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THE CREATIVE SIDE OF RECREATIVE IMAGINATION

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Abstract: The philosophical literature suggests two basic kinds of imagination, namely creative and recreative imagination. While the former is taken to underlie creativity, the latter is at work when we project ourselves into another situation. Fiction is an interesting context where both kinds would be involved: producing fictional works would require creative imagination, whereas engaging with them would paradigmatically call for recreative imagination. This contribution aims at clarifying how creative and recreative imagination are related, thus shedding light on the cognitive underpinnings of fiction. It has been claimed that creative imagination is more fundamental, even from a phylogenetic point of view, than recreative imagination. It will be objected that this claim relies on a questionable definition of recreative imagination, which makes it too closely tied to perspective-taking. The critique will question the existence of creative imagination itself: it is an unnecessary posit to account for creativity. Creativity instead includes recreative imagination as one of its necessary ingredients.

1. INTRODUCTION

In introductory classes on imagination I often start by asking students to draw a conceptual map showing what they think is connected to the imagination. These maps give an interesting glimpse of the naïve, folk psychological view of imagination. Creativity fails to appear in the drawings very rarely. This shouldn't come as a surprise, for in everyday language imagination and creativity go hand in hand. Take, for instance, the adjective "creative". The OED entry lists the following meaning: "Inventive, imaginative; of, relating to, displaying, using, or involving imagination or original ideas as well as routine skill or intellect, esp. in literature or art". Similarly, an imaginative person, as specified by the OED entry for "imaginative", is someone "having exceptional powers of creative imagination or inventive genius".

The intimate link between creativity and imagination permeates Western culture, and important figures have hinted at it. "Imagination is the beginning of creation. You imagine what you desire, you will what you imagine and at last you create what you will" stressed, for instance, Nobel laureate in Literature George Bernard Shaw (1949, p. 9). Scientist and educator Maria Montessori also pointed out that "Imagination does not become great until human beings, through courage and effort, use it for

some creation” (Montessori 1948, p. 43 – my translation). Yet such a link is a quite neglected topic in the current philosophical debate on imagination (Stokes 2016).¹ A common move is to acknowledge that imagination can lead to creativity, while pointing out that, first, this is not often the case and, second, creativity may come without imagination (Currie & Ravenscroft 2002; Langland-Hassan 2020). Creativity is, thus, dismissed as inessential for understanding the imagination.

The status of the debate among philosophers of imagination is well exemplified by how the recreativist account of imagination deals (or better: doesn’t deal) with creativity. Philosophers endorsing this view have focused their attention on *recreative imagination*, namely the ability to recreate (or simulate) non-imaginative mental states, such as perception and belief (Currie & Ravenscroft 2002; Goldman 2006a; Balcerak Jackson 2016; Dokic & Arcangeli 2016; Arcangeli 2018). Recreative imagination is at work when we project ourselves into another situation, and look at or think about such an imagined world (Currie & Ravenscroft 2002). The engagement with fiction is a paradigmatic example of the use of recreative imagination (Goldman 2006b; Arcangeli 2021).

Recreative imagination is not taken to be vital for creativity, which would call for a distinct kind of imagination, namely *creative imagination* (Currie & Ravenscroft 2002). The literature, however, lacks a thorough analysis of the latter, thus leaving mysterious the nature of creativity and how it relates to imagination.

The relationship between imagination and creativity cannot be put aside so easily. A proper theory of the imagination should account for it, so as to do justice to an aspect of imagination remarkably entrenched in our society. As Langland-Hassan correctly points out: “If a theory of imagination leaves creativity a mystery, so much the worse for the theory” (Langland-Hassan 2020, p. 262).

In this contribution, I take up the challenge, and try to show that the recreativist account can make space for creativity without needing to posit a further basic kind of imagination. I will firstly (§2) introduce in more detail the notion of recreative imagination and then focus (§3) on how it relates to creative imagination. I will develop and critically engage with an argument extrapolated from Currie and Ravenscroft, who, although mainly concerned with the recreative variety, offer some insights into the relationship between the two putative basic kinds of imagination. My critique will place the relationship between creative and recreative imagination under new light, questioning the existence of creative imagination itself: it is an unnecessary posit to account for creativity. In §4 I will turn to the philosophy of creativity. Although imagination is often cited, few philosophers of creativity have explored in detail what its role in creativity is. I will outline some features that imagination must possess if it is to be crucially involved in creativity, claiming that recreative imagination fits the bill. Finally (§5), I will be concerned with whether imagination is a necessary component of the creative

process. Most authors seem to think that this is not the case. I will offer some reasons to doubt this view, showing that imagination, understood as a recreative capacity, seems to be a necessary ingredient for creativity.

To what extent does an analysis of the relationship between creative and recreative imagination, and more broadly between creativity and imagination, help us to understand better the cognition of fiction? This is easily seen by considering that fiction is not only tightly tied to the imagination, which arguably is one of the key underpinnings of our engagement with fictions, but also to creativity: often fictional works are new and valuable *creations*, namely creative products of creative processes.

