ABSTRACT

This paper sketches an approach to understandings of creativity as historically and contextually specific material creativity cultures. Departing from the notion that the appreciation of creativity within contemporary capitalism is historically unique, we suggest investigating creativity from the perspective of its distinct infrastructural and technological foundations. Methodologically, we rely on discourse analysis, ethnographic techniques and practice-based research in order to transformations in/of creativity cultures within the Creative Economies and Design Research since the 1960s.

Keywords: Material Creativity Cultures, Infrastructures and Technologies, Research Methodology

1 INTRODUCTION

Over the course of the last decades the interest in concepts of creativity as well as methods and techniques considered to advance creative practice have increased remarkably. They have become substantial elements of best practice concepts in numerous professional and scientific fields. This applies especially to the emerging field of design research, where creativity is considered as engine of sophisticated problem solving and innovation. The 'usage' of the concept of creativity in design research diverges considerably from traditional concepts, where it was considered a capacity that distinguishes exceptionally gifted artists, designers, scientists etc. from the commons. More recent studies on creativity have in contrast looked at and investigated creativity as an emergent capacity of each and every individual, which can be triggered by employing particular creativity techniques and evaluated by means of standardized testing instruments.

In stark contrast to the prominence of research on creative practice, creativity research still lacks a conceptual historiographical and critical ethnographic analysis that would contribute to a deeper understanding of how distinct creativity concepts emerge as a result of social deliberation, professional rhetoric, infrastructures and technologies. Concurrent understandings of and methods for triggering creativity are only rarely viewed as historically conditioned, knowledge-based and collectively binding constructs. We will argue that creativity is a concept that in no way reflects ›natural‹ premises but exists merely in independently negotiated creativity cultures. What is in the 21st century considered to be human creativity must be viewed as being constantly construed, negotiated, re-determined in distinct contexts – in short: a situated,
Demystifying the ›creative‹: A sketch for creativity research in The context of Creative Industries and Design Research since the 1960s

Johannes Bruder, Claudia Mareis

temporarily valid and culturally specific assemblage of bodies, materials and amalgamating practices.

In order to support our hypothesis, we will provide a short overview of creativity research prior to and within the context of design research and show how creativity has been democratized and culturalized through psychological research during the second half of the twentieth century. Subsequently, we will introduce our understanding of creativity as a “tendentially empty signifier” and suggest investigating distinct and seemingly objective understandings of creativity as outcomes of cultural production processes. Our understanding of the process of cultural production through entanglements of bodies and artifacts will be discussed thereafter. The final section of this paper will be devoted to detailing a critical, empirical approach to material creativity cultures within the context of Creative Economies and Design Research.

2 THE SOCIAL AND CULTURAL PSYCHOLOGY OF CREATIVITY

The democratization of creativity was incited when psychologists took the lead in creativity research after WWII and put an emphasis on the assessment and advancement of the individual creative personality. WWII had paved the way for the professionalization of psychology and thereby also the application of quantitative psychological methods, especially in the form of intelligence tests and assessments. J.P. Guilford’s lecture on creativity (Guilford 1950), held at the American Psychological Association in 1950, is typically considered as a landmark in the development of a whole new research field that promised societal and economic benefits. It brought about the separation of intelligence as a disproportionately distributed capacity from creativity, which was from then on considered a workable character trait and a learnable way of thinking. The importance of intelligence tests in psychology was consequently marginalized by new methodologies for testing creativity (Barron & Harrington 1981); (Getzels & Jackson 1962); (Preiser 1976); (Runco & Pritzker 1999); (Sternberg 2003); (Torrance 1966); (Wallach & Kogan 1965); for a comprehensive overview see (Mareis 2011)) and fostering the creative personality – e.g. the ability to divergent thinking and problem-solving – through intersubjectively applicable techniques like brainstorming (Osborn 1957), lateral thinking (Bono 1968), or mind mapping (Buzan 1974).

Creativity research had in this period been characterized by the alignment of its concepts with entrepreneurial thinking, both on the level of the individual – ‘the entrepreneur of the self’ (Bröckling 2006) – and the society at large. Since creative thinking had been identified as an important resource of development and innovation, creativity research became more and more geared towards identifying above-average creative individuals, optimizing the average, and treating deficiencies in creative thinking.

In the 1980s, the latest, the concept of creativity had been transformed from a capacity of the rare genius into a scarce but exploitable resource located in the individual competing on the market. Instead of an uncontrollable and diffuse character trait (Heibach 2012) – tightly linked, for example, to obsessive-compulsive behavior (Davis 2008) or melancholic temper – creativity has since been regarded as a dozing capacity of the human individual and as such simultaneously a democratic good, which needs to be cultivated. The slogan “Be creative!” (Osten & Spillmann 2002) has been transformed into a ubiquitous imperative, an indicator for the wealth of a region or nation (Florida 2003) and as such a target of governmental techniques (Bröckling 2006) during the course
Demystifying the ›creative‹. A sketch for creativity research in The context of Creative Industries and Design Research since the 1960s

Johannes Bruder, Claudia Mareis

of recent decades. The prerequisite for this democratization of creativity (Bilton 2007, Weiner 2000) was the amalgamation of different creativity discourses – namely from art, psychology, and economics throughout the second half of the twentieth century (Cohen-Cole 2009).

