

Towards a Philosophy of Post-creative Practices? – Reading Obvious' “Portrait of Edmond de Belamy”

Jan Løhmann Stephensen
Department of Culture and Communication
Aarhus University
aekjls@cc.au.dk

As an emerging experimental subfield of AI in general, artificial creativity—that is, acts of creativity performed (semi-)autonomously by algorithmic/software robots—poses a particular set of problems. Most notably, computational/artificial creativity conflicts with the anthropocentric ways in which we have historically invented ‘creativity’ as something uniquely and quintessentially human; hence the term ‘post-creative’. Yet, when seeking to replicate the kinds of activities (or products) that we are prone to label ‘creative’, we often tend to forget the contingencies of the ‘creativity dispositif’ (Reckwitz 2017) and its contested and conflictual character. This amnesia includes the ways in which labelling something as ‘creative/not’ also, perhaps even primarily, is an aesthetic judgement—either in the traditional sense of philosophical aesthetics, or in the new (Ngai 2012)—rather than merely an ontological statement. To this end, the paper discusses how theories of how art comes into being (sociology of art, the institutional as well as the anti-essentialist theories of art) might have relevance to the issue of creativity as well. Using the recent, heavily debated auctioning of the AI generated painting, “Portrait of Edmond de Belamy” (by Obvious, 2018) as a case this paper will discuss how research into simulating creativity as a productive human activity will have to address not only the new challenges this phenomenon poses, but also some of the older aporias that have long marked our theoretical dealings with the concept ‘creativity’.

Keywords: post-anthropocentric creativity, artificial intelligence, art, philosophy, sociology

INTRODUCTION

One of the main reasons people often mention for finding art generated by artificial intelligence interesting are that it challenges our conception of how art comes into being. It allows or perhaps even forces us to rethink the nature of human creativity, posing the fundamental question, what does it mean to create or bring something into being?

In this paper, I will discuss the AI generated painting *Portrait of Edmond de Belamy* (figure 1) by the French group Obvious, which hit the mainstream news last year. I will do this in relation to my ongoing research project on what I call ‘post-creativity’ (an abbreviation of ‘post-anthropocentric creativity’). This research project is inspired by some of the key findings of Actor-Network-Theory and New Materialism (e.g. Latour 2005, Coole & Frost 2010, Dolphijn & van der Tuin 2012, Fox & Alldred 2017).



Figure 1: “Portrait of Edmond de Belamy” (Obvious, 2018)

But rather than just pointing out how humans and machines are entangled and interwoven in processes we would label 'creative', I am also interested in what this does to the concepts we use to make sense of these specific practices, and how the vocabularies we use to discuss and (try to) make sense of these tendencies, tend to cause certain problems; partly because of new problems that emerge, but certainly also because of old problems we have inherited in relation to the notion of creativity and how we think and talk about the way things come into being.

To this end, a final, yet crucial disclaimer is in place. The aim of the post-creativity research project is *not* to locate one or more specific notions of creativity that are to be considered more correct than others. Rather, it is to point out how this, as I will argue below, both contingent and highly contested concept, is performatively being talked into being all the time (Stephensen 2015a); while at the same time—which, however, I will not touch upon further in this paper, so I will just mention it here—being embedded or installed in those technologies we entangle ourselves with in our creative practices.¹ And they are so regardless of whether we think of or use these technologies as mere 'tools' in one end of the spectre; as 'emergent'/'generative' creators that work more or less without human interference (autonomously) at the other end of the spectre; or somewhere in between these: as 'creative colleagues' that "collaborate with human users on creative tasks much like another human would" (Davis et al. 2015, p. 10).²

'POST-CREATIVITY'

Portrait of Edmond de Belamy is a specific instance of what we might term 'artificial creativity'—or as others would put it: 'computational', 'algorithmic', 'digital' or 'machine creativity' as well as 'expressive' or 'creative AI'. With this notion of 'artificial creativity' (a specific subgroup of AI in general) I am referring to Machine Learning algorithms that have been set up to act (fairly) autonomously in ways and contexts in which we would normally think of as 'creative', and often also 'artistic'. That being said, the promise of an 'artificial artistic creativity' *per se* often appears quite speculative or futuristic, as the endeavours within the field has hitherto mostly been exploratory,

often in the shape of interdisciplinary experiments crossing the fields of artistic practice and computer science.³

As already mentioned, my term of choice 'post-creativity' is an abbreviation of 'post-anthropocentric creativity'. The latter is less catchy, which is why the shorter one has been preferred. But 'post-anthropocentric' does have the benefit of pointing more specifically and in detail to the fact that the interest of my research project is primarily in the change of perspective (on the *whats* and the *whos* and the *hows* we tend to think of as being central to creative practices), than it is meant to reference a change in creative practices as such—although this might also be the case. But what certainly is *not* the case, is that AI will fundamentally "disrupt" creativity/creative practices *in toto*, as some would argue—perhaps most notably those AI-advocates that have made a living through elaborating upon sci-fi author Vernor Vinge's (1993) notion of 'technological singularity'.⁴

