Imagination as a Source of Empirical Justification

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Abstract: Traditionally, philosophers have been skeptical that the imagination can justify beliefs about the actual world. After all, how could merely imagining something give you any reason to believe that it is true? However, within the past decade or so, a lively debate has emerged over whether the imagination can justify empirical belief and, if so, how. This paper provides a critical overview of the recent literature on the epistemology of imagination and points to avenues for future research.

1. Introduction

The imagination is associated with fiction, fantasy, and flights of fancy. Rather than represent the world exactly as it is, the imagination is paradigmatically used to dream up new, as-yet-unactualized possibilities. In contrast to mental states typically invoked in epistemology such as perception, belief, memory, and knowledge, the imagination is free to roam untethered by rationality, evidence, and truth.

And yet, the imagination is also a powerful tool for learning about the world. If you are buying tickets for a play, you might imagine what it would be like to sit in several different seats to determine which one will give you the best view of the stage. If you are splitting a bottle of wine with someone else, you might imagine pouring two more glasses to determine whether there is enough wine left in the bottle or whether you need to open a new bottle. If you notice that your partner acting stressed, you might imagine what their day was like from their perspective to better understand the cause of their behavior.

These examples illustrate that the imagination plays a role in the formation of empirical beliefs: that the center balcony seat affords the best view, that there is enough wine in the bottle for two more glasses, that your partner is stressed because they had to run several errands before an important meeting at work. But does the imagination contribute to the justification of these beliefs? In other words, can merely imagining something give you reason to believe that it is true? Recently, a lively debate has emerged around this question.

Traditionally, philosophers have been deeply skeptical that the imagination can justify empirical beliefs. This view can be traced back to Plato, who claims that imaginings are merely deficient and misleading images of the objects of the senses, which themselves are deficient and misleading images of the Forms, rendering the imagination doubly illusory. It is also notably present in Descartes, who uses the example of a piece of wax changing over time to argue that our knowledge of the true nature of things is achieved through rational intellect rather than imagination.

Davies, writing at the beginning of the 20th century, sums up the prevailing attitude towards the imagination by saying that "scant courtesy has been given to the imagination as being concerned with the elucidation of those objects and problems with which knowledge in its many forms is engaged," and that it is a tacit assumption throughout philosophy that "the imagination has no cognitive value" (1907 p. 645).

Figures as philosophically divergent as Sartre and Wittgenstein both endorse this view. Sartre remarks that "nothing can be learned from an image that is not already known," (1948 p. 12) and that "the image teaches nothing" (1948 p. 147). Wittgenstein makes the strikingly similar point that imaginings "tell us nothing," and therefore do "not instruct us about the external world" (1948/1980 p. 15).

Within the contemporary epistemology literature, the claim that imagination cannot justify empirical belief is typically taken to be so obvious that it is assumed rather than argued for: Markie states that "imaginings, hopes and the like are not sources of justification," (2005, p. 348) Tucker claims that "the imagined image can't even prima facie

justify its content," (2010, p. 533) and Chudnoff writes that "imagining that p never justifies you in believing that p" (2012, p. 69).

This claim is also endorsed within the contemporary literature on imagination. O'Shaugnessy remarks that the imagination is "out of the cognitive circuit" (2000 p. 357), Spaulding argues that imagination "is limited to the context of discovery," rather than the context of justification (2016 p. 207), and Kinberg & Levy write that "the human imagination is unlikely to be a good source of...knowledge" (2023 p. 15).

Within the past decade, however, there has been a sea change in attitudes, spurred in part by several edited volumes dedicated to exploring the epistemic role of the imagination (Badura and Kind 2021, Kind and Kung 2016, Macpherson & Dorsch 2018, see also Levy & Godfrey-Smith 2019 on imagination in science). As a result, many articles have recently argued that imagination can justify empirical belief and produce empirical knowledge (Aronowitz & Lombrozo 2020, Badura 2021, Berto 2023, Dorsch 2016, Hyde 2019, Kind 2016, 2018, Munro 2021, Myers 2021a, 2021b, 2023, Stuart 2021, Miyazono & Tooming 2023, Williams 2021, Williamson 2016). But this recent surge of optimism about the epistemic role of the imagination is not without its detractors (Egeland 2021, Kinberg & Levy 2023, Maibom 2016, Mallozzi 2021, Spaulding 2016). And even within the optimist camp, there is little consensus about the nature, structure, and scope of imaginative justification. Now, more than ever, it is important to carefully survey the theoretical landscape of the epistemology of imagination.¹

The article proceeds as follows. §2 clarifies what is at stake in the debate over whether imagination can justify empirical belief. §3 and §4 explicate and evaluate arguments for pessimism and optimism about imaginative justification, respectively. §5 outlines the constraints-based approach to imaginative justification. §6 explores whether the imagination generates or merely preserves justification.

