, the breakthrough happens twice. First, when visiting the house and seeing the design of Wiinblad coming to life among women's faces and bright colors, books and models in the house and, second, when being allowed to find her own signature, adding Caroline to Bjørn.

Many psychological treatments of the phenomena of creativity define it as the ability to think in novel and valuable ways. A central component of this is often perceived to be the divergent thinking of the individual person, as mentioned in the introduction. However, what became evident from our case study is that Caroline (Figure 8.1) continuously refers to things, events and materials in her stories, she talks about cracking the code, going for a walk and visiting shops, seeing friends, talking to people, looking at photos. While these activities do involve thinking, they are much more than that. They imply action, moving, making new associations between entities not connected before, getting into the stories and materials of Wiinblad to really understand them and go a step further from the initial ideas.

Which methodological implications follow from the above examples? These examples consistently point to other elements than the intentional, human actor and highlight the need to show an interest in what might 'turn up' and the context of

creative action: laughing women, the pictures in the cellar, the objects of design left by Wiinblad, Caroline's camera, the finances guiding the decision to use glass or ceramic as materials, the boss telling Caroline to move more freely in the design process, and many more. As such, we should begin our research journey by following the traces left behind by, in this case, Caroline's new design activity. The researcher needs to describe these movements, lines, traces, and must engage in a kind of backward reading of how the final product came into the world.

Furthermore, the activity is shaped through and not just by materials. As argued by Costall (Chapter 4 in this volume), objects such as models or figures in Wiinblad's house afford and invite Caroline to think about colors in the new design line, building a relational space populated by both subjects and objects (see also the discussion about physiognomic qualities in Wagoner, Chapter 2 in this volume). There is, in the actual process of design, no separation between Caroline and the range of materials with which she works, or rather, Caroline cannot describe the process without including references to all the materials that inspired her. The design process is indeed socio-material. Similarly, cultural-historical activity theory, spatial theories, materialist feminism and Actor-Network-Theory are all theoretical approaches or arenas pointing towards this idea of knowing (and designing) as enactment and experimentation rather than seeing or representation. The subject is not separable from the object, the creator from what is created, things and subjects emerge as 'outcomes' of connections and activity, material things are performative, they are matter and they matter (Fenwick & Edwards, 2013). Within this theoretical approach towards understanding the practical activities of human life, there are no individuals standing in front of things, but rather relations, mobilities and mediations. The result of creativity is that networks of things and ideas have become connected and are materialized in new forms.

In a paper entitled "Towards an epistemology of the hand," Brinkmann and I (Brinkmann & Tanggaard, 2010) argued, in line with this pragmatic, performative perspective, that experiencing the world – and knowing it – are functions of our practical activities, of our *handling* the world and its problematic situations. What we experience and know about the world are primarily aspects of the things that we interact with and manipulate (literally 'handle with our hands').

Things are not first and foremost entities independent of organisms that have objective physical characteristics that can be *seen*. Rather, "things are objects to be treated, used, acted upon and with, enjoyed and endured, even more than things to be known. They are things *had* before they are things cognized" (Dewey, 1925, p. 21). And this is the reason why creativity is moving in the space between what is and what can be, literally grasping the future.

Now, a possible critique of this new emergentist ontology is that it favors technical and even technological determinism over human subjects and human will. However, as pointed out by Fenwick & Edwards "this is not an anti-human post-humanism where technological enhancements and digitized bodies are the nightmare of lost human dignity and subjectivity" (Fenwick & Edwards, 2013, p. 58). It rather liberates agency from its conceptual confines as a human-generated force

and serves to illustrate the many driving forces of enactment and bringing to life. Nothing is determined; on the contrary, all kinds of future possibilities remain open because every encounter can be reinterpreted and redone touching on the dynamic between new or different actors.

As such, in the present context, creativity was understood and researched as 'potential becomings' along certain creative design pathways. There is a striking need for such approaches in today's creativity research. As stated by Kahl, Da Fonseca and Witte in a review paper on creativity research that compares past and present approaches in the field: "Recent postgraduates place more emphasis on investigating creative products compared to their predecessors in the 1986 sample; however, research on creative processes is less substantial in the current sample" (Kahl, Hermes da Fonseca & Witte, 2009, p. 5).

As such, while studies of creative processes are nothing new, they seem to be less prominent today than just a few decades ago. Most current research on creativity tends to measure creativity retrospectively; counting for example the number of patents in companies, the number of citations among researchers, papers published or products produced. This means that creativity is closely connected to outcomes, objects and production. The same tendency can be found within innovation studies. However, many other researchers (cultural psychologists included) ask for more process-oriented studies of innovation. Otherwise we would remain with a focus on the end product and, furthermore, ignore the complex and messy aspects of everyday innovative processes, including those in which new ideas are killed in the initial phases (Ingerslev, 2013).

There is of course nothing wrong with a focus on products or end results per se, but this chapter suggests that we should look at creativity from a more prospective angle, giving creativity a forward reading, seeing it and studying it as a kind of making, resulting in things and new forms of practice (Ingold, 2013).

Conclusion

The present chapter has presented a theoretical reflection on the socio-materiality of creativity. It outlined key ideas within the socio-material perspective on creativity involving an analysis of materiality's role in the creative process; materiality was here understood as things, artifacts and physical conditions based on the premise that the environment, other animals, objects and artifacts are treated as integral to the enactment of human existence and social life rather than as simply background context or tools.