What both terms, 'post-creativity' and 'post-anthropocentric', have in common is that they try to emphasise the fact that these practices of 'artificial creativity' fundamentally seem to challenge the ways in which we historically over the last Centuries have invented (and reinvented) 'creativity' as a concept, as an idea and as a (fairly diffuse) set of practices, namely:

- (i) as something we have increasingly come to perceive as being a quintessentially human thing, that is: the idea that creativity is something only humans can do—something exclusive and significant to our species—something that defines us (think in terms of Marx' notion of Species-being (1967): creativity as a species-characteristic); an anthropological assumption about human inventiveness that has become quite normative/imperative (often accompanied by the agenda that creativity somehow needs to be emancipated, either from stifling organisational frameworks like bureaucracy and so on, or from capitalism; and often with the help of 'new technologies');
- (ii) as something that challenges the idea that creativity could and perhaps even should function as a marker of human 'greatness'—individually and collectively—as something we praise, strive for, encourage, organise our lives, societies and collective practices in relation to,

¹ This part of my ongoing research project on *post-creativity* is inspired by Jeffrey Bardzell's (2007) work on creativity in amateur multimedia-production.

² See Davis et al. (2015, pp. 110-114) for an elaboration of this three-level taxonomy of human/non-human entanglements in relation to what they label 'computational creativity'.

³ Especially within the field of commercial/popular music, we have, however, recently seen a trend towards developing genuine business models that compete with other traditional services (cf. Drott 2019)).

⁴ According to Ray Kurzweil, who elaborates on Vinge's notion, "[t]he Singularity will allow us to transcend these limitations of our biological bodies and brains. [...] There will be no distinction, post-Singularity, between human and machine" (2005, p. 9).

build institutions for, have conferences to discuss, etc.

The important point is, that in the long history of humanity, all of this is actually fairly new. Even though we have become accustomed to the idea of human-driven change, innovation and novelty as something that has always been part of the human condition and on top of our agenda, it is, in fact, a very Modern idea.⁵ Likewise, the increasingly widespread expectation that one's life should be a creative life—or that creativity and innovation should be central to our societies—would have been unthinkable before the 1960's. In fact, creativity seems to be one of those ideas, which Michel Foucault (2003, p. 351) suggested have become so natural to us, so common sense, that we tend to forget they have a history. But creativity does have a history.

This has for instance been argued convincingly by the German sociologist Andreas Reckwitz in his *The Invention of Creativity*, in which he—with reference to another concept from Foucault— suggests that we should think of creativity as a *dispositif* (2007, pp. vii-viii, 9-32). With the so-called 'creativity dispositif', Reckwitz refers to all those specific institutions, objects, artefacts and practices, actors and actants, values and norms, beliefs, attitudes, sensibilities, and modes of knowledge and appreciation that especially since the 1950s have emerged in relation to the notion of 'creativity'; including the individual (identity) and collective (political) drive to intensify the diffusion of creativity into every fibre of society (the 'creative society'), which simultaneously has happened through our own desire to be/become creative and through a broad variety of institutionalised demands from the state, our employers, various normative discourses, etc.⁶

And, as I will argue in relation to the case, this assumption that creativity has always been with us causes some specific problems. When seeking to replicate the kinds of activities (or products) we

historically have become accustomed to labelling 'creative', we often tend to forget the contingencies of the whole idea and, as I will argue below, its inherently contested nature. Thereby we often end up trying to imitate something that is not really there; at least not in the sense we tend to think of it and talk about it. And we end up doing it for reasons, we are not always really aware of either.

PORTRAIT OF EDMOND DE BELAMY

Late 2018, the story of the auctioning off of the AI generated painting *Portrait of Edmond de Belamy* hit the news. This painting—or to be more precise: this print in a golden frame—was put on auction by Obvious, a group of three French students, who had trained a Machine Learning algorithm on a selection of classical portrait paintings. This was done by using a so-called Generative Adversarial Network (GAN), which had actually been built by someone else, namely the 19-year-old student, artist and programmer Robbie Barrat. From the paintings, which the GAN had put out, Obvious had selected 11 paintings, which made up the imaginary Belamy family tree (figure 2)—all bearing quite a few resemblances to works by modernists like Francis Bacon (why always Bacon, one might wonder?). It was the painting of the youngest offspring of this fictitious family, Edmund, which in October 2018 went under the hammer at Christie's in Manhattan.