¹ See Strohminger (forthcoming) for another survey of the epistemology of the imagination.

2. Optimism About Imaginative Justification

Optimism about imaginative justification is the view that the imagination can epistemically justify empirical beliefs. *Pessimism* is the denial of optimism.

Let me clarify each of the key terms in optimism.

First, empirical beliefs are beliefs towards contingent propositions about the external world. The debate between optimism and pessimism is distinct from debates over whether imagination can justify various kinds of non-empirical beliefs. First, it is neutral on introspective beliefs about one's current imaginative experience. While imaginings plausibly play a role in justifying beliefs about themselves, this is better thought of as a species of introspective justification rather than imaginative justification. Second, it is neutral on modal beliefs about what is metaphysically possible. Many philosophers have argued that imaginability is a guide to metaphysical possibility (Chalmers 2002, Gregory 2020, Kung 2010, Yablo 1993). But mere imaginability is too weak to serve as a guide to empirical reality—many propositions are imaginable, and therefore possibly true, but false. If imagination plays an epistemic role in justifying empirical beliefs, it is different from the epistemic role it plays in justifying modal beliefs. Since pessimism only denies that imagination can justify empirical beliefs, it is compatible with thinking that imagination plays an important role in justifying both introspective and modal beliefs.

Second, what do I mean by *imagination?* It is commonly observed that 'imagination' is a heterogeneous term used to refer to many different types of mental states and processes (Kind 2013). There is no reason from the outset to think that these different types of imagination will be epistemically similar.² When doing epistemology of imagination, we need to be clear about the notion of imagination we are operating with.

² See Balcerak Jackson 2016 for a discussion of the epistemological differences between imagining, supposing, and conceiving.

The main distinction that I wish to emphasize is between imagistic imagination and non-imagistic imagination.³ Imagistic imagination is imagination that involves mental imagery, such as tactilely imagining the texture of your pet's fur, or visually imagining a beautiful sunset. Non-imagistic imagination is imagination that does not involve any mental imagery, such as imagining that Barcelona is the capital of Spain or imagining that your great-great-grandmother was left-handed.

I will largely focus on imagistic imagination. One reason for this is simply that most optimists in the literature restrict their focus to imagistic imagination.⁴ Another reason is that it is plausible that non-imagistic imagination is involved in garden-variety hypothetical reasoning—you non-imagistically imagine that p, infer that q, and conclude that *if p then q*. However, pessimists about imaginative justification typically do not want to be skeptics about hypothetical reasoning—and certainly not about inference—in general. Instead, they typically think there is something distinctive about imagistic imagination that precludes it from conferring justification.

Finally, *epistemic justification* is a positive epistemic status. A belief is justified when it is epistemically appropriate to hold it. Thus, optimism says that it can be epistemically appropriate to form empirical beliefs based on the imagination.

Optimism has sometimes been interpreted as a stronger thesis, which has resulted in a significant amount of crosstalk in the literature. For example, some theorists have assumed that the imagination must be a *foundational* source that generates justification anew for optimism to be true.⁵ Other theorists have assumed that imagination must be

³ Imagistic imagination is sometimes referred to as 'sensory' or 'perceptual' imagination, and non-imagistic imagination is sometimes referred to as 'propositional' imagination. However, not all theorists use these terms to pick out the same categories. And some theorists, such as Kind (2001), deny that non-imagistic imaginings exist.

⁴ For example, Dorsch 2016, Kind 2016, 2018, Miyazono & Tooming 2023, Munro 2021, Myers 2021a, 2021b, 2023.

⁵ For example, Egeland 2021 claims to argue against optimism despite conceding that imagination can serve as a non-foundational source of empirical justification. He is better interpreted as arguing for a form of preservationism, discussed in §6.

an *indispensable* source that yields justification unable to be acquired in any other way for optimism to be true.⁶ Finally, some theorists have assumed that imagination must be a *robust* source that often or even always confers justification for optimism to be true.

