

# Artificial creativity: Beyond the human, or beyond definition?

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## ABSTRACT

Creativity, this seemingly innocent (set of) notion(s) and interrelated practices, is loaded with politics and ideology. With current debates on and experimentation with AI-assisted "artificial creativity," this fact becomes increasingly pertinent as these issues easily slip under the radar, especially given the extent to which both notions involved, "AI" and "creativity," over the last decades have been subject to exultant discourses that sometimes tend to blur the soberness of academic thought. Expanding upon Andreas Reckwitz's Michel Foucault-inspired account of the historical invention of creativity and the so-called "creativity dispositif" as well as upon Joanna Zylińska's Vilém Flusser-inspired work on a posthuman conception of AI-generated art, it is argued that without due focus on both the contingency and proliferability of "creativity," we might end up overlooking the potential ideological and political stakes in contemporary work on artificial creativity.

## KEYWORDS

creativity, dispositif, post-anthropocentrism, definitions, ideology

For scholars like myself who study discourses on creativity, it is remarkable how hard it is to find areas or domains in which the most anthropocentric understandings of creativity are held and often even advocated so strongly as in the academic and technological fields that seek to make artificial, computational or technological versions of creativity – or comment on, or predict the future of this quest. Given that these are areas in which you, at least intuitively, would expect the advocates of a potential nonhuman, AI-based creative agency to be geared towards understandings that were less insistent on creativity as a strictly human business, this seems paradoxical.

However, this is, as I will argue, not just a case of anthropomorphism (cf. Proudfoot; Watson; Smith), misplaced or warranted (Leach). The problem is first and foremost on a more fundamental level related to how we think of, discuss and subsequently practise and enact creativity – namely: as a definable phenomenon that (pre-)exists independently of us and our conceptual categories – and only subsequently related to how we more specifically have come to think of creativity almost univocally as something particularly pertinent to human beings and practices. So, to the extent that this article could be read as a critique of anthropocentrism within research on and experimentation with AI-related creativity, the anthropocentric bias should really only be perceived as collateral damage. My primary quarrel is with what I will label the “definition-game of creativity,” since this is where the assumption of creativity as a pre-existing phenomenon (specifically human or not) is being perpetuated.

That being said, I would nonetheless suggest, as a conceptual stepping stone towards my ultimate argument, that it could be useful to think in terms of “post-anthropocentric creativity” (see also Roudavski & McCormack). But my intention with this label is not to stir up expectations of future technological disruptions with all the “afters” and revolutionary upheavals such a “post-” prefix otherwise usually would imply. If there is an “after” in here, it is *not* meant as the introduction of an entirely *new* creativity, for instance through the adoption of new technologies like machine learning in our creative processes. As I will argue below, the entanglement of nonhuman entities in creative practices is not in itself as novel as at least some of the proponents of artificial creativity often tend to believe (cf. Nick Bostrom, Nick Land or Ray Kurzweil). If anything, my argument would be much more in line with Katherine Hayles’ notion that we have always been posthuman (291).

My point is that we have *known creativity the wrong way*. Or, in fact, to avoid the inherent essentialism in such a statement, and to avoid getting caught up in the definition-game myself by implicitly suggesting that there might be a *right* way, I will suggest in the following that we have lost track of: (i) the fact that we have *invented* creativity historically (rather than discovered it, as the argument often goes); and of (ii) *how* and not least *why* we have invented it the ways we have. Hence, we need to consider how creativity as a set of practices, dispositions, available subject-positions and epistemic practices historically has been produced, and still is being (re)produced, both through the conceptual endeavours to define these phenomena, i.e. knowing them the “right” way, and for instance through experimental attempts at reproducing creativity artificially (especially since these almost unanimously take their point of

departure in the assumption of a pre-existing/-definable creativity). In what follows, I will thus try to raise an essential discussion that is too often ignored, namely one that has to do with the historicity of our notions of creativity as well as the historicity of our attempts to explore and define creativity. And in addition, I want to hint at some of the socio-political stakes in all this, both in relation to the post-WW2 (re-)invention of creativity and concerning what now comes next.

This is especially crucial given the fact that when we concern ourselves with (ideas of) “artificial creativity,” we are navigating a double-hyped territory, since both “AI” and “creativity” over the last decades have been subject to exultant discourses that sometimes tend to blur the soberness of academic thought. Throughout this article I will thus discuss why this is important. What, for instance, happens when we (try to) build an artificial creativity? How could that affect – and reflect back upon – the ways we think about creativity? But even more important: how does this affect the way we think about what it means to be human (or perhaps posthuman), to engage in interpersonal relations and sociality, to be part of and engaged in a material, social and political world, etc.? These are, of course, grand themes or issues, so what does that have to do with creativity? It has to do with the fact that every notion of creativity actually contains a microcosmos of implicit ideological [1] and philosophical assumptions, norms, values and sensibilities, and when we apply a specific notion of creativity theoretically, analytically or in practice, we – often un-admittedly – perform or enact all of these things. And in the case of creativity-related computational technologies of various kinds, we even build these “creativity biases” into the algorithms, the affordances, the workflows, the ways in which they interact, and facilitate our interaction, with their surroundings, traditions and genres, etc. In short: artificial creativity, as any other kind of creativity, is loaded with ideology and politics.