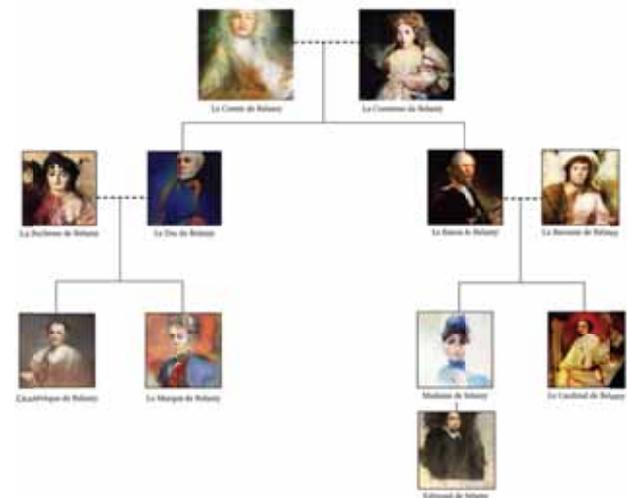


Figure 2: The Belamy family tree (Obvious, 2018)

This was not in any way the first AI generated painting; there is a long tradition for this. Nor was it in any way the first AI painting to be sold (Elgammel 2018); although it was the first at one of the major auction houses. So, there were actually quite specific expectations concerning the estimated sales price, based on what similar examples previously had been sold for. However, the estimated sales price at 7-10.000\$ was pretty far from bull's eye. It went for 432.000\$ instead,

⁵ Recently reading Yuval Noah Harari's bestselling book *Sapiens* (2014) on the history of humankind, this struck me as a quite important point, which he, however, does not make much out of himself: that in the long history of mankind, we have only quite recently come to value, let alone systematise, inventiveness and the ability to make something new. See Godin (2015) for an elaboration of the normative and ideological agendas that has surrounded the concept 'innovation' over the last three millennia.

⁶ Foucault himself describes the *dispositif* (*apparatus*) as "a thoroughly heterogeneous ensemble consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions—in short, the said as much as the unsaid. [...] The apparatus [*dispositif*] itself is the system of relations that can be established between these elements" (1977, p. 194).

leaving the expected estimate off with a factor of approximately 50:1. Hence, you could argue, the portrait was catapulted from the realms of 'fun-to-have, interesting gimmick' to 'fetishised art object'.

It was, of course, this huge, unexpected selling price that caught the interest of the media and made headlines. But almost immediately, other questions popped up, namely:

- (i) *Should this be thought of as some kind of 'artificial creativity' that could potentially match human creativity?* This has, of course, been the longstanding ambition for a lot of people in this field, and the reason why so many people have worked on defining creativity: to replicate and multiply it and to develop what we might label 'creativity short cuts'.⁷ This case rose the suspicion that this might be a successful realisation of this project/agenda.
- (ii) *Does this mean that computers, through Machine Learning or Artificial Intelligence, can now produce artworks that are as good as those artefacts made by human hand?* (Or put in Creativity Turing Test terms: indistinguishable from human-made products?).
- (iii) *What are the implications for the role of the artist and for the spheres of Art?* Will artists (at least visual artists that produce paintings) potentially become superfluous as the market might be flooded with these kinds of artefacts?

These questions were also brought up by the auction house. In quite a sensationalist tone they note that "when [the portrait] goes under the hammer, [it] will signal the arrival of AI art on the world auction stage" (Christie's 2018). Likewise, the same issues were the pivotal point of an article on The Smithsonian's homepage in which the author pondered:

If an AI researcher designs and executes an algorithm, who is the end product's true creator: human artist or machine? And, most importantly, if robots can create art, where does that leave humans? (Solly 2018)

In extension of these questions, the case also raised some legal and economic discussions. This was immediately pressing given the fact that Obvious had used a GAN made by someone else.

So, both the art and AI community soon also found themselves discussing:

- (iv) *Who is entitled to profit from the sale of the auctioned artwork?* (And by implication: from others like it?)

The questions concerning creativity and making (of art) are, of course, closely related to the discussions about copyright and ownership. These legal frameworks mirror our inherited, fundamental ideas and assumptions—or perhaps even: collective myths—about how things come into being, and what kind of agency that goes into that process. The notion of copyright, intellectual ownership, patents, etc. thus reflect an understanding that emphasises that a certain privileged kind of human activity, 'creativity', has been involved; which in turn becomes the moral foundation for granting a specific person judicial, economic and conceptual authority (cf. Woodmansee 1984, Lessig 2004 & 2008, Towse 2010).⁸

READING PROFIT (AND CREATIVITY)

The astronomical sales price of the portrait can be read in (at least) two ways:

Either, it reflects that the artwork has, in fact, been evaluated and valued as a genuine piece of art which *grosso modo* matches artistic artefacts produced by human hand and mind. No longer just a gimmick, but "real Art" with a capital A. The Market has spoken; and it has so in a kind of Creativity Turing Test (Boden 2010), which in this case is not even blind! If this was the case, it certainly would be the realisation of the wet dream of substantial parts of the artificial creativity community: to replicate human creativity to the extent that it is difficult, impossible, perhaps even irrelevant, to tell the difference.