Furthermore, examples from a recently conducted case study of a concrete design process were presented. This revealed the specific socio-material outset of a design process: reworking Wiinblad.

The chapter basically suggests that creativity research is in fact *the study of the materialized coming into being of things*. Methodologically and theoretically this implies that the researcher should focus on the movements, relations, associations and re-associations constituting the creative process in the chosen area of interest.

Practically, the socio-material perspective may help relieve the burden placed on individual creativity in modern-day, individualistic cultures by pointing towards many potential creative actors and the creative potential found in materials surrounding us and acting upon us – with or without us being aware of them.

Note

1 http://www.bjornwiinblad.dk/bjoern-wiinblad/kunstneren/

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Chapter 9

Discussing creativity from a cultural psychological perspective

Alex Gillespie, Cor Baerveldt, Alan Costall, James Cresswell, Constance de Saint-Laurent, Vlad Petre Glăveanu, Vera John-Steiner, Sandra Jovchelovitch, Keith Sawyer, Lene Tanggaard, Jaan Valsiner, Brady Wagoner, and Tania Zittoun

Alex Gillespie: Each of the forgoing chapters has advanced differing aspects of the cultural psychology of creativity. In this final chapter we aim both to synthesize what has been written and also catalyze future directions for research. To achieve this aim, we are harnessing the creative potential of social processes by jointly writing the chapter as a dialogue. The questions addressed will be first, what is creativity from a cultural standpoint, and second, what implications might this standpoint have for intervention, methodology, and future research.

Keith Sawyer: Many people believe that creativity is generated by solitary individuals, a 'lone genius' view of creativity. And yet, all of the research, including historical, biographical, and empirical social sciences research, shows that creativity never comes from solitary individuals. Creativity always emerges from collaborative groups, conversations, and social networks. This is why we need the cultural psychological perspective: to help us explain the social interactions that generate creativity. In particular, the cultural psychological perspective is essential in analyzing and explaining how creative breakthroughs emerge over time, over weeks, months, and years.

Brady Wagoner: Keith makes the important point that cultural psychology sensitizes us to social relations and emergence over time as key to understanding creativity. The issue of time makes me wonder if we might do better to talk about the 'creative process' or 'creative action,' than 'creativity' as such. The term 'creativity' encourages us to think of it as a thing, which either resides in individuals or is an end product of their interactions. What we should be focusing on, from a cultural psychology perspective, is creativity as a complex ongoing process, oriented to an open future, in which social others and cultural tools directly participate in and are constitutive of. A similar move was made in another research context by Frederic Bartlett (1932/1995), who began to talk about 'remembering' rather than 'memory.' In other words, he aimed to move away from studying a mental faculty, and instead focused on exploring remembering as a complex activity, occurring in time and incorporating multiple processes, the most important of which are social and cultural.

Alan Costall: "Like other learned branches, psychology is prone to transform its verbs into nouns. Then what happens? We forget that our nouns are merely substitutes for verbs, and go hunting for the things denoted by nouns; but there are no such things, there are only the activities that we started with, seeing, remembering, and so on" (Woodworth, 1921, pp. 5–6).

Unlike the adjective 'creative,' the noun 'creativity' only gained wide currency in the 1950s (see Google nGram, Michel et al., 2011). The noun form has encouraged researchers to hunt for the 'thing' it is supposed to denote, to present us with theories about 'it,' and on the basis of these theories, to find ways to enhance 'its' performance.

In my chapter (Chapter 4), I did my best to avoid 'creativity' and talked instead of 'creative activity.' There are, of course, a wide diversity of different activities people engage in. There are also a wide diversity of ways of being creative in relation to any one activity, including ways that so radically transform a practice that the new 'creation' may not be recognized, at least initially, as part of that very practice. In this sense, we must recognize that the word 'creative' is an evaluative term, and perhaps an even 'essentially contested' term (Gallie, 1956).

One additional point: Several chapters in this volume have emphasized the sociocultural preconditions of creative activity. But, there are also 'post-conditions,' that is to say, the emergence of something as creative also depends on how it is received by other people. George Herbert Mead talked of the "completion" of the meanings of what we do by the people around us (Mead, 1934, p. 78–9). As the saying goes, 'It's only a joke if somebody laughs.' We now regard Alfred Wegener's theory of continental drift as an exceptionally creative contribution to science. Yet for many years it was a rather bad joke.

Lene Tanggaard: I agree completely with Sawyer's comments about the fundamental we-character of creativity/creative processes. No one ever invented the wheel alone (Ville, 2011).

I want to follow up on Alan's comments relating to both the problems with the term creativity and its dark, other side. In the Danish language, the first usage of the noun 'kreativitet' (creativity) occurred barely 50 years ago, in 1964. Before 1940, however, it was hardly used outside theological discourses. Other nouns like 'genius' or 'imagination' seemed to capture those qualities which 'creativity' nowadays appears to stand for. As pointed out, there is a remarkable similarity between themes and topics in the 'genius' research from the nineteenth century and contemporary 'creativity' research (Albert, 1969). The current interest in creativity differs from earlier approaches to 'genius' in one important respect however: Creativity is today thought of as indispensable for the future prosperity of the knowledge economies. Creative skills and processes may be extraordinary, but it seems of great political and economic importance that everyone, not only gifted people, start acting creatively. In Csikszentmihalyi's (2006) terms, creativity is "no longer a luxury for the few, but a necessity for all" (p. xviii). Furthermore, research by Amabile (1996) has revealed that creativity is better

understood as a relational process in social practices rather than being the mysterious product of an unknowable inner world. Formerly, there was a clear underlying assumption that creativity existed as such independently of social norms and cultural conventions. However, as stated by Glăveanu, there is currently within the literature great consensus that "something is creative when it is both: a) novel or original and b) useful or valuable" (2010, p. 102), which underlines the normative aspects of creativity.