While most studies up to the 1990s were representative of a pre-social psychology in that their focus rests on intra-psychic processes and the individual, more recent approaches to creativity research acknowledge the fact that “creativity takes place within, is constituted and influenced by, and has consequences for, a social context” (Westwood & Low 2003, p 236). Concepts like ‘social creativity’ (Amabile 1996, Montuori & Purser 1999), ‘group creativity’ (Nemeth 2004, Paulus & Nijstad 2003) and the recent interest in communication and media as determinants of creativity (Negus & Pickering 2004; Knoblauch, Jacobs & Tuma 2014) shift the focus onto the social individual and the significance of social environments for the emergence of creative behavior. Concepts like Amabile’s social psychology of creativity stress the fact that “social and environmental factors seem to play a crucial role in creative performance”. (Amabile 1996, p 6) In a similar way, Csikszentmihalyi (Csikszentmihalyi 1988) emphasizes the interdependence of the person who creates, a cultural system of symbols and norms, and a social context with experts who assess the creative value of actions and products.

Csikszentmihalyi’s ecological approach has been taken up in an effort to formulate principles for a cultural psychology of creativity that promises to acknowledge both individual-psychological and sociocultural factors in the search for the nature of creative acts. (Glâveanu 2010) Glâveanu conceptualizes creativity as simultaneously contextual, generative, meaning-oriented, and genetic. He thinks of creative acts as using and reworking cultural artifacts (generative) in a supportive, intersubjective environment (genetic) with respect to the meaning attributed to creativity by individuals and the society at large (meaning-oriented). Its investigation should therefore be aimed at generating in-depth situational understandings of creativity by means of ethnographic case studies and process observation.

By defining principles for culture-oriented studies of creativity, Glâveanu performs a great leap towards a situational, contextual, intersubjective and process-oriented understanding of creativity. However, although due weight is given to the question about how individuals and collectives make sense of their creativity within historically cultural contexts – the meaning attached to creativity: how it is defined, explained, reconsidered etc. – creativity seems to be uncritically accepted as a trans-culturally desirable capacity. In short: while the creative nature of an act or product depends on the context, the positive nature of creativity is considered to be context-independent.

In that it at uncritically subscribes to the imperative of creativity at times, the cultural psychology approach adheres to the socio-cultural framework of the late (Western) 20th and early 21st century with its prevalence of creativity as an essential economic resource and exploitable capacity. In the following section, we will present an alternative approach that problematizes and historicizes the ubiquity of demands for creativity and emphasizes the need for reconceptualising creativity research as an investigation of how these demands are met in different contexts and what role infrastructures and technologies play in this process.
3 TIMES OF CREATIVITY

Instead of understanding the prominence of creativity in and its significance for social life as a-historic and indisputable given – an anthropological constant as it were – Reckwitz (Reckwitz 2014) suggests to consider the systematic encouragement of creativity during the 20th century as a result of the very specific social and cultural constellation in late-modernity. From this perspective, the democratization of creativity itself needs to be scrutinized as to its historicity and its social and political implications. According to Reckwitz, what developed over the course of the second half of the 20th century was a multi-layered creativity concept that paradoxically combines persistent ideas of artistic and scientific genius – the eccentric, obsessive, misunderstood, even anti-social creator – with psychological and economic discourses that promote the activation and advancement of individual capacities and the corresponding restructuring of problem-solving and decision-making processes. The amalgamation of different discourses resulted in an unforeseen popularity of the creativity concept beginning in the second half of the twentieth century.

Indeed, the term creativity entered the European culture only reluctantly. According to Tatarkiewicz, it was used for the first time in the context of artistic production in the 19th century – after the signifier ‘creator’ had been decoupled from god – and entered other spheres like science and economy only in the 20th century. (Tatarkiewicz 2003) In the German language, for example, the term ‘Kreativität’ had barely been used before it acquired its current prominence in the context of creativity research in the US. It came across the pond as a symbolically charged concept rather than a mere term and partly lost its descriptive character as it was mingled and contextualized with intelligence, mental health, professional leadership and individual maturity. (Ullmann 1973)