This is also the way both Obvious and Christie's frame the piece; most likely, of course, quite deliberately playing the 'AI hype' (Elgammal 2018). Obvious have for instance been arguing that it is actually the code that should be thought of as the artist: "the portrait was generated by an algorithm" (Obvious Feb 14, 2018). This is also the point of replacing the traditional signature of the artist with a string of the code that produced the portrait. In more

⁷ In this, there seems to be at least two underlying assumptions, that perhaps too often are reproduced without much reflection. Firstly, the idea that we generally lack creativity (I would, for instance, argue that what we are short of might not be creativity, but rather things like empathy, solidarity, dignity, reason, etc.). And secondly, that it would be meaningful to couple the more generic agendas of efficiency with those of creativity—or in other terms: that creativity should be easier, more accessible.

⁸ In fact, it could even be argued that creativity really mirrors whole cosmologies (cf. Mason 2003), but that would be another paper.

general terms, the Obvious collective have even proclaimed that “creativity isn’t only for humans” anymore (quoted from Vincent 2018).

This reading—that the sale of the portrait mirrors a successful imitation of human creativity—does, however hinge upon an essentialist idea of creativity ‘being out there’. Creativity as something objectively existing which we can define, localise and reproduce. In other words, an understanding of creativity as something that is not our own invention, something we have not created over time, but has been there all the time.⁹

In contrast, the other reading would suggest that the sales price really just reflects the fact that the portrait has been evaluated, valued and priced in exactly the same way as many other art works (as commodities, investments objects, etc.). Not because it *is* art in any essential sense. But because it has suddenly (for reasons we don’t know, since the buyer is anonymous) has been moved into the ‘Art’ category. It has, in other words, become part of the social, economic and sometimes even political/ideological game of art. A game, which is not in any ways new, since it actually quite some time ago has been described by some of the theoretical classics dealing with art, from which we could perhaps also learn something about the ‘game of creativity’ as well.

We could find this kind of description in the sociology of art (for example the classical works of Howard Becker (1974) and Pierre Bourdieu (1993, 1996), which both stressed the social character of art-making/making something into art; as well as Luc Boltanski & Arnaud Esquerre’s recent work (2016, 2017) on the “economic life of things” and how various artefacts can be “enriched” through narrative framings like the story of a portrait created by the much hyped technology of AI). And perhaps more surprisingly, a quite similar analysis can actually be found within philosophy, both by the Institutional Theory of Art (cf. Arthur Danto (1964) and George Dickie (1971)), who emphasised the role of institutional gatekeepers and the Artworld, as well as the Anti-essentialist Theory of Art (Morris Weitz 1956).

OPEN AND/OR CONTESTED CONCEPTS

These analyses of the (language) games of art seem to be worthwhile applying to creativity; despite—or perhaps because of—our

⁹ There is a lot of talk about defining, localising, enhancing, etc. in the emerging field of ‘creativity research’ (cf. Williams, Runco & Berlow 2016, Runco 2014), sometimes also referred to as ‘creativity studies’. It is the reason why this field exists and seeks and quite often gets funding, etc. So, it’s not just about journalists “not getting it”.

tendency to discuss creativity as a given, as something out there, no matter how mysterious it might seem. (Which, of course, was the exact same reason those guys gave for writing about art: that people were talking about it as something that was almost independent of us, and independent of what we would like it to mean and our uses of it.)

Take for instance Morris Weitz’ notion of art as an ‘open concept’ (in this quote he is talking about open concepts in general, but hopefully it should be obvious how this applies both to ‘art’ and ‘creativity’ as well):

A concept is open if its conditions of application are emendable and corrigible; i.e., if a situation or case can be imagined or secured which should call for some sort of decision on our part to extend the use of the concept to cover this, or to close the concept and invent a new one to deal with the new case and its new property. (1956, p. 31)

This means that the question whether some borderline case like an AI-generated portrait is art or not—and by extension, I would argue, whether something should be labelled ‘creative’ or not—is no factual, but rather a decision problem, where the verdict turns on whether or not we enlarge our set of conditions for applying the concept” (p. 32). Which is pretty much what has happened to both concepts in question here: ‘creativity’ and ‘art’.

Yet, given the ways in which creativity over the last decades has been ascribed an increasingly crucial, socio-economic and politico-ideological role in our contemporary societies (Stephensen 2015a, 2015b, Reckwitz 2017), we should perhaps add, that this is not just a strictly philosophical problem, but also—and perhaps even predominantly—a political and conflictual one. ‘Creativity’ has become a battle ground! So, perhaps we should even think of the concept of ‘creativity’ as an *essentially contested concept* (in a very strong sense), rather than merely an open one (which would be too weak a term).