The present definition of creativity in terms of novelty and usefulness exposes its cultural embedding and raises important questions about the processes by which people and products in communities of practice end up being called creative. However, we still do not know why creativity often gets destroyed rather than promoted and what happens when something ceases to be perceived as creative and innovative. Or do we?

Jaan Valsiner: Two levels need to be distinguished: One is *society's accepted discourse* about phenomena of creative/innovation processes. This gives us recently established nouns, such as 'creativity' and construct entified 'thing' that the noun supposedly represents. Such 'nouning' itself is not part of what it depicts. As Russell (1908) and Bateson (1955) have established, a category *label* does not belong to the category itself. For example, you cannot sit on the *word* 'chair.' From this viewpoint, the noun 'creativity' does not belong to the realm of *creative processes*. In fact it may be the end of such processes . . . imagine a suggestion to Picasso "you should be creative!"

The second level is that of processes that actually produce innovation, that is, creative processes. These can be explained in terms other than creating nouns for them (e.g. Baldwin's (1894) concept of persistent imitation).

Vlad Petre Glăveanu: Jaan makes an important point by distinguishing between creativity as representation and creativity as action. What I think is central for the cultural psychology of creativity is to study the way these relate (support each other, co-evolve, and, at times, generate tension and contradiction) at different levels: societal, ontogenic, microgenetic (Dunveen & Lloyd, 1990). A clear transformation in how both the creative agent and other people understand the practice of creativity takes place once the label 'creative' (or 'original,' 'useful,' 'important,' etc.) is attached or, more precisely, attributed to it. These kinds of attributions depend of course on larger systems of practice and representation, as well as the domain of the 'product' (ultimately, the social interaction that generates creativity, in Keith's terms).

In essence, to understand that something is creative means to perceive it as new and of value for self and/or others. This judgment is not inconsequential for how creative work progresses. While some creators certainly benefit (e.g. become more motivated) from this kind of attribution, others struggle to attain recognition. This view is well inscribed in systemic models (e.g., Csikszentmihalyi, 1988). The great contribution of the cultural psychology perspective is, above and beyond such

models, recognizing that creativity doesn't depend (only) on institutional recognition; representations of what is and what is not 'creative' are constantly being formulated and negotiated at different levels and by different people in concrete contexts such as families, schools, companies, and so on. From this perspective, creativity as representation does not only reproduce societal discourses but actively re-presents them and, as such, contributes to their ongoing transformation, as well as the transformation of actual creative action. That is to say, the two levels distinguished by Jaan, while being logically distinct, do impact one another. In the end, I agree with Brady and Alan that focusing on 'creating' rather than 'creativity' should be our aim, but we should also remember that 'creativity' (however we define it, as per Lene's reply) is actively involved in the act of creating and, itself, is the result of a 'creative act' (that of investing action with meaning).

What 'holds' creativity as representation and creativity as action together and integrates them? Perhaps something we unfortunately hear very little about in psychology, that is, 'creativity as experience,' which, in a cultural psychological sense, is not an intrapersonal but fundamentally shared phenomenon, developed at the encounter between person and world (Dewey, 1934).

Cor Baerveldt: By understanding 'creativity' as that which is both novel and useful, we understand it in terms that remain external to the creative process itself. I would like to challenge the assumption that novelty and usefulness are adequate criteria for deeming something creative. A dancer or a musician can creatively perform the same piece over and over again in a way that is 'fresh' each time it is performed. A society can repeatedly renew itself in a creative reenactment of the same myths. What makes each of those performances 'creative' is not that they are new and useful according to external social criteria, but that they are created anew with each performance. I think that this is also captured in Baldwin's notion of persistent imitation, referred to by Jaan. Genuine imitation is not just copying external behaviors or social conventions, but acquiring a generative principle that allows one to freshly express or perform those actions "in forms peculiar to one's own temper and valuable to one's own genius", to use Baldwin's (1911, p. 22) words. In other words, genuine imitation is creative, but not necessarily 'novel.' I would argue that it is only by acquiring the dynamic generative dispositions to creatively perform certain actions that we can potentially create something genuinely new. True creativity requires skills and proficiency and cannot just be a matter of accidentally stumbling upon something new that is subsequently recognized by others or society as useful. 'Creativity' gets lost precisely when we act only according to 'external' criteria, demands and conventions, without maintaining a connection to the 'inner' lived reality of the cultural competences we acquire. Perhaps that is precisely what Vlad calls "creativity as experience."

Tania Zittoun: I agree with many points raised. Rethinking creativity from a cultural psychology perspective emphasizes processes; instead of 'creativity' the focus is on 'creating,' as Brady, Alan and Jaan suggest. This approach also

emphasizes the social, cultural and historical dimensions. Additionally, this cultural approach should lead us to critically examine the social uses of the notion of 'creativity' itself. I want to highlight another aspect of a cultural psychology of creativity, a tension within the study of creativity which is implicit in what has been said so far, and perhaps present in the idea of 'creative experience' (mentioned by Vlad and Cor) and the examples introduced by Cor, namely the tension between shared and individual creativity.

