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What is This?
The sociomateriality of creativity in everyday life

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Abstract
This paper explores the sociomateriality of creativity in everyday life. Whilst creativity research has traditionally been concerned with the intellectual and individual skills promoting creativity, such as the ability to apply divergent thinking, this author anchors creativity in social practice. It is suggested that: (1) creativity is an everyday phenomenon resulting in continual processes of “making the world;” (2) there is a close relationship between human beings and material tools in the creativity process; and (3) there is a close relationship between continuity and renewal, meaning that materials, tools, things, institutions, normative practices and “ways of doing” already in the world are taken as starting points for new creations.

Keywords
Collective, distributed creativity, everyday life creativity, situated learning and creativity, sociomateriality

Introduction
In this paper, I will consider one of the newest trends in creativity research, one that also represents a break with the hitherto dominant individual-oriented creativity research within psychology. For the sake of simplicity, I will refer to this as sociomaterial creativity in everyday life. Sociomaterial creativity in everyday life implies an awareness of how different environments in everyday life do not merely form creativity and create conditions for it but also themselves represent a substantial component of creativity. That is, creativity is much more social and everyday-like than has hitherto been acknowledged; materiality and artefacts are to be seen as substantial components of creativity in itself. 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 in the present journal, 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). Even if there is general consensus within much creativity research concerning the 4P’s-model, in which creativity is assumed to consist of four interactive components: persons, processes, product and press (Kahl, Da Fonseca, & Witte, 2009; Mumford, 2003; Zeng et al., 2011), left unanswered is the problem of how these factors interact. For example, Zeng et al. (2011) refer to one of the P’s—press—as “the environmental or contextual factors affecting germination of creative productions.” However, the problem of understanding the processes of interaction remains, I will argue, if we continue to consider creativity as something only individuals can set in motion. Environment, contexts, press, social practices, materiality or whatever we term “the social” must be seen as more than a bowl to the soup—that is, a neutral container for individuals (Lave, 2011; Lave & Wenger, 1991). My point is that we need to begin to stress the situated character and the material basis of creativity as well as to tie creativity more explicitly to everyday life, not reserving it for exceptional individuals and extraordinary processes of intrapsychological thinking.

A closer look at sociomaterial creativity

I will now develop three primary theses concerning the sociomaterial conditions for creativity in everyday life. In this, I am inspired by an overarching anthropological approach to the study of creativity and cultural improvisation (Hastrup, 2007; Ingold, 2000; Ingold & Hallam, 2007), which can help develop a living theory of creativity that breaks with the concept that creativity originates from individuals’ internal sources or that it represents a radical rebellion against present and existing social structures.

The three primary theses are as follows:

1. Creativity is an everyday phenomenon resulting in continual processes of “making the world;”
2. There is a close relationship between human beings and material tools in the creativity process;
3. There is a close relationship between continuity and renewal, meaning that materials, tools, things, institutions, normative practices and “ways of doing” already in the world are taken as starting points for new creations.
Creativity as an everyday phenomenon

The present paper recognizes “the entire organism in its environment” as the basic unit of analysis, in which human beings are regarded as inseparable from their environments. This is in line with Glaeveanu (2010), who argues specifically for the importance of breaking with creativity research’s hitherto dominant focus on the creative individual instead of the characteristics of people’s work in creative environments, creative associations, and therefore also material contexts, in which creativity acquires meaning. However, creativity research has long been characterized by what Glaeveanu (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 in the psychologist Guilford’s (1950) emphasis on creativity being a so-called 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 previously established 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 as things, artefacts and physical conditions. It also involves a certain understanding of the intellectual resources necessary to creativity (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, 2011; Lave & Wenger, 1991), and a truly relational understanding of the processes of thinking, learning and creativity underlining that cognition is a matter of understanding practice, that learning involves changes in participation in social practices in everyday life and that creativity involves a kind of re-making and transformation of these social practices (Hasse, 2001; Haug, 2009; Lave, 2011; Wortham, 2006). Creativity thus occurs when we develop our practices—not via isolated thought processes but as part of life itself. In a similar vein, Mason (2003) has argued that “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 Amabile, 1996; Oldham & Cummings, 1996; Pope, 2005). In line with the above definition, it is thus vital to not just define creativity 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).
From the exceptional to everyday life