[1] Throughout the article, when I refer to “ideology” I generally do so in the sense which Eve Chiapello, with reference to Paul Ricoeur, has described as “a whole set of social representations” (or perhaps simply worldviews), rather than, as it is more often the case, either “a conception that emphasizes its distortion and dissimulation dimensions” (155); cf. the Marxist notion of “false consciousness,” or simply associates it with particular political programs (socialism, liberalism, etc.). See also my later comments on Glăveanu & Kaufman as well as Sheila Jasanoff’s notion of “sociotechnological imaginaries,” which could meaningfully be thought of as technology and materiality-oriented enactments or realisations of such collectively held, shared normative understandings (ideologies) of so-called “*futureescapes* that collectives actively wish to embrace” (83-84).

### **Towards an inhuman non-creativity?**

Although in recent years there has been a tendency within the computational communities to perceive the prospect of forging an AI-based artificial creativity from very pragmatic design and engineering perspectives that primarily focus on the functional and/or experimental application and commercial diffusion of these technologies (Bown), the issue still manages to raise heated debates of a more philosophical nature. This relates to the fact that the prospect of an artificial creativity has come to signify the “final frontier” or “bulwark” of AI computing (Colton & Wiggins; Manovich & Arielli; Boden; Gunkel). As I will elaborate in more detail below, especially since WW2 creativity has come to be seen *both* as the functional foundation of human language and thinking *and* as the epitome of humanness; that is: as the highest outcome of the processes of human intelligence (respectively inherited from cognitivist psychology and from the Romantic legacy within humanist psychology, cf. below). Or to paraphrase Graham Harman from a recent audio interview in which he criticized the modern model of the subject more generally: creativity has come to figure extremely high on “the list of honorary features of human uniqueness ... that makes the modern subject so great,” which are being used as grounds for “making erratic distinctions between the

subject and the object” based on – whilst simultaneously confirming – the fairly unreflectively *a priori* assumption that there is a “radical difference in kind between the human mind ... and everything else in the cosmos.”

This article is also critical of some of the basic assumptions behind artificial creativity. But unlike a number of voices that have toured the debates (Wellner; Watson; Smith), my argument is not that whatever kind of artificial creativity we might be on the brink of accomplishing, soon or in the more distant future, will be fundamentally dissimilar to the “true creativity” of humans. I am not driven by some romantic-essentialist urge to shout from the rooftops that this will spell the ruin of proper Creativity with a capital C; or to object from a humanist perspective that the AI engineers are making untenable simplifications of the “wicked” complex social embeddedness of creative processes (Bown). Nor am I for that sake defending a more politically potent version of creativity against passivizing emulations (Fazi; Pasquinelli). All various critical positions which have a long history and could already be found in Ada Lovelace’s comments from 1842 that such a machine would have “no pretensions whatever to *originate* anything” (quoted from Sawyer, *Explaining Creativity* 143), and which reappears in the late 1960s – now with more explicitly ideological undertones – in the writings of counterculture advocate Theodore Roszak, who against the very idea that human creativity could be “objectified computationally” demurred that:

[the] presumption involved in such statements is almost comic. For the man who thinks that creativity might yet become a technology is the man who stands no chance of ever understanding what creativity is. But we can be sure the technicians will eventually find us a bad mechanized substitute and persuade themselves that it is the real thing. (282)

Informed in part by Joanna Zylińska’s Vilém Flusser-inspired book on *AI Art*, in part by theoretical strands like actor-network-theory (Latour; Hennion & Latour; Piekut), new materialism (Fox) and the systems model of creativity (Csikszentmihalyi) – which will all mostly just resonate underneath it all [2] – I would rather argue that creativity is always already, and has always been, technologically entangled as well as socially, culturally and politically/ideologically. Perhaps creativity already is, and always has been, artificial. Or to phrase it in more detail: those practices and phenomena we refer to as “creativity” or “creative” are always already entangled in such ways that speaking of it in terms of something strictly, let alone quintessentially, human is, at best, very imprecise.

Following from this we should also be wary of new composite notions like “computational creativity,” which seem to promise greater precision. Using terms such as “creativity” *plus* “AI,” “digital,” “computational,” “algorithmic,” “software-based” or other labels that adds a specific technology-related qualifier to “creativity” tends to leave the impression that there could be a creativity without these things: a stand-alone, autonomous, solely human, natural creativity that precedes or escapes technology, which, as I will argue below, is hardly the case.

[2] The merits of *the systems model of creativity* by renowned creativity scholar Mihaly Csikszentmihalyi is its attention to the sociocultural embeddedness of creative practices. The shortcomings of this theory – at least from my perspective – is its insistence that inaccuracies that arise from these complicated entanglements could in principle be remedied by more domain-specific research and better definitions of what constitutes creativity in each domain.