If we look at the historical transformation of the notion of creativity and how it has been put to use, especially the ways in which it has expanded and diffused into nearly every fibre of society—or in Weitz’ terminology: enlarged—this also becomes evident. It has always been closely related to ideological struggles and agendas; regardless of whether we’re talking about its ‘instrumentalisation’ (cf. the creative industries and creative economy-agendas); or if we’re talking about its so-called ‘democratisation’ (for instance up against alienating labour of capitalism (Stephensen 2015b); in relation to the so-called ‘participatory turn’ and all those emancipatory connotations that sticks to it; or how the creative abundance of contemporary culture is

determined by the decline of elitism in the arts and the rise of digital media (Bolter 2019)).

Hence, the inclusion of any activity or artefact into the realms of 'creativity' is always tied up with normative, ideological and political issues. As a minimum, it has to do with the power to draw the line between 'creative/not'. And the discussion of whether an AI-generated painting like *Portrait of Edmund de Belamy* is 'art/not art' or 'creativity/not creativity' certainly would be such a case.

It does, however, make sense to insist that not any object or practice could easily be included. Breaking with the conventions in an interesting way (which is one of the key criteria for granting a given artefact, practices or process access to the realms of 'Art' or 'creativity' (cf. below)) is, in fact, quite a conventional business. Or put even more bluntly: there seems to be conventions for breaking with the conventions of art. (Those who would object, "How, for example, about Duchamp's famous urinal (or other ready-mades), then?", should think of the fact that it took almost 50 years until it actually became an important piece of art (cf. de Duve 1996)).

'CREATIVITY' AS AN AESTHETIC CATEGORY?

This issue of locating or pointing out 'creativity' could also be discussed in the terminology of Aesthetics¹⁰ Because the act of labelling something as 'creative/not creative' is also a passing of an aesthetic judgement, rather than merely an ontological statement. Despite its linguistically speaking seemingly objective or definitive character—"this *is* creative!"—this kind of postulate really has many affinities to the Kantian 'antinomy of taste' (Kant 1914/1790, pp. 230-241), especially the same paradoxical characteristics. The way we talk about 'creativity' in such objective terms—and on top of that: often as a singular, definite noun—glosses over the fact that we do so only *as if* we could really speak in that way about something so relative, contingent or subjective (de Duve 2012). Or as Morten Kyndrup succinctly has put it (in relation to 'art' and aesthetic judgements):

All judgments are pronounced as-if a shared scale of aesthetic preferences did exist (which it does not). Judgments are addressed to communities, to the notion of a joint "we", and thus they do participate in the creation and the maintenance of the social as such. (2018, p. 75).

¹⁰ Cf. Shusterman 2012, Welsch 2009 and Shiner 2001 for introductions to aesthetic theory, and Eagleton 1990 and Bourdieu 1996 for more critical takes on the ideological and conflictual aspects of aesthetic discussions.

This, I argue, is reflected in how we use the term 'creativity' as well. It is almost always used positively, as a superlative or a recommendation. We typically use it socially too, addressing someone, often implicitly saying: "I like this, don't you agree that we should call it 'creative'?" hereby both establishing a community of taste—or as a minimum: extending an invitation to a dialogue. At least, this is what Kyndrup would argue; whereas I would insist that although there might be some positive community-building in this implied "you ought to think the same", there is certainly also an element of power at play. Not everyone can weigh in with the same amount of authority on this issue; and as a critical-sociological analysis would suggest, the rules that structure the distribution of clout on these issues are typically quite opaque. This has for instance been pointed out by Yves Michaud, who notes that the social and political potentials of art (specifically as they are implied in Kant) is often thought of as "a utopia of possible communication, a utopia of 'cultural communism'" (1998, p. 146), when "in reality, nobody actually agrees on anything. [...] The aesthetic community is in fact skirmish and strife." (p. 151). And the same has been pointed out in Daniel Ericsson's (2001) Bourdieu-inspired reading of the increased 'creativization' of our work lives, which is characterised by a predominant discourse of emancipation that runs parallel to those on art and aesthetics; and glosses over an equal amount of inconvenient, socio-political facts.

In addition to keeping in mind this fundamental scepticism concerning the implicit conflictual, ideological and political agendas of the seemingly universal aspirations of the aesthetic judgement, we might also want to update our aesthetic categories (especially if we are to relate it to the issue of creativity). According to Sianne Ngai (2012) we should no longer think of aesthetic judgements as being related to traditional aesthetic categories like 'beauty' or 'the sublime'. Today, these have been replaced by new categories like 'zany', 'cute' and 'interesting'.

In particular the latter, 'interesting', seems pertinent in relation to the specific case being discussed here, since *Portrait of Edmund de Belamy* might actually have gained its surprising status within the artworld, both as a commodity and as "talk of the town", by being philosophically interesting in the same way as much Conceptual Art has been interesting. Namely: as an aesthetics praxis that takes on the discussion: *what is art (or creativity)?*¹¹

¹¹ A strategy, which dates back to avant-garde precursors like Marcel Duchamp's various *readymades*, which raised the same kinds of questions (Bürger 1984, de Duve 1996), including who gets to be (recognised for being) involved in the labor processes that produce art, that is, the so-called 'circuits of authorship' as John

Or to be more precise: through 'Obvious' and especially Christie's successful attempt to paratextually frame the piece, which managed to create and steer a hype in direction of these questions (Elgammal 2018).