In many psychological treatments of the phenomena and concept of creativity, it is often seen as a more or less exceptional and higher order thinking process (Mumford, 2003; Sternberg, 2006). A sociomaterial concept of creativity would not reject that creativity is a higher order thinking process, but does reject the idea that such processes are radically cut off from more mundane and everyday cognition. The main inspiration is derived from Ingold and Hallam (2007), social anthropologists from the University of Aberdeen, who conceptualize creativity and improvisation as aspects of everyone’s lives, in their anthology entitled Creativity and Cultural Improvisation. Their primary aim is to challenge the assumption that creativity is something special, a phenomenon radically cut off from the world in which we live. Ingold and Hallam do this by assembling a number of anthropological studies on the creation of sociality and by showing that our daily lives are constantly improvised and are thus creative, often without our directly experiencing it as such. An image or metaphor for this constant improvisation and creation is supplied by that of a pedestrian in the “big city,” who must constantly adjust and adapt herself to the teeming masses of people on the pavement in order to fit into the whole. We live in a world that is constantly “in the making.” Even though most perceive the act of, say, walking along the pavement, to be a matter of simple routine, maintenance of our place in this world requires numerous adjustments, improvisations, and innovations, both exceptional and mundane. Not even the houses in which we live remain the same as when they were created. They must undergo constant maintenance; they are changed by the way people live in them; wind and rain reform them, rounding their edges, polishing their corners, and breaking down their materials. In the same way, houses affect the people who inhabit them.

The trouble with an exclusive and more individual understanding of creativity is that it tends to reserve creativity for the intellectual moment. As stated by Mumford (2003):

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.” (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), and 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 kinds of life, changes which may at points be based on divergent
thinking, but surely also convergent thinking, routines, habits and daily cultural practices.

Ingold and Hallam (2007) have little time for the idea that individual and environment are two static entities confronting one another and the dualism involved in stating that first we need to understand the generation of new ideas within individuals and then how situations might change due to the new. Rather, they see the world as in a constant state of becoming. This understanding does not differentiate strongly between self and environment, between tradition and renewal or even between convergent and divergent thinking. It is first and foremost a dynamic conception of all individuals as creators with the ability to modify, adjust, and change the environments in which they find themselves. The world does not tower above us like some colossus of unchangeability; it reacts to us. We are all constantly engaged in changes, and it is impossible to separate creation from creator—or the materials from the people who create. In the same way, a material can be regarded creative in its confrontation with people, who respond to the object’s hardness, its softness, or whatever the object can do for them.

**Materialized becomings**

A more direct expression of a sociomaterialized understanding of creativity is that a 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 buildings in architects’ oeuvres are often never built, the designs exist in some material form (e.g., on paper or computer) and were created using these materials. Moreover, the architect is creating his design with the known affordances of building materials and normally with a particular material site in mind. 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. Creativity is, on the contrary, expanded to include the materials that are worked with and that quite concretely comprise that which is created as well as the continually developing creations of the products we produce. As described by Ingold and Hallam (2007): “And 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” (p. 3). However, for a psychological science to discover this, it requires that we move the study of creativity outside the typical test of the ability to think divergently. In this regard, psychology could seek inspiration in studies of design and architecture. In a recent study of the performative roles of materiality for collective creativity among students learning architectural design, Jacucci & Wagner (2007) argue that “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 is 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—different modes of expression. Moving beyond architecture and design, Vera John-Steiner (1997) also point towards the importance of artefacts 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. In the book, Thomas Mann 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… (Mann, quoted in 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 the good ideas pop into our heads. Thus, architecture and design studies, as well as music studies (Lock, 2011) and John-Steiner’s notebook studies, point towards the role of human-made artefacts in creative activity to a point neglected or overseen by many psychological treatments of the concept. However, Jacucci & Wagner (2007) also point out that materials have a history communicating pre-existing ways of doing architecture, emerge as part of specific activity and become part of performative action in the future. This point concerning history and the relation between the old and the new is an indicator of my third standpoint in this paper regarding the sociomateriality of creativity in everyday life.