In my view, we should not build any of these stronger conditions into our definition of optimism. We first need to establish that the imagination can justify belief at all before we can ask about the nature, structure, and scope of that justification. With these clarifications in place, is optimism too weak to be of any theoretical interest? I do not think so. It captures a fundamental claim that many have been motivated to deny: that it is sometimes epistemically appropriate to rely on the imagination as a guide to what the world is like. Optimism posits a minimal justificatory role for the imagination that we can then investigate and clarify further.

3. Arguments for Pessimism

As we have seen, pessimism is the orthodox, received view. Three main arguments for pessimism have been advanced in the literature.⁷

The argument from voluntary control states that the imagination cannot justify empirical belief because it is under voluntary control.⁸ Wittgenstein is one of the first to make it explicitly, saying that "it is just because imaging is subject to the will that it does not instruct us about the external world" (1948/1980 p. 15). This argument can be motivated by a disanalogy between perception and imagination. Perception is a paradigmatic source of empirical justification, and it is not under voluntary control. You cannot simply choose what you see or hear. What you perceive is determined by how things are. By contrast,

⁶ For example, Levy & Kinberg 2023 claim to argue against optimism despite conceding that there are cases in which the imagination confers empirical justification. They deny that this contradicts their view because in these cases the justificatory force of the imagination "is attributable to the proper application of appropriate principles of inference" (p. 12) and thus the imagination does not constitute an indispensable source of justification.

⁷ Kind 2018 is one of the first to explicitly label and discuss the first two arguments. She also lists the claim that the imagination is uninformative as an argument for pessimism. However, this is better understood as an argument for preservationism, discussed in §6.

⁸ Balcerak Jackson 2018 refers to this as the 'Up-to-Us Challenge.'

you can imagine almost anything you want to. Because what you imagine is only determined by what you choose to imagine, it cannot serve as a source of justification about what the world is like.

The *argument from world-insensitivity* states that the imagination cannot justify empirical belief because it is not sensitive to the actual state of the world. Once again, this argument can be motivated by a disanalogy between perception and imagination. Perception is systematically constrained by the reception of information via the sense organs. As a result, what I perceive is determined, in large part, by the state of my immediate environment. By contrast, what I imagine is not constrained by what the world is like. Indeed, one might think that the imagination is distinguished from other mental states such as perceptions and beliefs precisely by its freedom to deviate from the actual state of the world and to represent the fictional and fantastical.

These two arguments are closely related to each other. Indeed, we can combine them into a single master argument by noting that the imagination is not world-sensitive precisely because its content is under voluntary control.

There are two ways of responding to these arguments: either deny that the imagination is always voluntary or world-insensitive, or deny that these features undermine the justificatory force of the imagination. Optimists typically opt for the first option. Some have argued that the imagination can operate in an involuntary mode, and that because the contents of involuntary imaginings are not up to us, they are more world-sensitive. Williamson, for example, argues that the imagination has both voluntary and involuntary modes, and that "left to itself, the imagination develops the scenario in a reality-oriented way, by default" (2016 p. 116). Langland-Hassan (2016) and Williams (2021) flesh out this suggestion by arguing that there are algorithms that involuntarily determine how imaginings develop over time and that are sensitive to environmental regularities. In a similar vein, others have suggested that the imagination involuntarily

develops according to logical principles that ensure its world-sensitivity (Badura 2021, Berto 2017, 2021, 2023 Canavotto, Berto & Giordani 2020, Schoonen 2021).

In my view, the second option for resisting these arguments deserves more consideration. Both arguments are motivated by a contrast between imagination and perception. But consider a different analogy between imagination and reasoning. Reasoning is typically under one's voluntary control—I can choose what to reason about, as well as how I carry out my reasoning. Moreover, reasoning is only as world-sensitive as its inputs. If you start with false beliefs, then reasoning from those beliefs will not be sensitive to the actual state of the world. But neither of these features undermines the justificatory force of reasoning. Reasoning can confer justification even when it is voluntary and even when you reason from justified but false beliefs. So, these arguments for pessimism threaten to overgeneralize.

A third and final argument for pessimism is the *argument from unreliability*, which holds that the imagination is too unreliable to serve as a source of empirical justification. While the argument from world-insensitivity is motivated by the thought that the imagination is, by its very nature, disconnected from what the world is like, the argument from unreliability holds that people are simply not very good at imagining what the world is like.

Proponents of this argument typically support the claim that imagination is unreliable by pointing to empirical results suggesting that the imagination is plagued by misleading biases, heuristics, and fallacies.