In extension of Ngai, I would argue that we might want to consider adding 'creative' to this updated list; either as yet another contemporary aesthetic category; or as a subcategory of 'interesting' (understood here as 'the historically novel or innovative, hence interesting'). This is also in line with another point made by Andreas Reckwitz: that one of central pillars of the current 'creativity dispositif' is the ways in which 'creativity' has been put into semantic proximity with both 'newness'/novelty' and the 'interesting'—all within a societal framework that is increasingly aestheticised (2017, pp. 26-27). According to Reckwitz, the 'interesting' is one of the ways that our enormous sensuous appetites, which have been trained and refined all throughout Modernity, are enticed, subsumed—and sometimes even satisfied—under the label 'creative', which has become one of the primary superlatives we apply to express our likings.

THE NEWNESS OF IT ALL?

In this sense, the issue of this paper possesses a certain irony. On the face of it, the recent re-emergence of and hype about AI (including artificial creativity in general) seems to cause a lot of new problems. But maybe it is our old, inadequate understanding(s) of the contingencies of creativity that still trouble(s) us the most—especially the fact that we have convinced ourselves of the existence of a creativity in the definite singular conjugation (and typically a very heroic version too); which is quite a paradoxical reductionism given the findings of various sociological and anthropological studies of the actual practices we tend to think of as 'creativity' (or making; cf. Ingold 2013).

This becomes obvious when we are discussing whether algorithmic agency might someday replace human agency—for instance with reference to examples like *Portrait of Edmund de Belamy*, as if this was the case here. Because the problem of assigning authorial authority in situations like these might not, as it is often suggested, just be the lack of humans. In an unpublished paper entitled 'Music AI: Copyright, Compensation, Commons', Eric Drott recently argued that

Roberts (2007) called it. In fact, it could be argued that the notion of 'interesting' has been with us throughout the entire history of Art (as an autonomous praxis in the modern sense), since Friedrich Schlegel already in 1797 introduced the term as crucial to literature (cf. Ngai 2012, pp. 35-38, 110-173).

the trouble creative AI presents to contemporary copyright regimes doesn't stem from a lack of human involvement, as machines become creative agents in their own right; rather it stems from an *excess of human involvement*, from the complex network of human and nonhuman actors in which creative AI is entangled. (Drott 2019, my emphasis)

Yet, despite the fact that Drott does make a sobering point, this abundance of human agency—through the involvement of coders, data suppliers, neural network trainers, etc., many of whom have not even thought of their own work as a contribution to the making of an art piece—nonetheless still hinges upon the fact that *things* (technologies, materialities, etc.) increasingly seem to interfere and "make a difference" (Latour 2005, p. 71). There are so many (human) actors, functions and (nonhuman) actants involved; which, of course, also includes all that human stuff that over the years has been inscribed in institutional and conceptual categories like genre, tradition, conventions, etc., as well as in the various physical materials of painting itself, which made up the data training set used for *Portrait* (although the machine learning algorithm was, of course, only fed digital scans of the classical portraits).

So, the problem is not (just) the lack of humans. Despite the fact that this is exactly how autonomously working 'artificial creativity' is often being framed; which is also what 'Obvious' themselves and especially Christie's do for instance implying that it is actually the code, that should be thought of as the artist. The machine as creator, rather than a human being; or in fact: replacing the human being. They are not saying it directly, but the implication is, that the need for human creativity might soon vanish, thereby also hinting at the more general discussions about the role of human industry in a future of automation, robotisation and AI, in which it is actually often creativity that is being pointed to; either as our last refuge (the only thing that will be left, which we do better than the machines); or creativity is highlighted as that particular area of praxis, which we will soon be emancipated to devote our lives to (given that the machines will do all the humdrum tasks).¹²

¹² This discussion has a surprising number of affinities with discussions within the New Left half a century ago on how Karl Marx' distinction from *Capital* between the 'realm of freedom' and the 'realm of necessity' would turn out with the introduction of new technologies such as automation (cf. Marx: "Beyond [the realm of necessity] begins that development of human energy which is an end in itself, the true realm of freedom, which, however, can blossom forth only with this realm of necessity as its basis. The shortening of the working-day is its basic prerequisite." (2010/1894, pp. 593)).