Creativity is commonly defined as the production of something new and valuable (see §4). Therefore, it might be thought that only creating fictional works amounts to creativity. On this picture, producing fictional works requires creative imagination, whereas engaging with them calls for recreative imagination. This, however, overlooks that engaging with a fiction is a richly creative activity (Sartre 1948; Stokes 2016). In this chapter I will cast new light on the cognitive underpinnings of fiction by showing that recreative imagination is the only kind of imagination needed in creativity, thus laying the groundwork for a unitary analysis of fiction that can do justice to the creative side of our engagement with fictions.

2. RECREATIVE IMAGINATION

The last decades have seen a considerable growth of work in philosophy of imagination, which has developed into a dedicated branch of philosophy. One particularly influential theory within the field is the recreativist account of imagination, according to which imagination is the ability to recreate non-imaginative mental states, such as perception and belief.

Here is a very well-known passage where Currie and Ravenscroft, who coined the term “recreative imagination”, offer a definition of imagination so understood:

[T]he capacity to have, and in good measure to control the having of, states that are not perceptions or beliefs or decisions or experiences of movements of one’s body, but which are in various way’s like those states – like them in ways that enable the states possessed through imagination to mimic and, relative to certain purposes, to substitute for perceptions, beliefs, decisions, and experiences of movements. (Currie & Ravenscroft 2002, p. 11)

The idea is that our imaginings recreate non-imaginative kinds of mental state, in the sense that they are similar, from a phenomenological and/or functional point of view, to the “counterparts” they recreate. To put it more simply, imagining is *as if* seeing, listening, believing, etc. (Currie &

Ravenscroft 2002; Goldman 2006a; Balcerak Jackson 2016; Dokic & Arcangeli 2016; Arcangeli 2018).

The recreativist account is often conflated with the simulationist view of imagination – known to be held by Currie and Ravenscroft themselves and by Goldman (2006a). Recreative imagination is certainly a kind of mental simulation, if by that we mean the “simulation *of* a mental state *by* a mental state” (Goldman 2006a, p. 51, fn 10).² Recreative imaginings are simulative in the sense that they simulate the phenomenological or functional features of other mental states. Simulationists, however, usually go further and claim that recreative imaginings are simulative in that they re-use off-line their counterparts’ cognitive mechanisms. This extra step need not be taken by a recreativist, who may want to stop at the first simulative reading of recreative imagination. They would endorse a sort of phenofunctional simulationism, but without committing themselves to a specific view on the cognitive implementation of the imagination – i.e., without endorsing a stronger simulationism. Arguably, many philosophers are recreativists in this moderate sense (Arcangeli 2018).

Understanding recreativism in this way can also help to acknowledge its older roots, which can be traced back at least to Husserl. Within the phenomenological tradition imagination emerges as a distinctive intentional attitude which has its own manner of “positing” its object (Husserl 1900/1901 and 1913; Meinong 1902; Sartre 1936 and 1940). Still, imagination bears similarities with other mental states, such as perception and belief. Notably, Alexius von Meinong suggested the 50-50 hypothesis: there is an imaginative homologue for each type of non-imaginative mental state and, thus, “the exertions of the imagination in the broadest sense” make up “one half” of “the manifestations of the mental life” (Meinong 1902, p. 286 – see also Mulligan 1999, p. 55 and Goldman 2006a, p. 47). The question is not settled, though. The literature recognises at least two varieties of recreative imagination: sensory imagination (i.e., the recreation of perception) and cognitive imagination (i.e., the recreation of belief). Assessing how many varieties of recreative imagination there are, that is, which mental states imagination recreates beyond perception and belief, is one of the most challenging issues in the current debate.

This controversy notwithstanding, the moderate recreativist account mentioned above offers a promising framework to explain both the heterogeneity and the unity of imagination. On my preferred moderate version of recreativism, recreative imagination is a family-attitude within which different genera and species can be identified. These genera and species recreate the attitudinal profile of different non-imaginative mental states, but in a partial way that makes imaginings different in nature from their counterparts. All imaginings, be they recreations of perception, belief or whatever, belong to the same category and share core features (e.g., will-dependence and truth-independence – see Arcangeli 2018). I labelled such a framework the “attitudinal theory of imagination” (Arcangeli 2020).

One question that recreativism invites and that it is in a good position to answer is the scope of recreative imagination, that is to say, in which mental activities imagination is involved. Recreative imagination seems indeed to have a role to play in several mental activities, such as our engagement with fiction (Stock 2017), mindreading (Goldman 2006a), empathy (Stueber 2016), thought experimentation (Gendler 2004), dreams (Ichikawa 2016), self-deception (Gerrans & Mulligan 2013), pretence (Doggett & Egan 2007), mental time travel (Arcangeli & Dokic 2018).