Instead of representing the distinctiveness of the genius, creativity has quickly been transformed into an important political and economic resource, a lack thereof representing a deficiency potentially threatening successful integration into social life. The authors from The Authoritarian Personality (Adorno et al. 1950), for example, claimed that persons with a democratic political attitude were allegedly more creative, spontaneous, and imaginative than those with an authoritarian mindset. Cohen-Cole argues that many psychologists, social scientists, and public intellectuals consequently regarded creativity and autonomy in the 1950ies as “unalloyed aids to building the bourgeois society”. (Cohen-Cole 2009, p 237)

With regard to the economic dimension of creativity it is important to mention the strong connection between the capitalist model of economy and the creative capacities of the “ideal” capitalist entrepreneur characteristic of the early 20th century and the post-war period. The most prominent amalgamation in this regard is Schumpeter’s definition of ‘creative destruction’ as a “process of industrial mutation that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one.” (Schumpeter 1942, p 83)

Reckwitz argues that our current understanding of creativity, while still being charged by the ideas of continuous and radical progress has recently undergone a process of substantial change. He describes current dispositifs of creativity as dominated by aesthetic novelty and “structured by a certain basic structure of producers and an observing audience which certifies what counts as a creative act” (2014, 25). Aesthetic novelty would mark an appreciated deviation from the
usual, a sequence of stimulating acts, without necessarily representing a structural break. The definition of an act or product as creative would be culturally specific and tightly linked to economies of affect – the "affectedness by an object or situation, sensitivities or agitation, an enthusiastic, concerned, or calm way of feeling" (ibid. 28).

As a consequence, that which is creative is creative only within a particular cultural context and subject to constant deliberation; a deliberation, however, that is dominated by practices resulting from the stimulation of emotions, senses and meanings. If certain techniques for mathematical modeling of data are considered creative in the field of imaging neuroscience, for example, then this is a result of an amalgamation of ideas about scientific progress and affects triggered by the aesthetic value of the solution in the eyes of neurobiologists, physicists, or computer scientists working in the field. (Bruder 2014)

Assemblages of such verdicts form distinct, but only partly stable creativity cultures and result in the differentiation of understandings of creativity. The general concept of creativity, by contrast, has steadily been emptied of meaning and represents what Laclau calls a 'tendentially empty signifier' (Laclau 2005). The emphasis on creativity as essential economic resource and aspiration created a need for descriptions of, criteria for and understandings of creativity both in research settings and areas of social life, which had been untouched by considerations of creativity before. We think that investigating the development of such creativity cultures represents a valuable research object, which will open up new perspectives on creativity as an outcome of cultural production processes. Before we advance to a short overview of research projects we designed in respect of the above considerations, we will detail our understanding of cultural production as social practice and their materialization in infrastructures and technologies in the following section.

4 THE PRODUCTION OF CREATIVITY CULTURES

The idea that cultures are representative of assemblages of human actions and practices rather than mere symbolic systems has been put forward by a quite heterogeneous cast of scholars from the fields of ethnomethodology (Lynch 1997, c1993), gender studies (Butler 1990), post-structuralist theory (Foucault 1991; Deleuze & Guattari 1987), sociology (Bourdieu 1980; Giddens 1979), and the social studies of science and technology (Knorr Cetina 1997; Latour 1993). While these approaches are quite diverse, they have in common the notion that cultural codes of daily (work) life - whether e.g., in restaurants (Ferguson 2004; Fine 1996) or scientific laboratories (Latour & Woolgar 1986) - cannot be observed independent of their materialisation in routinized, skillful practice. (Reckwitz 2005) Cooking in restaurants, for example, is determined by national hygiene regulations, the characteristics and styles of particular cuisines, the particularities of distinct eating cultures - determining factors that can partly be accessed and studied by means of documents and texts. How these are integrated in and constantly changed by the practice of cooking in different restaurants, however, remains hidden from view if one concentrates merely on the symbolic and textual dimension of culture.

Similarly, in a scientific laboratory, routinized and skillful practices are passed on from researcher to researcher, often without being collected in manuals, since an objectively 'true' scientific practice - e.g., in the preparation of specimen, the operation of measuring devices, the ruling out of false positives etc. - does not exist. Apart from practice, cultural codes remain abstract because of their
persistent volatility and limited validity; as soon as they are written down, their production has always already been observed and made amenable to practices of practical (re)interpretation. It is the duty of those interested in cultural change to put an emphasis on processes of cultural production and its observation by way of social practices.

An important element of practice theories is their focus on objects and materiality as constitutive elements of social practice and, consequently, cultures. The significance awarded to materiality is due, first, to the characteristics of and second, to the definition of the social as transcending intersubjectivity. In practice theories, practice is never just a mere practice, a symbolic gesture as it were, but a “nexus of doings and sayings” (Schatzki 1996) – practices that entangles bodies and artifacts “in certain routinized ways of understanding, knowing how and desiring” (Reckwitz 2005, p 252).

Karen Barad explains (cultural) phenomena as discrete events that can neither be comprehensively explained by taking the perspective of an acting (human) subject nor through the determining effects of non-human objects.