The irony stems from the fact that the tendency to overlook, theoretically and analytically, a lot of invisible human agency and participation in the creative production processes is not new at all. Sociology of art (although rarely speaking about creativity *per se*) have for instance for ages argued, that this has always been the case. We have always had ideological narratives about processes of creativity and making that downplay the social distribution of agency, that is, the role of many other human actor). And ANT and the New Materialists would certainly agree, although they at the same time would argue that the traditional sociology of art fails to register the co-productive agency of nonhuman actants. Which according to ANT/New Materialism certainly could include both new, digital phenomena like AI; and ordinary, old stuff-stuff as well (Miller 2010, Boscagli 2014).

But also, and this is an important point: this also applies in retrospect. Which is the reason why I began this paper by emphasising that the concept of post-creativity would not merely be helpful to the study of *new* creative practices, but rather has to do with more general perspectives on creativity and how we make use of them.

So, to conclude, in some ways you could argue that *Portrait of Edmund Belamy* highlights how borderline cases like these are really hard to get a grip on. Not because it is radically new, but rather because we often tend to either apply too rigid concepts (which I would argue we often do, when we discuss the imitation of human creativity through AI, ML etc.), or because we think of the discussions concerning these concepts as already settled or without contingencies. So, despite the hype about the newness of it all, what we are struggling with is perhaps mostly old problems.

REFERENCES

- Bardzell, J. (2007) Creativity in Amateur Multimedia: Popular Culture, Critical Theory, and CHI. *Human Technology: An Interdisciplinary Journal on Humans in ICT Environments*, 3/1, 12-33.
- Becker, H.S. (1974). Art as Collective Action. *American Sociological Review*, 39/6, 767-776.
- Boden, M.A. (2010) The Turing test and artistic creativity. *Kybernetes*, 39/3, 409-413.
- Boltanski, L. & Esquerre, A. (2016) The Economic Life of Things: Commodities, Collectibles, Assets. *New Left Review*, 98, 31-54.
- Boltanski, L. & Esquerre, A. (2017) Enrichment, Profit, Critique: A Rejoinder to Nancy Fraser. *New Left Review*, 106, 67-76.
- Bolter, J. (2019) *The Digital Plenitude: The Decline of Elite Culture and the Rise of New Media*. Cambridge, Mass.: MIT Press.
- Boscagli, M. (2014) *Stuff Theory: Everyday Objects, Radical Materialism*. New York: Bloomsbury.
- Bourdieu, P. (1993) *The Field of Cultural Production: Essays on Art and Literature*. New York: Columbia University Press.
- Bourdieu, P. (1996) *The Rules of Art: Genesis and Structure of the Literary Field*. Cambridge: Polity Press.
- Bürger, P. (1984) *Theory of the Avant-Garde*. Minneapolis: University of Minnesota Press.
- Coole, D. & Frost, S. (eds.) (2010) *New Materialisms: Ontology, Agency, and Politics*. Durham: Duke University Press.
- Danto, A. (1964) The Artworld. *The Journal of Philosophy*, 61/19, 571-584.
- Davis, N., Hsiao, C.-P., Popova, Y. and Magerko, B. (2015) An Enactive Model of Creativity for Computational Collaboration and Co-Creation. In N. Zagalo & P. Branco (eds.), *Creativity in the Digital Age*. London: Springer.
- De Duve, T. (1996) *Kant after Duchamp*. Cambridge, Mass.: MIT Press.
- De Duve, T. (2012) Why Kant got it Right. In B. Eriksson, J. Lund, H.K. Nielsen & B.S. Pedersen (eds.), *Æstetisering – forbindelser og forskelle*. Aarhus: Klim.
- Dickie, G. (1971). *Aesthetics: An Introduction*. Indianapolis: Pegasus.
- Dolphijn, R. & van der Tuin, I. (eds.) (2012) *New Materialism: Interviews & Cartographies*. Ann Arbor: Open Humanities Press.
- Drott, E. (2019) Music AI: Copyright, Compensation, Commons. Unpublished paper from *Music and AI*-seminar at Aarhus Institute of Advanced Studies (Aarhus University) arranged by Georgina Born in May 2019.
- Eagleton, T. (1990) *The Ideology of the Aesthetic*. Oxford: Blackwell.
- Ericsson, D. (2001) Creative Leaders – or prisoners of the past? In Sjöstrand, S-E., Sandberg, J. & Tyrstrup, M. (eds.) *Invisible Management: The Social Construction of Leadership*. London: Thomson Learning.
- Foucault, M. (1977) The Confession of the Flesh (Interview). In Gordon, C. (ed.) *Power/Knowledge: Selected Interviews and Other Writings*. New York: Pantheon Book.