Creativity is missing from this list. This might not come as a surprise, if we think of recreative imagination as akin to (if not as another name for) Kant's "reproductive imagination". Kant distinguished between reproductive and productive imagination. The former is "subject solely to empirical laws, namely those of association" (*CPR*, B151-2); for this reason it is not apt to creativity. By contrast, the latter can create "as it were, another nature out of the material that actual nature gives it" (*CJ*, §49, V. 314), and thus can ground aesthetic and artistic creativity (Stokes 2016).

Recreative imagination, however, retains elements proper to Kant's productive, rather than reproductive imagination. Indeed, in being a *sui generis* psychological attitude, rather than a poor relative of other types of mental states, recreative imagination is a productive activity.³ Can, thus, creativity be grounded on recreative imagination? According to two of the most prominent recreationists, it cannot. Creativity would call for another kind of imagination, namely *creative* imagination.

3. CREATIVE & RECREATIVE IMAGINATION

Along with recreative imagination, the recreativist account posits the existence of creative imagination, which would be involved "when someone puts together ideas in a way that defies expectation or convention: the kind of imaginative 'leap' that leads to the creation of something valuable in art, science, or practical life" (Currie & Ravenscroft 2002, p. 9). A question arises: how are these kinds of imagination related?

One option is to see recreative and creative imagination, not as two *kinds* of imagination, but rather as two different *uses* of a single mental capacity. The idea is that the same imaginative processes might be used with the motivation of either "mentally mirroring or recreating" or "to some end of creativity or discovery" (Stokes 2016, p. 248). This solution, however, merely shifts the locus of our problems: it remains to be explained what this single imaginative capacity is.

In their seminal work on recreative imagination, Currie and Ravenscroft favour the hypothesis that the different labels – "creative" in opposition to "recreative" – capture a qualitative distinction. According to Currie and Ravenscroft creative and recreative imagination are independent of each

other. In some cases recreative imagination may be conducive to creative imagination, but it is not “definitive or even criterial for displaying creative imagination” (Currie & Ravenscroft 2002, p. 11).

They go further and suggest that creative imagination is more fundamental from a phylogenetic point of view than recreative imagination. Drawing on Tomasello’s research, Currie and Ravenscroft sketch an argument in support of their claim:

Michael Tomasello has argued that what separates humans from the other apes is not our capacity for creativity – the capacity to do things in a new way – for other apes have this capacity at least to some degree. Rather, it is our capacity for imitative learning – learning by seeing another’s goal, seeing how the other attains the goal, and acquiring from this the capacity to attain the same goal in the same way. Imitative learning (...) depends (...) on the capacity to ‘step into the shoes’, in imagination, of a conspecific. (Currie & Ravenscroft 2002, pp. 9-10)

If non-human primates are able to imagine creatively, but not recreatively – as argued by Currie and Ravenscroft – we would have shown that creative imagination is independent of, and phylogenetically more basic than, recreative imagination. Extrapolating from their suggestions, we can try and develop the following line of argument in favour of this idea, call it the Ape Argument for Creative Imagination.

We can divide the Ape Argument into two main steps. The first aims at establishing that non-human apes (hereafter simply “apes”) have creative imagination (CI) as follows:

- h1. Apes can create/innovate
- h2. Creativity/innovation requires CI
- c1. Apes have CI

The second step of the argument is meant to prove that apes don’t have recreative imagination (RI). It can be reconstructed as follows:

- h3. Apes cannot learn by imitation
- h4. Any creature that lacks imitative learning lacks perspective-taking (PT)
- h5. Any creature that lacks PT lacks RI
- c2. Apes don’t have RI

From c1 and c2 we can conclude that there can be CI without the support of RI, where the former would be more primitive than the latter, as per Currie and Ravenscroft.⁴

Several objections can be moved against this argument. Although there might be reasons to be

sceptical about its first part,⁵ I will accept it for the sake of argument, and focus on the second step, which raises more pressing concerns, precisely regarding the notion of perspective-taking. Let me expand on my worries.

The notion of perspective-taking needs some unpacking. It is meant to capture the human ability to change perspective and specifically to take the perspective of someone else.⁶ An example given by Tomasello illustrates well what this capacity amounts to, especially in the case of imitative learning.

In a study conducted by Tomasello and colleagues (Nagell, Olguin & Tomasello 1993), two groups of two-year-old human children were shown by an adult two ways (one more efficient than the other) of using a rake-like tool to get an out-of-reach object. Presented with the tool and the object, both groups tended to copy the method used by the demonstrator. This tendency is not displayed by chimpanzees submitted to the same protocol: subjects of both groups did very different things independently of which method of tool use they have been shown.

Evidence of this sort supports the hypothesis that apes do not learn by imitation (h3). Moreover, it suggests that the human capacity for imitative learning is supported by the capacity to adopt others' goals and their strategies, that is, "perspective-taking". Since apes lack imitative learning we have ground to claim they also lack perspective-taking, since if they had had perspective-taking, they would have imitative learning (h4).