### Post-anthropocentric creativity?

On many levels it would make sense to think of and terminologically address creativity *in general* in more post-anthropocentric terms, rather than through the prisms of these other more technologically specific perspectives. And as initially stated, the field of computational or artificial creativity is one of the domains you certainly would expect such a perspective to prevail. Yet, if you look at this particular field, much thinking about and experimenting with this does, in fact, seem stuck in this hardened dichotomy between real, authentic, existing creativity *versus* artificial, technological, simulated creativity; often revolving around a highly anthropocentric ontology based on a sharp segregation of the human and the nonhuman, which is only subsequently to be transgressed through simulation. From one stand-alone entity to another. From one black box to the next, cloaked in talk about and practices of coding and algorithms that furthermore are unintelligible to most people. A fact that actually reproduces the mystification of creativity, rather than the opposite. So despite all the hype and buzz about human creativity being challenged (Boden), perhaps even our humanness (Gunkel), the idea of creativity as a human prerogative is really just being replicated, namely as that non-artificial phenomenon, which even the mere prospect of artificial simulation of creativity potentially challenges, for better or for worse.

Obviously, this is most dominant when the aim is to create so-called autonomous, human-like equivalents to the romantic, “heroic creativity” (d’Inverno & McCormack) of the Great Masters like Bach, the Beatles, Rembrandt, etc. But even the more modest take on computational creativity in which technology is presented as a tool or crutch to the real creativity of humans (cf. Engelbart; Davis et al.; Bruno) ends up the same place, reproducing the image of creativity as a strictly human business, which is to be enhanced, emancipated or maximized through technology.

As Zylinska succinctly notes, echoing Harman above, the anthropocentric understanding of creativity that dominates the fields of so-called *AI Art* that she writes about, really seems “premised on a pre-technological idea,” or an “unsophisticated model,” as she frames it in another passage, “of the human as a self-contained subject of decision and action” (or “self-enclosed non-technological entity, involved in eternal battle with *tekhne*”) (Zylinska 55 and 27). Which, today, most would probably argue, given the intimate entanglements of digital technologies in virtually all processes of creative production, is not an adequate description. But, in fact, it might never have been; maybe recent developments have just made this harder to overlook. Because, as Zylinska argues, humans are always already “technological beings,” we are always emerging and developing with and through our technoscapes and have always “relied on technical prostheses and [been] part of technical assemblages” (27), which in the terminology of Czech-Brazilian philosopher Vilém Flusser, whom she draws on here, is simply labelled “collaborations” (52), thus indicating the intimacy of this entanglement.

Following this argument, rather than being a radical break with a previous state of affairs, (the dream of) artificial creativity is really just the latest instalment in the history of human/technology-entanglements. This in turn makes the post-

anthropocentric perspective relevant in retrospect too, as a way to re-visit the various histories of the Arts (perhaps even the history of human inventiveness in more general terms). Hence, Zylinska calls for a *post-humanist* art history and theory (54) that not only focuses on the creative agency of humans, but also takes into account the agency of a much broader spectrum of entities, phenomena, agents and actants; even though these probably should be thought of as more asymmetrically distributed than Zylinska tends to describe them (cf. also the inherent tendency to re-anthropomorphize these human/nonhuman entanglements in Flusser's notion of "collaboration," which implicitly indicates some measure of mutual intentionality).

Despite the disclaimer above that any "post-" prefixes suggested here should be read with some suspicion, the practices or products that we acknowledge *as* "creative" do change over time, and the introduction of new technologies and/or ways of using them is often pivotal to this. Furthermore, the big game changers in recent years have, of course, been digital technologies of (creative) production, consumption and circulation, and most recently the (potential) merging of artificial intelligence and creativity. So even if these posthuman entanglements do not exclusively pertain to our era as Zylinska argues, the current techno-media-scape nonetheless does raise a number of pressing questions. And contemporary technologies like AI, deep learning algorithms and so on have become increasingly important in our creative practices. But more importantly: they have become central to our reflections upon them, they have occupied our minds, and they have attuned our minds differently. In that sense, there is some kind of qualitative change at stake that would merit the claim that a crucial transformation has occurred after all, which would speak in favor of a modest "post-." So perhaps the real dealbreaker should be the extent to which the discursive framings that surround these technologies and associated practices are formulated by industry stakeholders with vested interests in hyping their technologies as radically new, whilst simultaneously clinging on to anthropocentric conceptions of creativity, at times even the most heroic ones at that, simultaneously tapping into our individual longing for *being* creative as well as for technological novelty.