“There is not knowing from a distance. Instead of there being a separation of subject and object, there is an entanglement of subject and object, which is called the “phenomenon.” (Barad in Dolphijn & van der Tuin 2012, p 50)

Barad’s statement contains a notion of objectivity that is about responsibility to the entanglements of which we are part – epistemic machineries (Knorr-Cetina 1999), as it were, organized, dynamic, but only partly manageable. What is being omitted, from this perspective, is the unconditional differentiation between subject and object, humans and non-humans as well as knowing and doing. Social practices appear as techniques and technologies – entanglements of different human or non-human actors, which Barad calls material-discursive (Barad 2007).

Why is this important for our perspective on creativity? Practice theories understand knowing as fundamentally attached to and located in the use and production of material-discursive artefacts that do in their entirety amount to material culture, e.g. of creativity. When we talk about creativity cultures we accordingly think of assemblages of bodies, materials and amalgamating practices, which are considered to carry and materialize understandings of creativity in response to demands arising in creative economies and design research. While we agree with Marion von Osten (von Osten 2011) that the creative economies as outlined in strategy papers of European governments (e.g., DCMS 1998) do still represent a mere vision of economic development and labour organization, we are convinced that these visions have since their inception begun to materialize in infrastructures and technologies that format how we connect, collaborate and cooperate in production processes.

We think that this rarely addressed material level of creativity cultures represents a valuable object of research on material cultures of creativity. Analyses of the media technological element of “technologically generating and exploiting intellectual property” (ibid.) will therefore be a cornerstone of our research activities within the field. In the final section of this paper we will shed some more light on our approach to studying creativity cultures in creative economies and design research through infrastructures and technologies by introducing three research projects located at the Institute of Experimental Design and Media Cultures (IXDM) at the Academy of Art and Design FHNW in Basel/Switzerland.
5 OUTLOOK

Within the core areas of research at the IXDM – design theories and methods, designing knowledge, and experimental media practice – research on infrastructures and technologies that substantiate understandings of creativity and cultures of production in creative economies and design research has the function of a node. It connects all topics via the empirical investigation of design theories in action, practices of knowledge construction and composition, and opportunities of their media technological reformulation. In our research projects, we depart from an understanding of infrastructures and technologies as as embroidered with discourses that emphatically distinguish creative economies and design research from other economic sectors by alluding to exclusive capacities for producing aesthetic novelty. In media technologies, visions of future economies take shape through the formatting of social production practices that determine the social and cultural differentiation in the 21st century.

With respect to the notion of social practices as constituent of (material) cultures), we have been developing an approach that combines historical research – a kind of forensics of material cultures, as it were – ethnographic accounts of contemporary practice and practice-based experience in different compositions.

From a historical standpoint, Claudia Mareis has been investigating creativity and ideation techniques within the context of design movements and theories since the 1960s. She pursues a historiographical and discourse analytical approach in order to analyze the emergence of creativity and ideation techniques and technologies in the period following WWII. This project focuses less on the individual authors, who created and disseminated creativity techniques such as the Morphological Box, Brainstorming, Synectics, or Triz, but investigates the complex entanglements of materials and practices that constituted a discourse of creativity in the postwar period. (Mareis 2012).

Furthermore, the recently launched research project “Machine Love? Creativity Cultures in Electronic Music and Software Engineering” (funded by Swiss National Science Foundation) has been designed for investigating understandings of creativity and their media technological bases in two areas of production that have undergone significant transformations due to visions of creative economies. Felix Gerloff aims at investigating media cultures of software development within the creative sector, where the domestication of software development through business administration and management has been partly revised during the last decades. The analysis of material conditions of ‘technical’ everyday work in the production of computer games, productivity tools and audio software and how these inform specific cultural structures will take center stage in this project.

Last but not least, Johannes Bruder is focusing on transformations occurring in underground electronic music scenes due to the co-optation of its work-life models into the corpus of creative economies. Electronic music producers and events get sponsored by major global companies, manufacturers of production technologies team up with technology startups producing on-the-go creativity tools, and software solutions integrate interfaces for long-distance collaboration. The overground presence of electronic music has incited a process of transformation within the underground that involves a return to classic analogue technologies and a desire for seclusion in dark basements. Johannes Bruder will
use a combination of customized ethnographic techniques and practice-based research in order to produce a close-up of these processes. We hope that the three projects sketched over the course of this outlook will further our understanding of changing material creativity cultures in contemporary societies.
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Demystifying the ›creative‹. A sketch for creativity research in The context of Creative Industries and Design Research since the 1960s

Johannes Bruder, Claudia Mareis


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Demystifying the ›creative‹. A sketch for creativity research in The context of Creative Industries and Design Research since the 1960s

Johannes Bruder, Claudia Mareis


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