- Foucault, M. (2003) Nietzsche, Genealogy, History. In: Rabinow, P. & Rose, N. (eds.) *The Essential Foucault*. New York & London: The New Press.
- Fox, N. & Alldred, P. (2017) Creativity – Imagination, Social Production and Social Change. In *Sociology and the New Materialism: Theory, Research, Action*. London: Sage.
- Godin, B. (2015) *Innovation Contested: The Idea of Innovation over the Centuries*. New York: Routledge.
- Harari, Y.N. (2014) *Sapiens: A Brief History of Humankind*. London: Harvill Secker.
- Ingold, T. (2013) *Making: Anthropology, Archaeology, Art and Architecture*. New York: Routledge.
- Kant, I. (1914/1790) *Kant's Critique of Judgement*. London: Macmillan.
- Kurzweil, R. (2005) *The Singularity is Near: When Humans Transcend Biology*. London: Penguin Group.
- Kyndrup, M. (2018) Aesthetics and Judgement: 'Why Kant got it Right'. *The Nordic Journal of Aesthetics*, 26/54, 75-85.
- Latour, B. (2005) *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press.
- Lessig, L. (2004) *Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity*. New York: Penguin.
- Lessig, L. (2008) *Remix: Making Art and Commerce Thrive in the Hybrid Economy*. New York.
- Marx, K. (1967). *Writings of the young Marx on Philosophy and Society*. Anchor Books, New York: Penguin.
- Marx, K. (2010/1894). *Capital: A Critique of Political Economy*. New York: International Publishers.
- Mason, J.H. (2003) *The Value of Creativity: The Origin and Emergence of a Modern Belief*, Aldershot: Ashgate.
- Michaud, Y. (1998) The End of the Utopia of Art. In B. Mari & J-M. Schaeffer (eds.), *Think art: theory and practice in the art of today*. Rotterdam: Witte de With.
- Miller, D. (2010) *Stuff*. Cambridge: Polity Press.
- Ngai, S. (2012) *Aesthetic Categories: Zany, Cute, Interesting*. Cambridge, Mass.: Harvard University Press.
- Obvious (2018) Obvious, explained. *Medium* Feb 14, 2018, <https://medium.com/@hello.obvious/ai-the-rise-of-a-new-art-movement-f6efe0a51f2e>.
- Reckwitz, A. (2017) *The Invention of Creativity: Modern Society and the Culture of the New*. Cambridge: Polity Press.
- Rhodes, M. (1961) An Analysis of Creativity. *The Phi Delta Kappan*, 42/7, 305-310.
- Roberts, J. (2007) *The Intangibilities of Form: Skill and Deskilling in Art After the Readymade*. London: Verso.
- Runco, M.A. (2014) *Creativity: Theories and themes: Research, development, and practice*. San Diego: Academic Press.
- Shiner, L. (2001) *The Invention of Art: A Cultural History*. Chicago: The University of Chicago Press.
- Shusterman, R. (2012) Back to the Future: Aesthetics Today. *The Nordic Journal of Aesthetics*, 43, pp. 104-125.
- Solly, M. (2018) Christie's Will Be the First Auction House to Sell Art Made by Artificial Intelligence. *Smithsonian Magazine*, August 21, 2018 <https://www.smithsonianmag.com/smart-news/christies-will-be-first-auction-house-sell-art-made-artificial-intelligence-180970086/#pflhccwS0PI1TC1d.99>.
- Stephensen, J.L. (2015a) Talking the Creative Economy into Being: Performative Economics, Knowledge, and Creativity. In M. Thorup (ed.) *Intellectual History of Economic Normativities*. New York: Palgrave.
- Stephensen, J.L. (2015b) Towards a Digital Materialism. *Conjunctions: Transdisciplinary Journal of Cultural Participation*, 2/2, 154-171.
- Towse, R. (2010) Creativity, Copyright and the Creative Industries Paradigm. *Kyklos* 63/2, 461-478.
- Vincent, J. (2018) How Three French Students Used Borrowed Code to Put the First AI Portrait in Christie's. *The Verge* Oct 23, 2018, <https://www.theverge.com/2018/10/23/18013190/ai-art-portrait-auction-christies-belamy-obvious-robbie-barrat-gans>.
- Vinge, V. (1993) The coming technological singularity: How to survive in the post-human era. *Vision-21: Interdisciplinary Science and Engineering in the Era of Cyberspace*. Westlake, Ohio: NASA Lewis Research Center, 11-22.
- Weitz, M. (1956) The Role of Theory in Aesthetics. *The Journal of Aesthetics and Art Criticism*, 15, 27-35.
- Welsch, W. (2009) Aesthetics Beyond Aesthetics. In Halsall, F., Jansen, J. & O'Connor, T. (eds.), *Rediscovering Aesthetics: Transdisciplinary Voices from Art History, Philosophy, and Art Practice*. Stanford: Stanford University Press.

- Williams, R., Runco, M.A. & Berlow, E. (2016) Mapping the Themes, Impact, and Cohesion of Creativity Research over the Last 25 Years. *Creativity Research Journal*, 28/4, 385-394.
- Woodmansee, M. (1984) The Genius and the Copyright: Economic and Legal Conditions of the Emergence of the 'Author'. *Eighteenth-Century Studies* 17/4, 425-448.