### **The definition game: knowing *versus* enacting "creativity"**

As already mentioned, the problem with anthropocentrism within the field is only a subset of the problem of what I would refer to as the "definition-game" within creativity research and associated areas. This concerns on a more fundamental level our truths or facts about creativity, which especially since the 1950s have multiplied and proliferated throughout a number of new discursive formations and regimes of knowledge and research that, despite their many other differences, all concern themselves with what creativity really *is*; both as something that can be explained and defined, and typically also with the agenda of nurturing more of it. Take for instance acclaimed collaborative creativity-advocate R. Keith Sawyer's instructively entitled book *Explaining Creativity: the Science of Human Innovation* in which the stated agenda coincides with that of most research in the field: "The first goal of this book is to explain creativity, drawing on the latest science provided by a broad range of scientific

disciplines. But a second goal is to use the scientific research to learn how we can be more creative” (405).

In contrast, the perspective that I suggest does *not* think of creativity as something that has always been with us throughout history – for instance as a human ability of invention (of ideas, technologies, practices, artefacts and artworks, etc.) – and which we might then have learned more about over time through empirical research or philosophising on the subject. In fact, I would even argue that *creativity does not pre-exist* in any solid way as something we can find “out there” (or “in here” or “up there”). Which in turn means that getting to know and explain creativity as Sawyer suggests, should rather be about getting to know those social and socio-material processes and entanglements (cf. Latour; Hennion) in which creativity is produced or enacted. That is: how creativity comes to be, how it is talked into being (Stephensen, *Talking the Creative Economy into Being*), how we perform it as “creativity,” so to speak, rather than what it *is*. And on top of that: acknowledging the extent to which this is a dynamic process in which the actual production of knowledge about creativity continuously influences *both* the social field of creativity (including creativity research) *and* its pivotal entity, “creativity” itself, that is: the practices we perceive as “creative.”

Thus, drawing on the German sociologist Andreas Reckwitz’s book *The Invention of Creativity*, which in turn is quite indebted to Michel Foucault’s notion of the “dispositif” (which I will get back to below as well), I would not only argue that creativity is a distinctly (late) modern invention (see also Weiner; Mason). Creativity is also something we constantly re-invent conceptually as well as in our practices and in our appreciative sensibilities (what we think of, acknowledge, treasure and cultivate *as* “creative”). And one of the chief ways we do this is for instance through various modes of practice and appreciation of creativity as well as through (academic) study and research.

### **Real, existing creativity?**

Insisting on us having invented creativity does not mean that it does not exist (hence also my use of the term “*pre-exist*” above). Sociologist Howard Becker, specifically referring back to his own previous work on how things come to be “art” through the cooperative activity of the innumerable stakeholders of the so-called “art world,” once noted that “to a sociologist, nothing is more real than what people have agreed on” (Becker, *What about Mozart?* 185). Following this logic I would argue that creativity *does* exist, but more as a product of our actions, than as the cause of our actions (or even independently thereof).

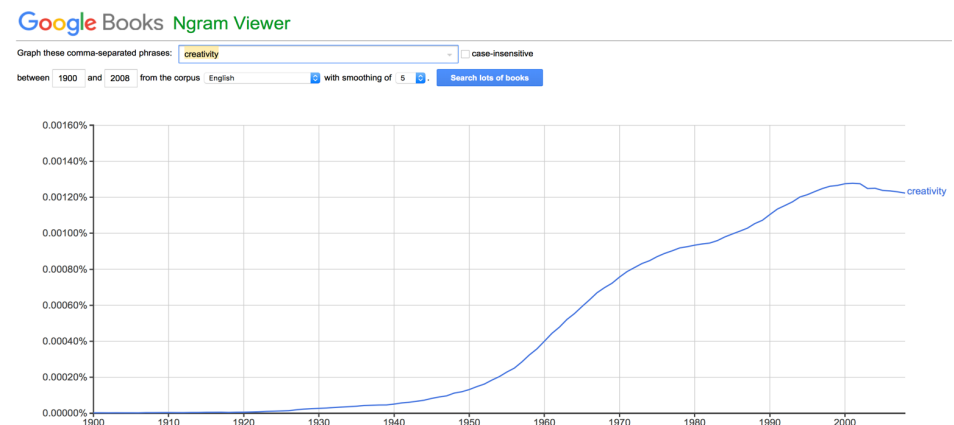
Yet, from my perspective, the most interesting part is not even what we have agreed on (exists), but rather the very processes of *agreeing, disagreeing* and *agreeing to disagree* over the true nature of creativity. These processes of (dis)agreeing have over time solidified creativity’s reality both as something real, an enigma (Reckwitz 6) we can figure out and know things about; and as a set of practices, institutions, actors and actants that concern themselves with and enact this particular phenomenon. Thus, “creativity” becomes creativity – or as I will argue below with implicit reference to Sternberg (*Creativity or*

*Creativities?*): *creativities* – something(s) we can approach with various scientific and pragmatic methodologies, have different opinions about, give various definitions, etc. We can thus *agree to/or disagree* on the “nature of creativity” (Sternberg, *The Nature of Creativity*), whilst implicitly assuming – and continuously confirming and reinforcing – its existence as something that *has* a nature, so to speak. Drawing on yet another sociologist of art, Pierre Bourdieu (*Field of Cultural Production; Rules of Art*), this could be conceptualised as the *illusio* of the game of creativity that secures the involvement of all the different stakeholders within the booming academic field of creativity studies. It is through processes like these, creativity gradually *comes to be* and is *produced* historically. All this (dis)agreeing is what makes up the mutual, simultaneous production of scientific and practical knowledge and facts about creativity (including the *scientificity* of creativity research itself in all its various forms) *and* the very object of this knowledge (creativity). Processes, which not only occur among, and simultaneously constitute the existence of, the “exotic tribes” (Latour & Woolgar 17) of creativity researchers; it also occurs among all other participants, stakeholders and (human and nonhuman) actants that take part in and constitute the field of creativity.