An assumption from cultural psychology is that human experience is always already cultural. This assumption reveals, as has been emphasized, that human activity takes place in a social world, shared with others, within specific social fields and traditions – and so it is for creating as well as creativity. But another implication of this is that even the 'solitary' mind, to borrow Keith's expression, is actually culturally and socially constructed. Hence, even when the person is thinking or day-dreaming alone in a room, they are still 'cultural.' This is because the stuff of one's dreams, or the resources one uses to think or imagine, result from the internalization of cultural experiences.

My point is that we also need a cultural psychology of creativity to account for the fact that individuals alone can be creative/creating: this temporarily lonely activity is always and already taken in streams of social and cultural meaning and previous inventions. My worry is that, with an emphasis on shared creativity alone, or situated creativity, we will reproduce in the field of creativity psychology the same mistake found in educational psychology: for years, the emphasis on the socially situated nature of thinking and learning led to the gradual disappearance of the individual from sociocultural enquiry; there was 'learning' but no one, no person, to feel, hope, fear or enjoy its meaning.

Both Vygotsky (1931) and Winnicott's (1971) understanding of creativity tries precisely to address this 'internal' moment or aspect of being creative/creativity, whilst still retaining a sociocultural focus. Both of them also fully acknowledge that being creative alone is always also and already cultural ("at the meeting of the person and the world," in Vlad's comment). These authors are also interesting for another reason: they would fully acknowledge the creativity of a repeated action. A repeated action is actually new in time and can be new in experience. As Winnicott (1970, p. 43) wrote: "In creative living you or I find that everything we do strengthens the feeling that we are alive, that we are ourselves. One can look at a tree (not necessarily at a picture) and look creatively."

Hence, beyond the social and normative evaluation of what is creative for a society, perhaps there is space for cultural psychology to consider the individual evaluation of one's own creative thinking as a dialogical, that is cultural, evaluation. In other terms, perhaps even little-c or daily creativity can satisfy the conditions of being also (experienced as) "a) novel or original and b) useful or valuable" (in Lene's comment).

Alex Gillespie: There is evidently a healthy diversity in the cultural psychology conceptualization of creativity. Several dimensions have been raised: the focus

on 'creating' instead of 'creativity,' the focus on the social and historical context instead of just the individual (but, as Tania reminds us, the real challenge is not to ignore the individual, but to socialize the individual, to conceptualize even the solitary daydreamer as being creative through internalized social processes), the focus on the psychological processes instead of the outcomes, the focus on reproduction in novel contexts instead of novelty itself, and the focus on the way in which the representation of creativity (or creating) itself feeds into the process of creating. Each of these lines of argument points to the distinctive contribution of cultural psychology, but distinctiveness is not sufficient. As some would say with creativity itself, there also needs to be some utility, consequence or 'upshot.' In short, 'so what?'

Accordingly, I invite you all to reflect on the discussion so far, to sort through our various conceptualizations, in terms of implications. Implications could be for theory (either for creativity research or for cultural psychology), for method-ology (how might sociocultural concepts be operationalized? Are there existing sociocultural research methods which could be used?), or for enhancing creativity (What practical advice would we give to stimulate creativity?). Or, does rethink-ing creativity from the standpoint of cultural psychology lead to new questions?

Brady Wagoner: Let me pick up the question about practical advice to stimu-late creativity. In my chapter (Chapter 2), I develop a notion of culture in which items always take on meaning by being placed within a wider social framework, vis-à-vis other cultural items. Being socialized into a culture involves learning to make these connections automatically. Creativity can emerge from intentionally placing an item within an incongruent cultural setting. Literary critic Kenneth Burke (1964) gives the example of placing a lion in the category of 'big dogs,' in order to see them in new light, a strategy he called 'perspective by incongruity.' Similarly, scientific breakthroughs often occur by utilizing novel metaphors to develop models of some phenomenon (Dreistadt, 1968), such as the solar system in the Rutherford-Bohr model of the atom. Furthermore, there is a sense in which creative developments in science are often brought about by people who move between the boundaries of different disciplines. Vygotsky's move from literature to psychology is a nice case in point (Van der Veer & Valsiner, 1991). Thus, creativity here involves making connections between items of culture normally kept strictly apart. In other words, innovations can be expected to happen on the margins, or more specifically, in moving between the center and the margins.

Vlad Petre Glăveanu: Following Brady's observation that creativity involves making connections between items of culture normally kept strictly apart, I think that one key contribution cultural psychology can make is to recognize that what is being used within creative work as well as the outcomes of this work are in fact part of culture and expressive of it. This may initially sound trivial but it has very deep consequences. Instead of looking at combination, selection, divergent thinking, and so on, as processes taking place 'in the head' of the creator we are

able, within this new paradigm, to locate them in a relational space of connections between people, cultural domains, and artifacts. Considering creativity a distributed cultural act (also Glăveanu, 2011), something that emerges strongly from each contribution to this volume, is a powerful idea that has numerous methodological and practical implications.