The human ability of stepping in others' shoes is often understood in simulative terms: we are able to align with others' goals and strategies via mentally simulating their mental states. This simulative reading of perspective-taking seems to make it tightly connected to recreative imagination, which has been defined as the capacity to simulate mental states (§2). We shouldn't, however, jump too quickly to this conclusion, since perspective-taking can be simulative without involving recreative imagination.

There are at least two kinds of simulative perspective-taking: high-level and low-level.⁷ While the former belongs to the personal level, is cognitively more complex and arguably recruits recreative imagination, the latter belongs to the sub-personal level and is grounded in resonance or mirroring processes (e.g., the activation of mirror neurons in the observation mode). For example, when I see someone moving her hand to grab a mug, this activates in me the same neurons in the premotor cortex, and such a neural matching would constitute the causal basis of my predicting her intention to grab the mug. In this case, I would simulate at the sub-personal level what the other is undergoing, without necessarily engaging in a more complex high-level simulation, that is, without recreating in imagination her beliefs and intentions.

These clarifications pinpoint a first problem in the Ape Argument. In order to ensure that the argument is sound, we have to make sure that h4 and h5 refer to the same kind of perspective-taking.

Which notion is at stake in h4? If it is the *low-level* perspective-taking, h4 ends up being false, insofar as it might be questionable that apes are not capable of this kind of perspective-taking. The latter is potentially there whenever there are mirroring processes, which have been found in apes (see, e.g., Hecht & Parr 2015). In order for h4 to go through, mirroring processes cannot suffice for perspective-taking. They might be part of the story, but by themselves they are insufficient for putting oneself in another's shoes. Indeed, it has been argued that not all creatures showing mirroring processes are able to exploit such potential (Goldman 2006a, p. 140). This might be the case with apes: they might not have the requisite cognitive resources to capitalise on mirroring processes to step in the shoes of a conspecific. If this is true, h4 can be saved only if low-level perspective-taking is no perspective-taking at all.

As an aside, h5 also fails under the low-level reading. It would state that one cannot attribute recreative imagination to a creature that does not also have *low-level* perspective-taking abilities. This is a highly questionable claim, though: the idea that there is no recreative imagination without mirroring processes (i.e., low-level perspective-taking) is at odds with the reason for which the notion of recreative imagination has been introduced, namely to capture a kind of mental simulation not necessarily tied to those processes (Currie & Ravenscroft 2002; Goldman 2006a).

Things would not be any better for the Ape Argument if high-level perspective-taking were the relevant notion at stake in both h4 and h5. Even granting that apes lack *high-level* perspective-taking (accepting the new version of h4), the new version of h5 raises pressing concerns. More precisely, it establishes an overly intimate relationship between recreative imagination and perspective-taking. Recall the characterization of the latter provided in §2. Recreative imagination is certainly a projective capacity that allows us to take up different perspectives (i.e., visual, auditory, proprioceptive, doxastic perspectives). It does not require, however, to step into another's shoes. For example, I can imagine a tree and that there is a cat behind it, that is, I recreate in imagination perceiving (seeing, touching, etc.) a tree and believing that there is a cat behind it. The imaginative exercise need not involve taking the perspective of another person. Who, in the imagined situation, is perceiving and believing can remain open. It can be myself, someone else or might even be a "virtual" self (i.e., a placeholder for any subject who would have those experiences – Dokic & Arcangeli 2016).

Moreover, there is no reason to believe that possessing recreative imagination need necessarily lead to the capacity to take another's perspective in this stronger sense. Recreative imagination can be employed in several different domains and for different tasks, as above, while not involving any sort of high-level perspective-taking. What is plausible, in any case, is that high-level perspective-taking requires recreative imagination as a precondition. But, at any rate, the absence of high-level perspective-taking does not entail absence of recreative imagination, contra h5.

Since a lack of perspective-taking (in both its guises) need not be accompanied by a lack of recreative imagination, c2, that is, the claim that apes lack recreative imagination, does not follow from its premises. Apes may have recreative imagination, but be unable to use it for perspective-taking.⁸ Or, they may lack the specific type of recreative imagination (if there is any) involved in perspective-taking. Weakening the Ape Argument in such a way, it would at best show that there can be creative imagination without *this* very specific type of recreative imagination, which would indeed be necessarily tied to perspective-taking.

Creative imagination has been introduced to account for creative behaviour, including innovations displayed by apes in tool-use. Take, for instance, the aforementioned study where chimpanzees were presented with a rake-like tool and an out-of-reach object. Chimpanzees explored different ways to use the tool to reach the object and some of them arrived at very inventive methods. For chimpanzees in the less efficient condition (i.e., the one in which a less efficient method was shown by a demonstrator) had a more successful performance than children in the same condition. Apes are very good at inventing novel and more efficient ways of using tools – e.g., a stick for fishing more termites (Tomasello 2000).