### The shifting agendas of our various *creativities* (towards Man as the creative being)

An instructive way to illustrate the historical invention of creativity is simply to register how the very use of the noun “creativity” has exploded in a series of bursts (Figure 1):

**Fig. 1** Screenshot from Google Ngram Viewer of the growing use of the noun “creativity” from 1900 to 2008 (relative to the overall corpus in English).

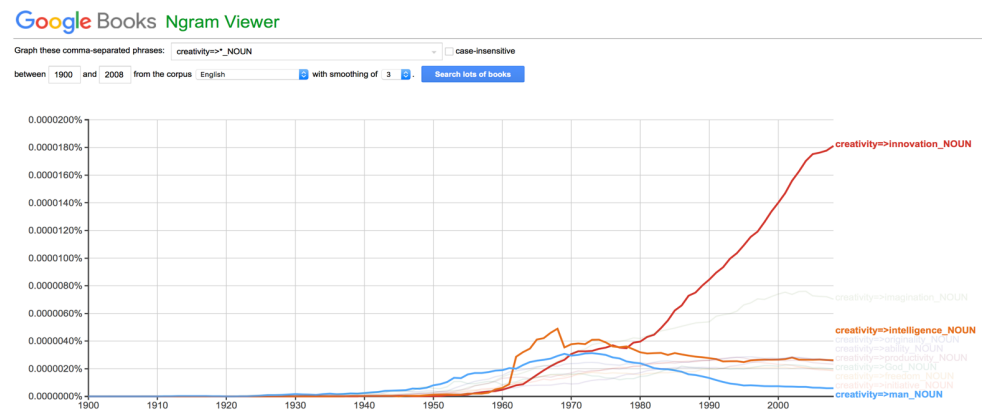


First, during the 1950s when creativity research really took off especially within psychological research, both within humanist psychology/self-growth psychology (cf. Maslow, *Motivation and Personality* and *Psychology of Being*; Rogers; Fromm), and within more cognitivist strains of psychological research (Guilford; Torrance). Slightly later, the notion of “creativity” became a central component of counterculture’s anti-capitalist lingo in which it was cast as that truly human thing capitalism was accused of alienating and smothering (Fromm). A similar agenda can be observed within the discourses of and on the various artistic neo-avant-garde movements of the time, where the death of the author/artist-genius, the increased focus on creative audience participation and so on can all be read as attempts to liberate the creativity of



the former purely passive spectator, which is also echoed in much of the work of early Cultural Studies. Finally, there is the second boom in the 1990s where “the creativity agenda” (Campbell) took off and terms like “creative industries,” “economy” and “class” (Florida) suddenly became pivotal to societal discussion about national economic growth, the future of our work lives, etc, alongside equally hyped discourses on new digital media and platforms as technologies of creative participation (Jenkins; Gauntlett; Meikle & Young).

**Fig. 2** Screenshot from Google Ngram Viewer of which other nouns “creativity” has occurred alongside most frequently from 1900 to 2008 (relative to the overall corpus in English).



These shifting agendas also become evident when we look at which other nouns “creativity” most often appears alongside. The Ngram in Figure 2, in which I have taken the liberty to highlight just the three couplings that are most important to my argument – also given the fact that these probably are the ones that will stand out when future generations of scholars will look back at current discussions on the intermingling of *creativity* and artificial *intelligence* within the broader *innovation* agenda – illustrates how the notion of creativity more or less simultaneously became subject to creativity research that related creativity to *intelligence* (e.g. “divergent thinking” as the psychologist J.P. Guilford famously labelled it in 1950); and was modulated into an ideologically re-charged idea of creativity as the essence of *being Man*, who “under the system of capitalism” was being alienated or “estranged from his own creative powers,” as Erich Fromm famously put it in his introduction to the much read collection of first English translations of the writings of young Karl Marx instructively entitled *Marx’s Concept of Man* (48-49), in which Fromm combined anti-capitalist theory and humanist psychology.