For the former we can think about how most methods used to study creativity in psychology focus almost exclusively on the individual. With the exception of case studies, biographical research, and historiometry, the dominant psychometric and experimental approaches cut the person from their context and focus primarily on psychological processes or features of the object. Cultural psychology, with its emphasis on ecological and longitudinal research, has a great contribution to make here. To capture the cultural nature of creative acts and outcomes we need to expand our vision in ways that incorporate the normativity and openness of symbolic forms (Baerveldt & Cresswell, Chapter 7 in this volume; Wagoner, Chapter 2 in this volume), development and life trajectories (Zittoun & de Saint Laurent, Chapter 5 in this volume; John-Steiner, Chapter 3 in this volume), materiality and affordances (Tanggaard, Chapter 8 in this volume; Costall, Chapter 4 in this volume). Simple paper-and-pencil tests asking respondents to generate as many new ideas as they can tell us very little about the above (although this testing practice and its outcomes can and should be interpreted in cultural terms!).

Finally, the understanding proposed here necessarily shapes the practice of creativity and gives us new practical means to act in the world. If the idea of differences is fundamental for creative action (Glăveanu & Gillespie, Chapter 1 in this volume), then the first step towards enhancing creative potential is to recognize such differences, to become aware of them. Culture, again, gives us ample opportunities to do this by presenting us with so many instances in art, science, and everyday life, where we are faced with discrepancies, ambiguity, ruptures. Exploiting the creative potential behind such contexts can become a point of focus for creativity researchers and cultural psychologists alike.

Lene Tanggaard: Based on my research on creative learning processes, I have during the last five years been involved in workshops with more than 100 schools and organizations. Drawing on my experience from this work, it is my impression that most people in these contexts (be it teachers, students, managers, or employees) are very concerned with questions like, for example: how to make students work more creatively in the real-life context of school or education and/or how to organize events and tasks so that the work contributes to the ongoing activity in the case of particular tasks. Working with these questions, in close collaboration with practitioners, I have drawn two major implications from a cultural psychological approach to creativity.

First, we need to move away from thinking exercises. Based on the often very individualistic approach to creativity as outlined by Keith and Vlad, many schools and organizations tend to suggest to me initially that creativity must be enhanced basically by teaching individuals how to think creatively. However,

while recognizing that creative processes do involve thinking, I believe this is a way too restrictive approach to creativity as it often results in spending a lot of time on divergent thinking tests or exercises often disconnected from daily working practice. That is, I believe creativity must move back into everyday life in schools and this requires us to work with more culturally, socially, distributed models of the process. From this perspective, there is in principle no contradiction between working with grammar in a language session and enhancing the creativity of the pupil (Tanggaard, 2014). This is based on the premise that using language creatively does involve a certain level of mastery of basic principles, or as Vygotsky (1978) claims: All inner psychological processes have, in their first instance, been social. Creativity entails knowledgeability, meaning mastering the tools with which to work creatively. On a very practical level, helping schools to work with these perspectives would involve teachers and psychologists becoming experts in judging the potential creative learning processes involved in particular projects or lessons in school, rather than spending time on administering tests or isolated exercises on divergent thinking.

Second, interventions should be based on what people are already doing. One week ago, I spent three hours in a workshop meant to enhance creativity. I was participating as a board member in an organization called The Wave, being part of Kulturby Aarhus 2017. Our job was to come up with ideas for a big event in Aarhus in 2017 involving more than 5,000 young people in the campus area of Aarhus University. The consultants who ran the workshop kept saying "Now, think out of the box" and "Come up with as many ideas as you can." The dean from Aarhus also told us to break boundaries. While I was sitting there, I felt I was wasting my time. When the consultants said think out of the box, my mind moved into the box and, as the dean told me to break boundaries, I came to the conclusion that breaking all these boundaries might be part of the problem. Why not work within boundaries? We were told nothing about the overall frame of the event or what the organizers already knew, and in my group, members voiced criticism concerning what would happen with our ideas and if we would be told about the work after the conference. We did have fun and were served nice fruit, coffee and cake, but the event was disconnected from both the organization process and the future actuality of the event. Again, working from a cultural psychological approach, I would frame such events differently. I would base them very clearly on what is already there. I would maybe even suggest particular ideas with which to work and I would draw a precise plan for the future work. Put simply, too many so-called creative workshops work in thin air without a clear foundation and I guess this is a possible implication drawn from working with creativity as isolated, mental processes which can materialize everywhere, regardless of content, culture, and social processes.

Tania Zittoun: The cultural psychology approach to creativity has implications for how we study it, that is, for methodology. I agree with many of the propositions made, and mainly want to emphasize one aspect already raised. The main

idea is, I think, to open the scope of investigation and action: if one wants to understand creative activities, one has to look beyond the person or group in space, towards the wider social, material, cultural settings. Also, we need to look beyond the moment of the specific creative process, and see a longer temporality.

I agree with the papers gathered in this volume which suggest that rich case studies, or ideographic approaches, are central to a cultural psychology of creativity. The case studies would need to be over a long duration, covering a diversity of settings, and paying attention to a diversity of actors and artifacts. In effect, many chapters in the book suggest the importance of documenting the trajectories of creating X. In Lene's chapter, or Vlad and Alex's, creating is spread over a long period of time, and often the origin of the actual creating is far beyond the observable process (e.g., a person's childhood). Second, in order to account for recognition by others, the chapters in the book also suggest that the scope of an observation might be quite broad, so as to identify real and imagined others that participate in the trajectories of creativity. Third, given the importance of the psychological time-space of creating, case studies should document the conditions or mediations facilitating imagination, trying-and-failing, and so on. Hence, in Lene's chapter and ours, the creating person is asked to keep a diary, which opens a very specific symbolic space allowing and supporting reflexivity and the creative process. Also, Brady, in his chapter, reminds us about the dream-space. Case studies can document the variations of phenomena along dimensions such as these (but also others).