Kinberg & Levy 2023 argue that there are systematic errors in imaginative physical reasoning. For example, subjects incorrectly imagine that an object exiting a curved tube will follow a curved trajectory rather than a straight trajectory (McCloskey & Kohl 1983), and that an object dropped from a moving body will follow a straight path downwards rather than a curved path (McCloskey et al. 1983). Other work suggests that imagination is subject to the conjunction fallacy—the finding that subjects incorrectly tend to rate

conjunctions are more likely than either of their conjuncts (Ludwin-Peery et al. 2020, Bass et al. 2022).

Maibom 2016 argues that systematic error is also found in the context of imaginative perspective-taking. When we imagine our own future emotional reactions, we are subject to impact bias—a systematic tendency to misestimate both the intensity and duration of our affective responses (Wilson & Gilbert 2005, Ayton et al. 2007). Moreover, people overestimate similarities between themselves and others (Nickerson 1999, Birch & Bloom 2007) as well as between their present and future selves (Read and van Leeuwen 1998, Van Boven & Loewenstein 2003). For example, subjects that are hungry or thirsty tend to project these states into an imagined scenario.

However, for every study that evinces the limitations and biases of the imagination, there is another that evinces its advantages and strengths. In one well-known study, experimenters asked subjects to determine whether a narrow or wide cup would need to be tilted further before water spills out (Schwartz & Black 1999). Subjects who were explicitly instructed to imagine the tilted glasses were more accurate than those who were not. Moreover, many of the patterns of error cited in support of the argument from unreliability are context-dependent. For example, errors are reduced when physical reasoning problems are presented in familiar contexts and with richer stimuli (Kaiser et al. 1986, 1992). Finally, many studies find that imaginative reliability can be improved with practice (Barone et al. 2005, Moen et al. 2020).

In my view, we are simply not in a position to make a general claim about the reliability of the imagination. Too much depends on the domain that is imagined, the context in which the imagining is undertaken, and the skills, abilities, and background knowledge of the imaginer. Instead, our best empirical evidence only warrants the conclusion that the imagination is fallible in certain contexts. But this is not enough to

⁹ To be fair, Kinberg & Levy (2023 p. 324) concede this point.

establish that pessimism about imaginative justification is true. Nearly everyone thinks that empirical beliefs are fallible. But few would think that the fallibility of our empirical beliefs undermines their justification. The fallibility of the imagination may give us reason to guard against error and train our imaginative skills (Kind 2022). But it does not entail that the imagination cannot justify empirical belief.

4. Arguments for Optimism

Recently, several arguments have been put forward for optimism.

Dorsch (2016) articulates several plausible and widely endorsed conditions on justification and then argues that beliefs based on the imagination can meet them. More specifically, he argues that beliefs based on the imagination can meet the externalist conditions of reliability and safety, and the internalist condition that a subject be in a position to know that these beliefs are reliable and safe.

Williamson (2016) argues that there was evolutionary pressure for imagination to be selective (it tends to represent practically relevant scenarios) and reality-oriented (it is generally reliable). He points out that "an imagination that clutters up the mind with a bewildering plethora of wildly unlikely scenarios is almost as bad as no imagination at all" (2016 p. 114) and that this selection pressure gives us reason to believe that the imagination can be a source of knowledge.

Kind (2016, 2018) offers two arguments for optimism. First, she argues that extraordinarily skilled imaginers, such as Temple Grandin and Nikola Tesla, can form justified beliefs based on their imaginings. She then argues that ordinary imaginers can approximate the epistemic ideal represented by these extraordinary imaginers. Second, she argues that computer simulations can justify beliefs. As evidence, she cites the fact that computer simulations are relied upon in scientific practice to evaluate hypotheses. She then argues that imaginings are relevantly analogous to computer simulations. While the latter are simulations that are run on external hardware, the former are simulations that are run inside of one's head.

Although these arguments each contain important insights, they also each have important philosophical and dialectical shortcomings. Kinberg & Levy 2023 argue that they rely on speculative empirical claims (e.g. about the evolutionary function or general reliability of the imagination) and tenuous analogies (e.g. between extraordinary imaginers and ordinary ones or between computer simulations and imaginings).

In my view, there is a more convincing argument for optimism, which we can call *the argument from skeptical consequences*. This argument starts with the simple fact that many beliefs are based on the imagination. This can be motivated by reflecting on the examples with which this paper began. But I do not need to rest my case on the mere intuition that such cases are sufficiently common. There is also extensive empirical evidence that the imagination is implicated in many broad domains of belief-formation, such as spatial reasoning, physical reasoning, reasoning about other minds, and reasoning about hypothetical and future experiences.¹⁰ As a result, if imagination were not capable of conferring justification, then many broad domains of empirical belief would be systematically unjustified. But pessimists about imaginative justification are not wholesale skeptics. They typically think that our ordinary empirical beliefs are by and large justified—they just deny that imagination contributes to this justification. To avoid these skeptical consequences, we should embrace optimism.