Once the notion of recreative imagination is severed from stepping into others' shoes, it becomes less clear why we need to posit creative imagination to explain creative behaviour. According to Currie and Ravenscroft, creative imagination is in place whenever ideas are combined in ways that go beyond conventional schemata. In order to take the “leap” that leads to innovation and creativity we have to engage with what is merely possible (and then to make the possible actual). But recreative imagination is precisely what enables us “to project ourselves into another situation and to see, or think about, the world from another perspective” (Currie & Ravenscroft 2002, p. 1).

Moreover, an indirect goal of contemporary analyses of recreative imagination is to show that an imaginative process, incorporating a sequence of recreative mental states, could be creative. This is what seems to be the case in thought experimentation (Arcangeli 2021) and in other epistemic uses of the imagination (see contributions in Kind & Kung 2016 and in Badura & Kind 2021), where it produces new and valuable knowledge, provides new and fruitful hypotheses or at least opens up new and promising paths of investigation.

Without further reasons to justify the need of introducing the notion of creative imagination, it sounds like an *ad hoc* posit. Unlike recreative imagination, creative imagination hasn't been thoroughly studied, and has been posited merely to account for the link between imagination and creativity. This move, however, does not offer any genuine explanation of that link, which turns out to be quite trivial: creative imagination and creativity end up being two sides of the same coin. By contrast, we have at our disposal a quite solid and promising account of recreative imagination, within

which room can be made for creativity.

4. RECREATIVE IMAGINATION & CREATIVITY

Although often mentioned, imagination remains a minor theme in the current (see fn1) philosophy of creativity. The reason might lie in the fact that the latter has been mainly concerned with the task of defining creativity more in terms of creative *products* than creative *cognitive processes*.⁹ Beardsley stressed, for instance, that the “true locus of creativity is not the genetic process prior to the work but the work itself as it lives in the experience of the beholder” (Beardsley 1965, p. 302, quoted in Paul & Stokes 2018, p. 205; see also Halper 1989; Carroll 2003; Nanay 2014).

The literature, however, has produced a definition of creativity broad enough to be applied both to products and processes. Creativity is widely defined to be the production of something that is *new* and *valuable* (see, e.g., Sternberg & Lubart 1999; Gaut 2003; Boden 2010; Paul & Kaufman 2014; Stokes 2016). Most authors have expressed the need for at least a third ingredient to be added to novelty and value.¹⁰ Yet, they disagree about what this further ingredient (or ingredients) would be.¹¹

In any case, such disagreement shares an underlying goal: to account for the idea that the creative product has to be generated in the right kind of way. The dominant view is that creativity cannot rely on imitative or mechanical procedures, but rather has to be a matter of spontaneous and flexible cognitive processes (Gaut 2003; Gaut & Kieran 2018; Kronfeldner 2018; Hills & Bird 2019; Paul & Stokes 2014). It is also quite common to think that unconscious or non-inferential thought processes constitute the core of creativity (for criticism see Baumeister *et al.* 2018 and Stokes 2014), or at least of exceptional creativity (Langland-Hassan 2020). Indeed, creativity can be more or less remarkable, insofar as novelty and value are comparative terms: something is more or less novel/valuable with respect to a certain standard of comparison. This has led to distinguishing different types of creativity.

Two psychologists, Kaufman and Beghetto (2009), introduced the influential “Four C” model of creativity, which identifies four types of creativity: mini-c, little-c, Pro-c and Big-C.¹² Mini-creativity is an intrapersonal type of creativity. We have it when the creative production is personally meaningful, that is to say, when we have reached a new and valuable step in our personal growth. For example, we might display mini-c when we learn a new language or a new painting technique.

When we come up with something that is not only novel and valuable for us, but has an impact on acquaintances, we have little-c. This might be the case when writing a good poem, taking a remarkable picture, or making a superb soup out of unusual ingredients. A special talent might lead to little-c, but most of the time it also requires specific skills and it is often the result of repeated trials.

Through further training and expertise acquisition, one can move from little-c to Pro-c. In this

case the production is new and valuable with respect to a specific domain or field (e.g., poetry, photography, philosophy). Gettier, for instance, can be credited with Pro-c, insofar as his famous paper on knowledge and justified true beliefs had a considerable impact on epistemology and analytic philosophy in general.

Only history, however, will tell us whether Gettier simply advanced discussions in epistemology or made a more ground-breaking contribution, whose resonance extends beyond the respective field. When such a revolutionary step is made, we have Big-C. Einstein is a paradigmatic example of this extraordinary form of creativity.

Big-C is quite often taken to be the “real” creativity in ordinary discourse. Yet all magnitudes, so to speak, of creativity deserve careful analysis. For present purposes the question to be addressed is what is the role (or roles) of imagination, and more specifically of recreative imagination in cognitive processes underling all kinds of creativity.