Since the 1950-60s creativity has thus become a defining feature of what it means to be human in general, something we all share. It is no longer thought of as the prerogative of gifted individuals – or cursed mad geniuses (Becker, *Mad Genius Controversy*) – or exclusively related to specific practices or fields like (High) Art. Suddenly creativity becomes, is invented or produced as, a “species-characteristic,” something at the core of our “species-being” as the young Marx would put it (Wartenberg; Sayers). In short: creativity becomes one of those things that makes us different from, and special in comparison with, all other living beings. And following from this, it is also perceived as a potential that needs to be actualized in order “to become a person,” as the psychologist Carl Rogers phrased this at the time increasingly mainstream idea. In fact, this line of thinking is also part of the cognitivist strand of research, albeit in a less ideologically loaded form. Here, creative thinking is considered

a part of normal, non-pathological ways of thinking, e.g. in the everyday use of language (Weisberg). Hence, creativity in this quite specific time in history simultaneously comes to figure *both* as the foundation for human intelligence and thinking (a functional means), *and* as human thinking at its best (an aspirational goal).

This cluster of ideas does, of course, have predecessors such as parts of the Romantic Movement, utopian socialists like Charles Fourier and William Morris as well as (the young) Karl Marx, just to mention a few. The crucial part is the extent to which these ideas enter the mainstream, and how the idea of a “democratized” generic human creativity over time becomes common sense (which also explains its apparent subsequent demise in Figure 2: it hardly needs to be mentioned). It is important to emphasise that in a historical perspective this is completely new. Foucault once suggested that some ideas have become so natural to us that we “tend to feel [they are] without history” (*Essential Foucault* 139); that once they were perhaps even unthinkable. The notion of creativity as a shared human faculty, as something quintessentially human, and as something that can and must be actualised and maximised, individually and socially, would be such an idea.

Finally, the Ngram in Figure 2 also illustrates how “creativity” subsequently – after its countercultural heyday – has been recuperated in the service of the emergent neoliberal *innovation* economy/economics of the 1980-90s and onwards. A discourse that despite its pivotal argument being mostly economic quite often still draws upon the idea of Man as a creative(-cum-economically innovative) being; albeit perhaps mostly for legitimacy thereby supporting the idea of the emergent innovation driven creative economy as the natural state of affairs, creative labour as inherently unalienated, creativity-related domains as sites of freedom, etc. (Wright; Chiapello).

In essence, these graphs illustrate how a number of different, at times even incommensurable creativities under the influence of radically diverse socio-economic political agendas have been invented, re-invented, multiplied and talked and enacted into being during the last six or seven decades (Reckwitz; Stephensen *Talking the Creative Economy into Being*). And these are not just different conceptions or ways of understanding creativity in the singular. These shifts in balance between different couplings entail relative shifts in both productive practices and regimes of appreciation and knowledge as well. Yet, it does not mean the eradication of one creativity for another. One new truth about, discovery or better definition of the “true nature of creativity” does not replace previous one(s). They co-exist, often within the same text, sometimes even on the same page or in the same sentence, where they complement and strengthen each other (e.g. creativity as both “problem-solving” and as an appeal to our urge for “self-actualisation”). Still, despite all their differences, it is an important point that common to most of our creativities – including the ones I have not mentioned here – is the anthropocentric bias as well as the tendency towards increasing universalism, in sum adding to the conception of creativity as something generically and quintessentially human.

In fact, it could even be argued that this emphasis on the essential humanness of creativity has been hugely important to the success of the idea of creativity

itself; for instance first up against an economic system thought to alienate its citizens, then as the humanistic polish on the innovation agenda. And now also within AI-related thinking on creativity, where the mere prospect of successfully forging a genuine artificial creativity has come to stand as the benchmark for the re-humanization of this alien, incomprehensible technology, hence also offering an explanation for the counterintuitive anthropocentric bias within artificial creativity research.

There is another irony or paradox in this: despite the quite recent surge of the idea of (human) creativity, we have actually become accustomed to think of it mostly in a universal, ahistorical sense (cf. Foucault's "without history"). We tend to forget its contingent, emergent character: that "creativity" is historically invented, rather than universal or given by (human) nature. And we tend to forget its permutability or proliferability, instead (dis)agreeing on and struggling over better or more correct definitions of creativity (in the singular). Two ways of saying that the ideas and practices that we perform under the label of "creativity" are continuously subject to (re)construction and (re)negotiation and thus perpetually seem to be multiplying into various competing and/or complementing conceptions. Because this is the business we are in, all of us humans (and nonhumans) who in various ways are engaged in the process of enacting whilst agreeing and disagreeing over creativity; including all those who work experimentally or theoretically on artificial creativity, and who in various ways contribute to the reformatting of "creativity" too.