One might object that denying optimism only leads to a skeptical conclusion if imagination is the *only* way to form beliefs about the relevant domains. If there are other ways to form justified beliefs about those domains, then one can deny optimism while holding that those domains of belief are justified by non-imaginative means. But what is at issue is not whether other belief-forming methods are available that *would* justify the

¹⁰ See Kosslyn, Thompson, & Ganis 2006 and Byrne & Johnson-Laird 1989 on the role of imagination in spatial reasoning. See Hegarty 2004 and Battaglia, Hamrick, & Tenenbaum 2013 on the role of imagination in physical reasoning. See Currie & Ravenscroft 2002, Davis et al. 2004, Goldman 2006 on the role of imagination in reasoning about other minds. See Nanay 2016 for the view that imagination is involved in decision-making. See Moulton & Kosslyn 2009 for a review.

relevant beliefs *if* they were based on them. So long as most people in fact base beliefs in those domains on the imagination, then pessimism is committed to the claim that their beliefs about these domains are systematically unjustified. Moreover, even if imagination is dispensable in principle, it will often be indispensable in practice. Imagination is a practically feasible way to simulate scenarios that would be too costly to investigate by any other means. If pessimism has seemed attractive, it is because philosophers have underestimated the extent to which we rely on imagination in forming empirical beliefs.

5. The Constraints-Based Approach

The *constraints-based approach*—first advocated by Kind (2016, 2018) and Kind & Kung (2016) and further developed by many others (Langland-Hassan 2016, Myers 2021a, 2021b, Tooming & Miyazono 2023, Williams 2021)—is a prominent account of the conditions under which the imagination justifies belief. But it can also be seen as a constructive argument for optimism: an account of *how* imagination justifies that demonstrates *why* it is epistemically relevant in the first place. The core idea is that the imagination can confer justification when it is appropriately constrained to represent accurately. Letting your imagination wander freely cannot teach you anything about what the world is like. But reining your imagination in by constraining it in the right way can make it more sensitive to the truth and thus a better source of evidence.

In her initial presentation of the constraints-based approach, Kind distinguishes two constraints that the imagination must meet to be a source of knowledge. The reality constraint stipulates that imaginings must "capture the world as it is" (2016 p. 150) and the change constraint stipulates that when an imaginative project requires one "to imagine a change to the world as they believe it to be, they are guided by the logical consequences of that change." (2016 p. 151). Kind is clear that these constraints represent

epistemic ideals to aspire to, rather than strictly necessary conditions on imaginative justification.¹¹

These constraints are broadly externalist in nature. They require that imaginings be veridical (at least, in the relevant respects). This may be due to Kind's focus on knowledge, rather than justification. But it gives rise to the worry that these constraints cannot play a role in guiding how we carry out our imaginative projects. As I argued in earlier work, "we cannot directly constrain our imaginings according to what the world is like. The best we can do is constrain our imaginings according to how we represent the world to be" (2021a p. 3260). This suggests an alternative conception of constraints according to which they are internal states that play a role in determining the content of the imagination. These two conceptions are not rivals. We can view Kind's externalist constraints as success conditions and internalist constraints as the mechanism by which we achieve that success.

Kind and Kung (2016) distinguish between voluntary constraints, which can be imposed at will, and architectural constraints, which are limitations on the imagination involuntarily imposed by our psychological architecture. Some theorists primarily appeal to voluntary constraints in explaining the justificatory role of the imagination. For example, Kind (2016) argues that one can impose or relax the reality constraint at will. Other theorists emphasize architectural constraints. For example, Langland-Hassan (2016) and Williams (2021) both argue that the imagination automatically develops according to generative models within the perceptual system, and Balcerak Jackson (2018) argues that the recreative architecture of the imagination imposes epistemically relevant limitations on the contents that can be imagined. The voluntary/architectural distinction is related to a different distinction between personal constraints, which are

¹¹ Although she claims that they could be reformulated as necessary conditions by requiring that the world is imagined as it is *in all relevant respects* and that all and only the *relevant* logical consequences of a change are imagined.

reflectively accessible, and subpersonal constraints, which are not (Myers 2021a, Miyazono & Tooming 2023). However, these distinctions crosscut each other. Some argue that the imagination is involuntarily constrained by one's beliefs, yielding a constraint that is both personal and architectural (Canavotto, Berto & Giordani 2020).