**Renewal stretches back to tradition**

In the present paper, creativity is regarded as a much more everyday and collective activity than is usually seen in studies, which, except for a few studies pointing towards the socio-cultural dimensions of creativity (Hasse, 2001; John-Steiner, 1997), tend to focus on individual behavior, personality and cognitive processes. A primary aim is to anchor creativity in everyday life and in the constant relational dynamics between artefacts, materials and humans, and also to challenge the idea
that there exists a radical distinction between the conventional and the new. It can thus be said that a sociomaterial conception of creativity in everyday life focuses more on describing improvisation’s generative character and less on creativity’s newness value. I am, in fact, less interested in celebrating the new, which is typically integral to the discourse on creativity. I argue, in explicit contrast to the modern conceptualization, that creativity is less a rebellion against limitations present in the current world than it is a type of adaptation and response to the possibilities and barriers with which we live in this ever-changing world. This lies at the root of Ingold and Hallam’s (2007) statement that “the improvisational creativity of which we speak is that of a world that is cresent rather than created; that is ‘always in the making’ (Jackson, 1996: 4) rather than ready-made” (p. 3). The world is in a constant state of becoming rather than being characterized by abrupt and sudden innovations.

When we are creative, we rarely produce knowledge that is wholly detached from the prior knowledge of ourselves and others. It is perhaps more a matter of repackaging knowledge, of recreating something that previously engaged us, of improvising on the basis of knowledge that we already master, possibly of retrieving something that we had once forgotten. Let us use an illustrative and potentially provocative example from the world of fiction: a quote from Lars Saabye Christensen’s novel Åbent hus (2009): “Greater men than I have said that middling artists borrow while great ones steal.” Thus thinks scriptwriter Will Bråten in the novel Åbent hus when he has snuck into the premiere of a film of the same name—The script for which a former script consultant stole from him without his knowledge. Certain details have been changed from Will’s original script. The film takes place in Copenhagen instead of in Oslo. The two young protagonists, Will and Cathrin, drink Tuborg beer instead of Bellini (with or without vodka). At the film’s premiere, to which Will has been invited, he waits patiently for his name to scroll by in the closing credits—but he waits in vain. “I didn’t see it,” Will states on the last page of the novel. It was not particularly nice of the script consultant to benefit in this way from Will’s art. It was theft. It is wrong to hide one’s sources, and yet no artwork exists without sources and inspiration from other artwork. This is an important lesson to learn for those who wish to create something that appears to be “new.” Andreas Golder, one of the greatest painters living today, says in a 7 September 2010 article in the Danish newspaper Politiken: “Creativity?! Bah! I just steal.” Golder discusses how he brings the old masters into his work in order to produce a different result:

When I look at a painting, it doesn’t matter whether or not it’s modern art. The important thing is that it’s good art. And the old masters, well, they’re hanging there in the museums, so they’re part of my time, of the new. I absorb things like a sponge, from all of the artists from all periods – and from everything I see and experience. I wring that sponge at the workshop, and the result is what you see here. (Golder, quoted in Ross, 2010: 18)
In other words, tradition is materialized in the artwork that already exists. It is quite literally hanging on the walls, and it becomes a materialized starting point for Golder’s innovation. The necessary relationship between tradition and renewal appears paradoxical to many today. This is reflected in interviews with primary school teachers that I have just undertaken as part of my latest book *Fornyelsens kunst – at skabe kreativitet i skolen* [The Art of Renewal: Producing Creativity in School] (Tanggaard, 2010, 2011). The teachers I interviewed focus on traditions as a starting point for renewal in their teaching, but regarding their students, the teachers are more concerned with charging into the realm of total innovation. On the basis of the argument above, however, we must suggest that knowledge of tradition is at least as important for the students’ creativity as it is for that of the teachers.