The implications of a cultural psychological approach for enhancing creativity are not strictly linear, but might be precisely about paying a special attention to the conditions just mentioned: trajectories of creating X, involvement of the persons involved, creation of reflexive spaces, transitional spaces, with all this being of course extremely variable.

Keith Sawyer: I very much like Tania's phrase, "trajectories of creating X." All creations emerge over long periods of time, with many small moments of insight/ideation along the way. This view, of creativity as emergent over time, is quite different from the common view that creativity comes from a sudden breakthrough moment of insight which is disconnected from the social context. If the latter were true, then the proper method of study would indeed be to focus on the individual, and the cognitive processes and structures associated with that moment of insight. But all of the accumulated research on creativity converges on the 'trajectories of creating' view: that creativity is not due to an isolated cognitive moment that one could call 'breakthrough insight,' but rather creativity emerges over time, from long periods of hard work, collaboration, conversation, and idea exchange. At a broader level, creativity emerges from history, over historical time, and in many cases across multiple lifespans. And because this is the reality of how new things are created, the sociocultural approach is necessary. An individualist approach can, at best, help us understand one small moment of contribution to a very broad and complex trajectory. This, too, is valuable and worthy of scientific study, but I believe it will always be incomplete without the sociocultural approach.

Alex Gillespie: Tania and Keith emphasize the methodological implications of a cultural psychological approach to creativity, namely, that we should use longitudinal case studies. Brady, Vlad, and Lene show the practical consequences of rethinking creativity from the perspective of cultural psychology. Their suggestions include: Perspective by incongruity, crossing between domains and out to the margins, exploiting differences and giving up decontextualized creativity tasks in favor of working with people's daily practice to build creativity from the ground up. These fruitful suggestions also feed back into consequences for research, pointing towards new lines of theory and research. Consider the juxtaposition of difference. It is a mundane experience that conversations can be creative, that things can emerge which nobody knew beforehand. Yet, conversations can also be filled with platitudes, with repetition, non-transformative interaction and power relations which silence the play of alternatives. Certainly, if we were all the same, then social interaction or conversation would be unlikely to do anything for the process of creativity. But equally, not all differences enhance the creative process. Thus, the question emerges: what differences make the difference? Is there any way that we can begin to master, and make deliberate choices, about how best to marshal the differences between images, people, groups, meanings, and contexts?

Another line of research and theory is evident in Brady's suggestion that moving between contexts, between the center and periphery, can foster the creative process. The historical record does show that many 'great thinkers' moved between contexts and discourses that were in tension (Collins, 1998). My own view is that such movement is crucial to integrating and transcending productive differences (Gillespie & Martin, 2014). As Lene cogently argues, creativity begins with what people do in their everyday life, in concrete situations. But people are not bound to single situations or activities, rather, they move between domains of situated practice. For example, an academic might move between the situated practices of writing and peer-reviewing, between obtaining food in the canteen and preparing food at home, between listening to a lecture and giving a lecture, and between studying commuters and being a commuter and so on. In moving between these social contexts individuals internalize the differences of society, as manifest in diverse domains of practice. This movement overcomes the simplistic opposition between 'the social' and 'the individual' discussed by Tania above because it makes the individual societal: The individual, moving within society and between domains of practice, becomes the vehicle for the creative integration of societal tensions.

My emphasis, here, on people moving between contexts, I would argue, also chimes with Tania and Keith's insistence upon longitudinal research. People, artifacts and activities tend, at best, to be studied within contexts. But, more radically, we need to study people and 'trajectories of X' as they move between contexts.

In conclusion to both this chapter and this book, we should now turn to any neglected issues and also consolidating what has emerged, not only out of our

dialogue, but also the book as a whole. Accordingly, do contributors wish to make any final comments or 'take-away' thoughts?

Vera John-Steiner: I am in full agreement with the conceptualization of creativity as social, as constituted of processes, as everyday as well as transformational, as cultural and collaborative (John-Steiner, 2000). But I would like to add an additional concept to this discussion, namely, creativity as a network of processes, which include daily acts as well as sustained preparations and mastery for work, which requires innovative approaches. Recently, we have aimed at a more inclusive view of creative processes (Glăveanu, 2011) from one that is limited to well-documented lives of those engaged in transformations of their domains (Gardner, 1993). But this larger view, which emphasizes the wide prevalence of daily creative acts, can minimize activities such as culturally transmitted skills, the slow acquisition of disciplinary knowledge, and organizational strategies among other long-term joint endeavors. Creativity conceptualized as a network is made up of diverse processes, including rapid problem-solving aimed at everyday challenges; longer scientific, artistic, and commercial endeavors, which require division of labor and complementarity among the participants; and intergenerational, culturally constructed apprenticeships (Lave & Wenger, 1991). Part of the challenge is to rely on an interdisciplinary use of methodologies, including historical and anthropological tools. By basing ourselves primarily on the psychological tradition (although we reject psychometric approaches to the study of creativity), we limit ourselves to methods that have been successful in studying individuals.