### **Beyond mere creativity: ideological implications**

As already mentioned, these issues are not just related to a very narrow set of practices we would conventionally associate with creativity. They have much broader implications, and they actually do so *even* when they are explicitly "just" about art. Because each of these notions of creativity we have forged over the years contain – albeit often implicitly – a microcosmos of ideological and philosophical assumptions, norms, values and sensibilities that reach far beyond the traditionally innocent and often slightly obscure issue of creativity itself. This point is also made by Glăveanu & Kaufman in their introductory chapter to *The Cambridge Handbook of Creativity* from 2019, where they (begin to list) the true scope of all this:

conceptions about creativity and its many facets – individual and social, based on novelty and on value, grounded in ideation and action – are intertwined with our conceptions of human beings, God, society, and culture. More than most phenomena studied within psychology, the way we define and study creativity has deep implications for how we see ourselves – as more or less agentic beings, as determined by our society and culture or actively shaping it, as different from or similar to the divine. (21)

After which they in a very acute, yet sombre tone – at least compared to the normal standards of this often quite hype-ridden field of creativity studies – emphasise the importance of all of us creativity researchers, practitioners and

other actants in the creativity field (including those working on artificial creativity) being aware of the impact of what we do, since we are all

actors that maintain and construct certain ideologies of creativity (understood here as systems of belief rather than biased or manipulative conceptions). How are we using this agency? What kind of agendas do we promote or continue through our work? And what kind of visions of individuals and society are associated with them? (22)

All our activities of seeking to define, measure, nurture, utilize and make artificial versions of creativity have fundamental impact on how we act and think socially and politically in ways that reach way beyond purely creativity-related issues. Hence, the point is *not* if one definition or conception is more correct than others. It is rather, that they look and taste and feel different because they are tied to different sets of practices and different sets of evaluative schemes; and they are tied to different world views and imply different anthropological assumptions and norms including ideologies, politics and policies. Which at the end of the day makes those of us engaged in creativity-related research – regardless of whether this involves AI or not – potential proponents of specific sociotechnological imaginaries (Jasanoff). Keeping track of this – or for starters: even just keeping track of the fact that this *is* the case – seems urgent.

### **The creativity dispositif, governmentality and technologies of the (creative) self**

Central to Andreas Reckwitz's account of the historical invention of creativity is how this process over time has led to, and simultaneously becomes conditioned by, the establishment of institutions, schools, fields and practices of knowledge that in various ways revolve around "creativity." Yet, this is not just institutions of bricks and mortar, physical places and infrastructures. It also entails a host of other phenomena: a broad variety of social roles; discourses and vocabularies; values and norms; conventions and traditions; practices and processes; beliefs, attitudes, sensibilities and modes of appreciation; categories of artefacts and products. And on top of that a host of technologies in which we are both entangled in our productive processes of creativity; in our consumption of creativity, including the consumption of ourselves *as creative* through the purchase of creativity-enhancing technologies; and not least, in our processes of (scientifically) studying creativity through various methodologies (e.g. neuro-cognitive and genetic lab research as well as the current interest in machine learning algorithms, artificial intelligence, etc.).

In fact, all these are just some of the components in the so-called "creativity dispositif," which especially since the 1950s has quite suddenly emerged and proliferated into society and many of its underlying logics, primarily focussing on studying, nursing and even celebrating this phenomenon we call "creativity" (Reckwitz 29-32). Integral to the creativity dispositif is thus the individual and collective (or political) drive to intensify the diffusion of creativity into every fibre of society as well as into our individual lives and those desires or aspirations we ascribe to this. A drive that simultaneously is

*working* through, and is a *working through of* – that is: first gradually instilling and then perpetually modifying – our own desire to be(come) creative. This for instance functions through institutionalised demands, expectations or sometimes just naturalised and internalised ways of thinking about ourselves and our place in the world (e.g. as “creative selves” (Prichard)), which are imposed, suggested or simply made readily available to us by the state, our employers, normative discourses, new definitions of normality, etc.

So, this is where it all becomes political. Yet, the creativity dispositif does not work through *power* in the sense that someone possesses the authority to coerce others into doing “something they would not otherwise have done” (Dahl 158). It does not entail making us do what we did not want to do. On the contrary, we often want it badly, or at least many of us do, as we conform to various creativity-related criteria and values (paradoxically often in the form of the criterium of “non-conformity”). In fact, this has become so embedded that nowadays *not wanting* to be creative has become “an absurd disposition [...] that defies comprehension” (Reckwitz 1). So, if there is governing taking place, it is “governing through freedom” (Dean 262); or more specifically: the freedom to be(come) creative. Or as Raffnsøe et al. put it, the often implicitly prescriptive level of the (creativity) dispositif “has a determining effect on what is taken for granted and considered real” (for instance the truth about Mankind as the creative being), and thus it “determines not only what is and can be considered possible but also what can even be imagined and anticipated as potentially realizable, as something one can hope for, or act to bring about” (292), both on a societal level and as an individual. And once again, our contemporary relationship to creativity stands out as a clear cut example of this: in a historical perspective the idea of creativity as a shared, quintessentially human faculty, and as something that can and must, both as an obligation and as a desire, be actualised and maximised, individually and socially, is something completely new, especially as a commonsensical, “natural” matter of fact.