Allow me to briefly summarize. Creativity is not liberated from the world. Rather, it simultaneously contains the unexpected and the recognizable—the past in which it is embodied and which it transforms into the new. Creativity is expressed in the world and is the materialized starting point for the new—just as when we metaphorically absorb the knowledge of others, wring the sponge, and produce something new ourselves. Concerning the acceptance of the new, Hastrup (2007) emphasizes the importance of emotion or anticipation:

The point is that social creativity cannot be a mere fact of novel combinations making it a wholly intellectualistic exercise (Friedman, 2001: 60). It must also contain a sense of semantic and emotional newness, in which others are prepared to take interest—and invest themselves—in spite of being unprecedented and discontinuous. (p. 200, author’s translation)

The creative is thus that which can set others into movement, and creative individuals are those who can inspire others and convince them to invest resources, energy, and time in their ideas. We are not discussing a purely intellectual exercise that consists of combining things in new ways, as is promoted, for example, by a cognitive understanding of creativity (Kupferberg, 2009). The creative also includes a kind of emotional newness, which moves us and prompts us to understand the value and importance of the new—even though it is new. The mastering of this is, of course, an art in itself. In other words, to produce something new, something that diverges significantly from the established order but that nevertheless can be understood within the worldviews of others. From this perspective, nothing is achieved by, for instance, a teacher or school head developing a wonderful pedagogical concept if she cannot interest others and convince them to invest their feelings in it. Creativity is, in this sense, not just about coming up with a good idea; it is also the process by which such an idea is realized and results in an actual renewal and changing of social practices. Or as an architect formulated it at a lecture I held at the Aarhus School of Architecture in Denmark: “Most of us only get two or three good ideas in our lives—the trick is to realize the ideas we get.”
Creation is collective

As argued above, much psychological creativity research has operated on the basis of creativity being an individual phenomenon that involves learning to think in particular ways and standing up to conventions (and convergent thinking) by thinking in terms of opposition and conflict. In his article “Situeret genialitet,” McDermott (2006) makes a number of inroads against the individualization of genius. His analyses are also useful for highlighting the problems with an individualized understanding of creativity. McDermott explains that genius and creativity do not belong to an isolated cognitive space but belong instead to people who organize collective problems that are sufficiently well defined to permit the development of a solution. Creativity is “common” in the widest sense of the word. People do what they need to with the materials they have at hand. This means that creativity cannot be traced back to an individual person; its origins lie in a large number of people who build upon one another’s work. People who create breakthroughs should, according to McDermott, be regarded as links in a chain. From this perspective, the celebration of individuals is misplaced: “We lose sight of collaboration when prizes are handed out to individuals” (McDermott, 2006, p. 271). Interesting from this perspective in particular is that even Isaac Newton is famous for celebrating the work of others: “If I have seen further it is only by standing on the shoulders of giants” (Newton, quoted in McDermott, 2006, p. 271). Common sense conceptions, on the other hand, have tended to maintain that creativity and genius reside in the mind, whereas a materialized perspective as in the present paper would regard the issue as that of some people creating the appropriate challenges to prompt other people to take the right steps at the right time. Individually, geniuses are merely the neurological loci for important cultural events (McDermott, 2006). This is not to imply that great achievements are not great achievements. It is problematic to simply celebrate individuals, forgetting that “neither the great skills nor the small ones are significant in this context: what matters is being strategically placed in a movable constellation occurrences” (McDermott, 2006, p. 273).