Historical approaches and ethnographic analyses require a focus on time as a critical variable in examining the multiplicity of creative processes. Time plays a crucial role in the account of the development of Noma, documenting how its formation is linked to other major developments in the Nordic countries and elsewhere. But a more explicit inclusion of time and long-term creative activities is needed, I believe, in this emerging, cultural theory of creativity. A network approach, in addition to a definition that fits all creativity, may facilitate an analysis of commonalities and differences between short-term and long-term innovative and transformative activities. A systematic, non-individualistic approach to the study of creative processes is much needed. This book has initiated the complex tasks that such an approach calls for.

Sandra Jovchelovitch: I would like to flag up three theoretical issues which for me are productive points of tension opening up avenues for social and cultural psychology. These three paths for future exploration have been referred to above, in one or the other way, but deserve further elaboration.

First, the individual self and sociocultural context: There is little doubt that creative processes, as opposed to a reified notion of creativity externally defined by the social imperatives and dominant discourses of the day, are intrinsic and fundamentally a work of sociality and, in particular, sociability, the play-form of social life in which individuals enjoy the pleasure of togetherness and can imaginatively

detach themselves from asymmetries, roles, and power. Sociability was discussed by Simmel (1949) as the form of sociality related to play and the imagination. It refers to the sheer joy of being with other people in friendship, in community, in love, in fun, in productive work, in acts of creation. Such a kind of togetherness is very much linked to Winnicott's (1971) potential space, where being alone in a zone of symbolic detachment is only possible because of the scaffolding of a positive sociality – sociability – that enables the individual to be. In this sense, Tania's point is paramount: any substantive social and cultural psychology must face head on the space of individuality, the area in which self is with self and thinks as a self in relation to others and the world. In the head means internalization of what happens between heads, but there is an 'in the head.' The particular insight of socio-cultural psychology resides in the understanding that the internal is shaped by the external and vice versa. This is true for creativity as well. Independence from the situation and from the immediacy of the environment, freedom of judgment, freedom for recombining, juxtaposing, and reinterpreting elements of the world are processes scaffolded by social life and enacted by selves. I think we need to conceptualize this inner lived reality in Cor's words and the 'internal' moment of the process (in Tania's words). I see this challenge as a promising avenue for a cultural psychology of creativity.

Second, tradition and innovation, the old and the new: The tension between what is established and routinely exercised and the not-yet is a central tension of creative processes and I am in full agreement with Vera's point. The novel *My Name is Red*, by Turkish writer Orhan Pamuk, introduces a wonderful account of the nature of Ottoman art, as the capacity to create and renew the continuity of tradition. For this, the author must obliterate himself, engaging in a huge creative effort. This differs fundamentally from Western art and its preoccupation with the individuality, detachment, and originality of the author. In each – East and West – there are different ways of realizing the subjectivity of the author, but both refer to the fact that all novelty comes out of an established platform of traditions that provides the framework for our thinking and for our actions. That these platforms vary and thus provoke variation on what is considered creative should be part of a theoretical model offered for a cultural psychology of creativity. Novelty and difference are important, but for some cultural traditions novelty does not constitute a criterion for the creative because sameness and continuity are what matters. Sustaining cohesion and homogeneity is pretty hard work; traditional cultures are immensely creative in the ways in which they do that. Cor wrote above that "a society can repeatedly renew itself in a creative re-enactment of the same myths." This is particularly true in the Brazilian public sphere for instance, where a polyphasic mythology of origins has been reinventing itself in a thousand guises throughout history (Jovchelovitch, 2012). The tension between tradition and innovation in creative processes takes us back to cultural representations of creativity and the exchanges between creativity as action and creativity as representation. A cultural psychology of creativity must go beyond Western discourses about the creative and engage with its manifold modalities of realization in different parts of the globe.

Finally, the role of practice, repetition, skills, vis-à-vis working in 'thin air' (in Lene's words) or out of a box: This is something Vera also highlights above. The imagination comes out of sustained experience, according to Vygotsky; it requires broadening of experience, it requires active engagement with the task, and sometimes resilience to bear the boredom of repeating the task, and the burden of training. Here, I think of Boesch's (1993) article the "Sound of the Violin"; the Suzuki method, endless practice, being with others, disciplinary practices, and so on. Enlightenment comes to those prepared and that is why education matters.

In a way these three avenues come together is Vygotsky's idea of recombining, which is about what the mind does to what is already there, the freedom of the mind to mess with the world and the given. This is in my view where Vygotsky continues to meet Freud, Winnicott, and the deep psychology of symbol and signification. I so liked the point Brady makes about incongruence of placing; just try something that seemingly does not fit and see where it takes you, voilà, a new something out of an old wardrobe. Ultimately, the creative effort takes to its full potential the power of the symbolic function: condensation and displacement just as in dreams, play and all symbolic experience pertaining to the potential space.