The few philosophers of creativity who have been concerned with imagination in creativity have delineated a specific role for it. In the creative process, imagination would explore a conceptual space in depth, select among its logical possibilities, and connect them with one another or with possibilities belonging to other conceptual spaces (Gaut 2003; Beaney 2005; Stokes 2014; Hills & Bird 2019).¹³ Here is an example of the imagination working in creativity, put forward by Gaut:

[A] painter may suddenly ‘see’ how his painting will look, but much of the subsequent work will involve scrutinizing the painting as it is being made, imagining how it could be improved by altering it in various ways, trying out these changes, observing the results, making more alterations, and so forth. (Gaut 2003, p. 157)

Imagination possesses distinct features that make it very well suited for this job. First of all, a thorough scan of some conceptual space requires a capacity able to go beyond what is believed and known, what is taken to be true. Imagination is a mental action typically credited with a high degree of freedom, insofar as it is will-dependent and truth-independent (Gaut 2003; Stokes 2014). Selecting and connecting ideas seem also to demand inferential capacities, as well as interaction with affective, motivational and free associative capacities (Stokes 2014). Picciuto and Carruthers have further hypothesised that pretence is a sort of training camp for the imagination to subsequently fulfil its role in creativity (Picciuto & Carruthers 2014 and 2016).

None of these authors have clearly endorsed recreativism, and it is open to debate whether they all have in mind the same notion of imagination.¹⁴ Nevertheless, recreative imagination meets most of the aforementioned desiderata. It is a “non-truth-bound” (Stokes 2014) voluntary mental activity, which shows inferentiality, and can directly trigger emotions and even action, though typically in an

indirect way (Arcangeli 2018). As stressed beforehand, recreative imagination is also taken to play an important role in pretence. Moreover, given its perspectival nature (i.e., the fact that recreative imagination is a projective capacity which helps us to change perspective), recreative imagination is particularly apt as a tool for scanning conceptual spaces. Indeed, Gaut's painter example can be easily interpreted as involving recreative imagination.

What about recreative imagination and free associative thinking (i.e., the last requirement which makes imagination fitting for creativity)? This question has been rather neglected in the literature. The reason might lie in the fact that recreative imagination seems to be at odds with free association: while the former is a voluntary mental activity governed by inferential rules, the latter is a less rule-governed passive mental phenomenon. If recreative imagination is incompatible with free association, it might be objected that it fails to be a necessary component for creativity. The idea is that many cases of creativity – and possibly the most interesting ones (i.e., Big-C) – hinge on free associative thinking only. Thus, recreative imagination would not be involved in these cases, if it has nothing to do with free association (Langland-Hassan 2020). Indeed, most authors seem to think that imagination is neither sufficient (though see Scruton 2009) nor necessary for creativity (though see Beaney 2005 and Langland-Hassan 2020). I will now turn to this specific issue.

5. DOES CREATIVITY REQUIRE RECREATIVE IMAGINATION?

Many contemporary philosophers resist the idea that imagination is a necessary component of the creative process (Gaut 2003; Stokes 2016), but they are not always clear about why it should be so.¹⁵ Some examples are meant to show how creativity is possible without imagination. Here are the two offered by Gaut:

Bertrand Russell reported how, when he was writing *Principia Mathematica*, he would frequently go to bed having failed despite much effort to solve a difficult problem, but then wake next morning knowing the solution. Russell went from not knowing the answer to knowing the answer, without it seems any imaginative act on his part. A more subtle instance of this involves the chemist Friedrich von Kekulé, who claimed that he discovered the ring structure of the benzene molecule by dreaming in front of his fire of snakes devouring their own tails. This example does involve imagery, but being dream-imagery, and depending on the precise details of the case, it may well not have involved imagination: Kekulé while asleep may have believed that he saw snakes devouring their tails, and when he awoke, the image suggested his discovery to him. (Gaut 2003, pp. 154-5)

Both Russell's and Kekulé's cases involve creativity grounded in dreaming and free associative thinking (what Gaut calls "passive" creativity, whose underlying processes are opaque

to the subject). Imagination would not be involved in them, since it is a conscious will-dependent mental activity.

Two lines of response suggest themselves. First, we might wonder whether these are genuine cases of creativity. Kekulé's case is quite controversial. The German chemist told the story of his snake dream in his speech at the twenty-fifth anniversary of his benzene paper (published in 1865) organized by the German Chemical Society. Before that occasion, he was reluctant to reveal what had led him to hypothesise the hexagonal structure of benzene. In 1984, two American biochemists and historians, Wotiz and Rudofsky, discovered that Kekulé's inspiration goes back twelve years before the publication of his paper and it is due to the reading of a paper by the French chemist A. Laurent, who proposed a hexagonal structure formula for benzoyl chloride. These historical discoveries cast doubt on Kekulé's dream, which ends up being at best a mere anecdote "told to amuse the audience at the 1890 Benzolfest" (Wotiz & Rudofsky quoted in Browne 1988).¹⁶ They also have an impact on philosophical and psychological theories of creativity, which have frequently quoted Kekulé's dream as the epitome of passive creativity. Philosophy and psychology are not simply robbed of one of their favourite anecdotes; there might be reason to doubt other similar cases, and passive creativity in general.