These issues have also been raised in more specific relation to artificial intelligence, for instance by philosopher of technology Brian Cantwell Smith. In *The Promise of Artificial Intelligence* Smith notes that one of the challenges raised by developments in AI in general is how this will “affect not only our sense of ourselves, but the constitutive standards on what it means to be human (since “human” is in part a normative predicate, not merely a biological one).” (117). This becomes particularly pertinent to our present discussion given the fact that creativity, parallel to intelligence, has become a quintessential part of the kind of defining stories we tell ourselves about mankind and the sort of beings we are; or alternatively: can aspire to become when we are at our best. And in addition, such im- or explicitly prescriptive, normative anthropologies are the cornerstones of wider ideological worldviews as well as subsequent political actions, as most of the latter start from very specific assumptions about what kind of being Man is, and subsequently what kind of society would fit this being (at least on level of the legitimation/justification (Chiapello)).

### If “post-definition-game creativity” is the answer, then what is the problem?

So, why is it so important that all of our creativities are emergent and contingent, perhaps even artificial, and that they generally have emerged and/or been transformed by political or ideological agendas (among other things)? And how is the suggestion that we should begin to think about creativity in a “post-definition-game”-mindset going to change anything? The idea is to hopefully avoid getting caught up in the business of blindly defining creativity by claiming that creativity *really is this* rather than *that*; like for instance Keith R. Sawyer, who up against the idea of creativity as an individual feat argues that “the truth is always a story of group genius” (*Group Genius* xiii). Or for that sake, relating specifically to this article, to avoid pitting a post-anthropocentric perspective as the latest discovered truth about creativity against the more traditional humancentric perspective in order to disqualify the latter as a historical misunderstanding that we should move beyond (cf. Zylinska’s notion of a posthuman art history).

My primary interest in cross-pollenating both “post-anthropocentric” and “post-definition-game creativity” with the notion of the “creativity dispositif” is to emphasise how loaded with history and politics something as seemingly innocent and supposedly inherently human as creativity easily becomes – or actually: always already is – even when it is somewhat playfully applied and experimented with, as is the case with artificial creativity. But as already mentioned, this is not in defence in some other understanding (definition) or set of creative practices. Rather, the point is this: that we simply need to be aware what it is that we have achieved when, or if, we finally achieve something we are willing to accept or recognize as “artificial creativity.” We will not have made an artificial equivalent of something previously un-artificial. We will most likely (just) have accommodated our applied notions of creativity to fit a number of factors that seemingly are unrelated to creativity – but of course they are, as I have argued. Because as always there will most likely have been a strong influence by especially politics, ideology and economy/economics. And perhaps more specifically to the contemporary quest for artificial creativity, an important parameter will also have been what is technologically attainable. “[We] can be sure” as Roszak put it, that “the technicians will eventually find us a bad mechanized substitute and persuade themselves that it is the real thing.” (282) Except, of course, that “the real thing” does not exist as such a hard fact as Roszak assumed, at least so I would argue.

So if or when we celebrate our successes in building artificial versions of an apparently pre-existing un-artificial creativity, the reality will most likely be that we will simply have given more (conceptual and practical) credit to those practices of creativity that both fit in with what we can do technologically, and with our ideological and economic agendas; and less credit to those that do not fit in. Or to put it in a more technology-related terminology: we will have *reverse-engineered* our concepts of creativity conceptually (Stephensen, *Post-creativity and AI*); and subsequently also practically, as these are intricately entangled. And the important thing is, following Glăveanu & Kaufman, that reverse-engineering creativity also entails the reformatting of all those things that attach themselves to the various creativities we embrace. It means signing

up for this or that agenda, this or that sociotechnological imaginary, consciously or not.

So, the take-away in the context of computational or artificial creativity is that emulating creativity really gets you involved in all kinds of problems and issues. It is not just, as it is quite often discussed in those domains, a technical thing that can be fixed with the right snippet of code. Nor is it some philosophical obstacle that can be solved with (yet another) truer, better or more functional definition of creativity. It is all loaded with politics and history. If this holds true, it means that when we seek to create artificial creativities – because I am not arguing that we should not embark on these interesting experiments – we must both be wary of and quite explicit about questions such as: “Exactly which one of these many creativities are we building?” (instead of simply assuming or pretending that it is creativity *per se* in the singular). But perhaps even more critically we should also ask: “What kind of problems are we trying to solve with this?” “Whose problems?” “To whose benefit?” etc.

These latter critical questions are perhaps why thinking about artificial creativity in the terms I have suggested here might be urgent. Indeed, if we look beyond the interests in the simple, experimental novelties of engineering, design and computer science there is yet another crucial question that must also be asked (regardless of whether we are working on creativity enhancing tools or stand-alone autonomous creators): “What, in the first place, is the deeper point of making creativity easier, more assessable, perhaps even automatable?”; “What are the underlying assumptions of this perpetual quest for more creativity?”; and “Do we even need more creativity?”

This begs the final question: how should we proceed? In my opinion, instead of hiding behind universalisms and essentialisms about the true nature or definition of creativity (humancentric or not), the best place to start would really be just to explicitly flag which kind of creativity (practices or processes, outcomes or products) you are aiming to arrive at and why. In other words, work on creativity, artificial or not, should be *re-politicized*. Not in the sense that it should be in the service of one or the other agenda, but simply as an awareness that it already is loaded with politics.

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