Cor Baerveldt: I would also like to share one final consideration with regard to the relation between the sociocultural origin of all creativity and the unique contribution of 'individuals.' I think we all agree that creativity is a collaborative activity that involves historical practice, cultural skills, and multiple contributions extended in time. However, without wanting to bring back the mysterious genius of self-contained or independent individuals, I wouldn't want to lose sight of what might be considered the more existential aspect of creativity. Creativity is not just a matter of finding novel or original solutions to problems, but also of envisioning new worlds and authentic ways of being. It seems to me that there is a difference between the kind of creativity involved in Vlad and Alex's example concerning the invention of sticky notes and the kind of creativity involved in creative expression and art. Spencer Silver's weak adhesive might be seen as a solution waiting for a problem, but only in hindsight, after the problem had already presented itself. Silver had very little riding on it. His very identity was not at stake. There was no existential risk involved. But an artist like Cézanne, who envisioned an entire new style of painting, had to express his new vision, risking his self and sanity, without knowing if this vision would ever take root in the consciousness of others. I agree with all that has been said in this discussion about the temporal, distributed, and 'marginal' nature of creativity (e.g., Vera, Tania, Keith, Vlad, Brady, Alex), the importance of open and reflexive spaces (e.g., Tania), and the role of training, skills, practice, repetition, and apprenticeship (Sandra). It seems to me, however, that expressive creativity must also involve an element of existential risk, an authentic moment of escaping mere conventionality (what Heidegger calls "das Man"). To be sure, such authentic moments could only happen for someone who sufficiently masters the normative skills of an expressive domain or cultural practice. As Sandra puts it so eloquently, "Enlightenment comes to those prepared."

I don't think those existential moments are reserved for great artists and cultural masters. We all continuously face the challenge to express ourselves in ways that are both recognizably meaningful and 'authentic.' Even traditional, non-individualist societies require rituals and practices to renew and authenticate their normative fabric. I tend to associate creative conduct with this kind of authenticity (whether we genuinely connect our cultural competence to the generative sources of our character and our culture) more than with its presumed novelty in the eyes of a general or anonymous public.

James Cresswell: An emergent theme in this volume is the idea that creativity is an irreducibly social phenomenon. Authors herein argued that it is marked by a generative expression of style that is both unique and normative at the same time. This claim expands upon the idea that creativity is distinct from something that is just different or merely novel happenstance. Creativity seems better than novelty and involves an evaluative judgment. That is, there seems to be something better to a creative act and the question is: How do we mark that better-ness? Insight into this question comes from William James' pragmatism and the idea that truth is something that satisfies us.

Linking truth to creativity would seem ill placed if we think about truth as an abstract claim about something, such as a general covering law. This approach is not what James (2011) had in mind with his conception of truth. He argued that truth is always inextricably bound to concrete life insofar as people do not use truth in an abstract sense. To find a general immutable truth claim about creativity is ill conceived because people talk about some-*thing* being truly creative. Consider the illustration of the Post-it® Note from the introductory chapter (Glăveanu & Gillespie, Chapter 1). This thing was considered truly creative via the relations among the emotional valuation of an object, the object, and the use of the object in life including the problems that it solves and function that it serves. These moments' interrelations all play a part in saying that the Post-it® Note is truly creative. Truth is not separate from the thing or the life that we experience.

For something to be creative means that it must resonate with such lived experience, and herein lies satisfaction (James, 2011). James placed experience at the forefront of this work and pointed out that life is a series of experiences where one thing leads to another. We live in an interconnected experiential web of things and ideas (past, present, and anticipated). James' view of truth was that something is true when it fits into the flow of life and the complex web of interrelations constituting experience. There is a sense of satisfactory peace and rest when something fits with lived experience (James, 1912). The Post-it® Note, for example, did not originally fit with life and it could not initially be truly creative. At the moment that it fit the flow of experience, it ceased being a useless novelty, and became something that was creative.

A charge that was leveled against James could be leveled against us at this point and it is that of solipsism. I have outlined a theory of what makes something truly creative and it relies upon notions like experience and satisfaction,

which could be understood on subjectivist grounds. James repeatedly argued that a pragmatic conception of truth was not solipsistic and that truth is not a matter of the mere proclivities of subjectivity (1907, 1912, 2011). He did so in a way that radically resonates with the intrinsic sociality integral to the chapters in this book. He made the claim that standards of satisfaction are socio-normative, that lived experience is action in the communal phenomenological world because people believe that precepts they possess are common (1912, p. 27) and they are such within a community. For James, experience was deeply entwined with the world and with others with whom we are engaged. The implication is that any conception of creativity needs to assume the intrinsically social and cultural constitution of experience.

Constance de Saint-Laurent: I completely agree with James' comments, although I believe that the question of the 'subjectivity of truth' that pragmatism raises could actually be beneficial to a theory of creativity. We can indeed equate creativity to pragmatic truth, on the grounds that human experience is forever changing, and thus any adaptive reaction is novel (see for instance Bartlett, 1995), and that both are 'solutions' to practical issues. One interesting point raised by Cornish & Gillespie (2009) on pragmatic truth is, however, that instead of making of it something forever subjective on which no criteria of validity can be applied, it forces us to ask: To whom is it useful? Therefore, it may be more appropriate to ask of any given cultural artifact, who is this useful and/or novel for? Instead of trying to find a criterion to define novelty and usefulness in absolute terms (which for me can never be more than a more thought-through version of what is done in creativity tests), there is a case for situating that utility and novelty in the domain of practice itself. This brings me back to the point raised by Jaan regarding the difference between creativity and creating: Is it not a matter of whose perspective you are taking on the situation? If we all agree on the fact that creativity is necessarily a social and material process, therefore involving more than a lonely creator, it also means that we need to understand creativity as a process including more than one perspective. As with any social act (Mead, 1977; Gillespie, 2005), creating cannot be summarized or reduced to a single perspective or position within the social act, minimally the creator or the audience, and I do not believe that one should be given priority over the other. Returning to the introductory chapter by Glăveanu and Gillespie, despite there being an irreducible gap between the perspectives of self and other, both perspectives are necessary for any creative action to exist.

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