Certainly, this temptation can be resisted and we might still think that genuine cases of creativity are passive, though Kekulé's discovery of benzene structure should not be counted among them. Are we therefore forced to accept that imagination has no role to play in passive creativity? No, if we pursue the second line of response: we might accept that some creative processes can be exemplified by (at least) Russell's case, but wonder whether imagination is really absent in them.

Two considerations can help us to see that imagination's role in dreamlike-based and association-based creativity has been dismissed too quickly. On the one hand, dreams have been considered as essentially involving imagination (Ichikawa 2009 and 2016). This might sound strange, given the will-dependence proper to imagination. It has been pointed out, however, that imaginings are mental actions, even if the imaginer fails to control them, or if she does not recognise her own agency (Ichikawa 2009; Arcangeli 2018; Kind 2020). Imaginings can be spontaneous (i.e., not under our voluntary control or not recognised as an action on the part of the imaginer) while being dependent on the will.

On the other hand, even granting that dreaming and associative thinking in general do not involve imagining in a pertinent sense (Stokes 2014), we may take these opaque processes to not be part of the creative process. As stressed by Beaney, in solving a problem or making an important discovery, dream-based insights might be relevant, but what really matters is "*rethinking* of what was dreamt" (Beaney 2005, p. 195). According to him, it is the rethinking, which involves imagination, that

“constitutes the creative act” (*ibid.*).

Alternatively, we may opt for a more liberal view that sees creativity as a dynamical procedure involving different steps and capacities, imagination and dreamlike free associative thinking being two of them. Stokes has advanced this view. He acknowledges the significance of free association and insight for creativity, but points out that “[r]arely does an artist or scientist gain a breakthrough by insight or free association without both some important antecedent and consequent cognitive work” (Stokes 2014, p. 178). Thus, imagination can follow dream-like associative thinking, playing with its resulting insights (*ibid.*, p. 177), but it is also very much needed before, since it precedes and prepares those insights. In both cases imagination is part of the creative process.

Why should we resist the idea that imagination (*viz.*, recreative imagination) is a necessary ingredient for creativity? Additional arguments are needed for proving that this is not the case.¹⁷

6. CONCLUSION

Ordinary language suggests that there is a sense of “imagination” by which it is just another word for “creativity”. The link between these two notions has been discussed by illustrious philosophers of the past, but surprisingly it has been almost neglected by contemporary philosophers. The current philosophical debate has seen the development of two separate branches, namely the philosophy of creativity and the philosophy of imagination, both paying little attention to how creativity and imagination are related.

In this contribution I tried to fill in this gap by analyzing how the recreativist account of imagination can accommodate creativity. Here are two main take-home messages. First, positing a special kind of imagination to account for creativity – as it has been proposed by some recreativists – ends up establishing a trivial link between imagination and creativity. Second, there are good reasons to grant imagination (understood as a recreative capacity) an essential role in creativity.

What is the impact of this view on the study of the cognitive underpinnings of fiction? Fiction is an extremely interesting case study for any theory of the imagination. Recreativists claim that our engagement with fictions relies on recreative imagination, but hint at the idea that it is not involved in the creative side of fictions, namely their conception and production. The latter would call rather for creative imagination. I have given reasons to think that recreative imagination is a necessary ingredient of creativity, and therefore that we do not need to posit an additional, creative kind of imagination to account for creativity. My account opens up new research perspectives, suggesting a unifying analysis of the cognitive roles of imagination and creativity in underpinning fiction that may be better able to show due appreciation to the creativity displayed also in our engagement with fictions.

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¹ This breaks with eminent philosophical traditions. According to Plato, creativity is displayed only by geniuses, whose imaginative inspiration is an irrational state prompted by the divine (Gaut & Kieran 2018, p. 6). Kantian philosophy gave pride of place to the imagination and to how creativity depends on its workings (Beaney 2005; Stokes 2016). Kantian seeds have flourished during Romanticism. Wordsworth, for instance, defined imagination as “absolute power”, “clearest insight, amplitude of mind”, and “reason, in her most exalted mood” (1850, bk. 14, l. 189-192). To terminologically mark this ascent, imagination is detached from fantasy or fancy. Coleridge says: “the fancy combines, the imagination creates” (quoted in Poe 1850). The centrality of imagination in creativity can also be found in Sartre, whose analysis shows overlapping points with that of Kant (Stokes 2016).

² In Arcangeli 2020 and 2021 I have argued that there is more to mental simulation than recreative imagination.

³ This creative aspect of imagination has been stressed by Sartre (1936, 1940; see also Stokes 2016), who arguably endorsed an attitudinal account of imagination along the lines suggested above (Kriegel 2015). Gaut (2003, p. 163) clearly equates the Kantian productive imagination with “experiential imagination” (i.e., another label for recreative imagination – Dokic & Arcangeli 2016, or at least for sensory imagination).