Celebrations of the individual thus risk limiting reality to retrospective simplifications: “teachers, competitors, and helpers are pushed off to the sidelines” (McDermott, 2006, p. 274). A collective understanding of creativity therefore represents a resource for people in their interpretations of others because it does not distort the material we pass on to the next generation. Celebrating the success of the few—the exceptional talents, the geniuses, and the creative—at the expense of others leaves the rest of us categorized as lacking imagination. An early segregation of individuals could be justified by the idea that not all of us can be creative. If creativity becomes rare, lack of imagination becomes widespread. However, the point is not to understand creativity as simply a collective phenomenon. In so doing we lose sight of the creator’s phenomenal experience, individual subjectivity, which is of course also socially conditioned and situated. The collective and subjective aspects of culture and creativity can instead be conceptualized as dialectical opposites in tension.
The above critique means that we should take care to correctly describe the process of becoming (there is always a line to trace) and to recognize that dividing the creative from the less-creative could be used to legitimate social segregation that has little to do with true creativity. It is just as creative for someone to find a new means of baking bread as it is for a professor of mathematics to discover a new algebra. The two kinds of creativity may well possess different sorts of social significance, but they are each significant in their own way. We should furthermore be aware that creativity often occurs in environments where people can literally stand on each other’s shoulders. As described by McDermott (2006):

Genius is cumulative: Socrates, Plato, and Aristotle follow one after another over three generations; Confucius, Loazi, Zhuangzi, Mencius, and Han Fei come in quick succession; Darwin and Wallace bring out theories of evolution in the same year. (p. 270)

It is thus not always the case that, as far as creativity is concerned, individuals are always on a collision course with society’s limits, which is commonly assumed in conceptions of creativity that celebrate individual talent. Creativity follows a course, the contours of which have already been set down by others. Significantly for this discussion, Ingold describes thinking as a means of moving within the world: “In the first, a way of knowing is itself a path of movement through the world, the wayfarer literally ‘knows as he goes’” (Ingold, 2000, pp. 229–230). This is a perspective of movement for innovation and does not differentiate strongly between movement and thinking, between process and substance. To the contrary, it describes thought as a forward movement suspended between process and substance or materiality (Ingold, 2000, pp. 89–90). When we are creative, we cross divides, discover new countries, and move through unknown terrain. Thought is “a doing,” a journey which extends the paths that were set down by previous generations. Herein lies the centrality of the relationship between continuity and renewal.

**Implications for creativity research**

This paper has considered the potential for developing a sociomaterialized understanding of creativity in everyday life and identified three central theses of creativity: that creativity is an everyday phenomenon; that there is a close relationship between human beings and material tools in the creativity process; and that there is a close relationship between continuity and renewal.

Turning to the implications of this perspective for creativity research within psychology, we should begin studying creativity as a relational dynamic between artefacts and humans in the social practices of everyday life. Rather than viewing creativity solely as a matter of individual cognitive processes of divergent thinking, we would consider creativity as the change and transformation of social practices over time and space in everyday life and not only among scientists or highly
creative people. We could also consider the genesis of specific ideas and products rather than focusing solely on people. Indeed, we should possibly map out, to echo Lorraine Daston, the biographies of objects rather than just the biographies of scientists. Or perhaps we should trace the paths of creative individuals and their movements within the landscape. Do they, for example, follow particular paths, go down certain routes, which lead them to enter territories of their own? We should not only seek the new but should also seek the relationships and the dialectical tension between the continuous and the remaking or the innovative.

As such, if we aim to learn to be creative, we must cultivate, rear, or educate our ability to be aware of new landscapes, to feel, note, or search for the new on the basis of our knowledge of what already exists. From this perspective, education can involve fine tuning the ability to perceive the significance of what is already in the world—in other words, to see the paths that have already been made in social practices and to be able to pursue the making of new paths and new kinds of social practices and institutions when these are needed. In addition, an education should teach us that the collective and subjective aspects of culture and creativity can be conceptualized as dialectical opposites in tension and that we should therefore build environments that can develop past experience, which, from this perspective, is the raw material for producing the new.

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