⁴ Currie and Ravenscroft clearly hold h3. However, in the quoted passage above, they suggest the converse of h4, namely that any creature that lacks perspective-taking lacks imitative learning. Moreover, h5 conflicts with other commitments they hold in their book. Yet, both h4 and h5 are needed in order to draw c2 from h3.

⁵ Both h1 and h2 raise several questions whose answers are far from being obvious: is innovation sufficient for creativity (see §4)? Do apes really display creativity in their innovative behaviour? What are the arguments for the idea that creative imagination is a necessary condition for creativity/innovation?

⁶ Perspective-taking is often associated to “mindreading” (i.e., the capacity to attribute mental states to others) and to “empathy” (i.e., the capacity to vicariously share the affective state of another person). How these three notions relate to one another is still an open question which lies beyond the scope of this contribution.

⁷ The same distinction goes under different names in the literature: high-level and low-level simulation-based mindreading (Goldman 2006a); reenactive empathy and basic or mirroring empathy (Stueber 2016).

⁸ Research on imagination in apes, and more generally in non-human animals, is still an open and disputed field (Mitchell 2016).

⁹ The adjective “creative” can also be applied to individuals. What its is to be a creative person is another less explored topic, which can be tied to the subjective disposition to recruit imaginative capacities (Gaut & Kieran 2018; Hills & Bird 2019).

¹⁰ The necessity of the value component has been questioned by Hills and Bird (2019), who suggest adding imagination, fertility, and motivation. It should be noted that they are mainly concerned with creativity as a personal trait.

¹¹ Some of the proposed additional components are: flair (Gaut 2003), surprise (Boden 2010), a certain phenomenology (Nanay 2014), agency (Paul & Stokes 2018).

¹² The “Four C” model bears interesting similarities with Boden’s philosophical distinctions. Big-C is similar to Boden’s “historical creativity” and “transformational creativity” (Boden 1994/2004). The former is involved when the creative product is valuable and new to human history, and not merely to individual minds (i.e., simple “psychological creativity”). The latter specifies the kind of creativity at stake when a new conceptual space is opened by considering ideas previously thought to be impossible. It’s not clear whether Pro-c is always historically creative. There might be meaningful advances in a field, although they are not new with respect to the entire human history. Pro-c can be definitely tied to Boden’s “exploratory creativity”, that is, the kind of creativity we see when a conceptual space is thoroughly explored and hitherto unnoticed paths are disclosed. It is an open question whether Pro-c can be merely “combinational” (i.e., the kind of creativity that arises from the “unfamiliar combination of familiar ideas” – Boden 1994/2004, p. 3). Mini-c and little-c are clear cases of non-historical psychological creativity and, arguably, are mainly combinational.

¹³ In the literature these are presented as *different* models of the role of imagination in creativity (Gaut & Kieran 2018) – e.g., the “search model” (Gaut 2003); Gaut’s own proposal of considering imagination as the vehicle of active creativity; and the “connection model” (Beaney 2005). Rather than being conflicting proposals, they all seem to grasp a grain of truth about imagination in creativity. Gaut (2003) also recognizes that imagination can be seen as the medium through which the results of an unconscious creative process are displayed to the creative subject. On this “display model”, imagination would be out of where the real game is played, having a mere ancillary role in creativity.

¹⁴ Gaut (2003) distinguishes six senses of imagining: a) falsely believing; b) being creative; c) having mental imagery; d) entertaining a proposition; e) experiential imagination; and f) dramatic imagination. Eventually, he thinks that only senses d), e), and f) refer to exercises of imagination (where f) can be reduced to d) and e)). These senses seem to map onto the distinction between cognitive and sensory imagination, respectively. Stokes (2016) takes on board the distinction between recreative and creative imagination, but in characterizing the notion of imagination at play in creativity he mainly draws on recreativism (see Stokes 2014).

¹⁵ Julia Langkau pointed out to me (in private conversation) that the excessive focus on product creativity, combined with the intuition that non-human animals and AI can make creative products, might offer an explanation of why imagination is typically not seen as necessary for creativity.

¹⁶ At worst, it is a clever way of avoiding sharing credit for the discovery with other colleagues (Browne 1988). Wotiz and Rudofsky raised doubts also about another “dream” (of gambolling atoms) told by Kekulé during the 1890 speech, which was meant to explain his discovery of carbon atomic structure.

¹⁷ Langland-Hassan (2020) grants the necessity of imagination for creativity, but thinks that this pushes us to abandon a notion of imagination as a rule-governed, conscious, will-dependent mental action. The reasons I offered in favour of the idea that creativity requires recreative imagination partially answer Langland-Hassan's worries. Indeed, I contend that he has overlooked both the complexity of the will-dependence nature of our imaginings and the dynamical structure of the creative process, which can combine imagination with dream-like associative thinking. A further line of defence would insist on the idea that not all recreative imaginings show inferentiality – cognitive imaginings and suppositions are typically credited with such a feature, but the same does not hold for sensory imaginings (Arcangeli 2018).