So far, I have focused on what imaginative constraints are. But what does it mean for the imagination to be *appropriately* constrained? For many, like Kind (2016), it is enough that constraints increase the reliability of the imagination. Others have argued that we need to appeal to a more normatively loaded notion of constraints. Suppose you constrain your imagination with beliefs that are true but unjustified. Since the beliefs are true, using them to constrain your imagination will make it more reliable. However, intuitively, an imagining that is constrained by unjustified beliefs cannot itself confer justification. Myers (2021a, 2024) uses cases like this to argue that the imagination must be epistemically based on good evidence to confer justification and that because of this, the imagination is itself epistemically evaluable.

Although the constraints-based approach is widely endorsed amongst optimists, it is not uncontroversial. Gauker (2024) argues that the constraints-based approach is too narrow to account for imaginings of open systems. Similarly, Stuart (2020) argues that many imaginings are epistemically useful precisely because of their unconstrained nature.

While the constraints-based approach offers a promising way forward for the epistemology of imagination, more work needs to be done to systematically describe (i) what constraints are, (ii) the mechanisms by which constraints are imposed on the imagination, (iii) the conditions under which imaginative constraints are epistemically appropriate, and (iv) whether the constraints-based approach is extensionally adequate in capturing all cases of imaginative empirical justification.

6. Is Imaginative Justification Generated or Preserved?

As we have seen, most of the literature has focused on whether optimism is true. While this is no doubt an important question, there are many further questions that any complete theory of the epistemology of imagination will need to answer.

One of the most important questions is whether the imagination generates new justification or merely preserves existing justification. Both options are a form of optimism. But the former is a much stronger and more ambitious form of optimism because it holds that the imagination can go beyond what one already has justification for believing. Following Miyazono & Tooming (2023), let us say that *generationism* about the imagination is the view that the imagination can generate new justification and *preservationism* about the imagination is the view that the imagination only preserves existing justification.

Egeland nicely articulates guiding intuition behind preservationism when he argues that "one cannot simply imagine one's way to new information about the world that isn't already somehow contained in one's prior beliefs and perceptual experiences," and therefore the imagination does not "confer any new justification that one didn't already have" (2021 p. 512). On Egeland's view, the epistemic role of the imagination is to allow one to appropriately base beliefs on existing justification, rather than to generate new justification that one did not already have. For example, consider the case of imagining moving a table through a doorway in order to determine whether it will fit. According to Egeland, the belief that the table will fit is already justified by one's prior beliefs about the shape and size of the table and the doorway. The imagination simply helps you to take advantage of this pre-existing justification.

A popular way of defending preservationism is by arguing that imaginative justification is inferential. On this view, the imagination only confers justification via an inference from one's prior beliefs and therefore only preserves the justification one already has for those beliefs. There are several ways of developing this idea. Some theorists argue that the imagination itself is, or is reducible to, a form of inference. For

example, Kinberg & Levy 2023 argue that the imagination "appears to serve as no more than an arena, as it were, for performing...hypothetical inferences" (2023 p. 330). Others argue that the imagination merely generates hypotheses that must then be justified by a distinct, non-imaginative inference. For example, Spaulding argues that imaginings must be "supplemented with general background information, theoretical knowledge pertaining to the particular subject matter, and general cognitive capacities for abductive, inductive, and deductive reasoning" (2016 p. 221-222). Both strategies vindicate preservationism by arguing that imaginative justification is inferentially transmitted from antecedently justified beliefs.¹²

Recently, several philosophers have pushed back in favor of generationism. Their general strategy is to argue that the content of the imagination can outstrip the content of one's prior non-imaginative evidence, and thereby justify new beliefs that were not justified by this prior evidence alone. However, within this broad strategy, there is disagreement over the details. Miyazono & Tooming (2023) argue that the imagination can access information that is otherwise cognitively inaccessible, such as representations of intuitive physics and core object principles. By making this information accessible, the imagination can justify more beliefs than one's prior, non-imaginative evidence alone. Myers (2023) offers a different argument for generationism according to which the imagistic format of the imagination is 'relationally fecund'—it can represent relational content at no extra cost over and above its non-relational content. This allows the imagination to justify beliefs with relational content that were not justified based on one's prior, non-imaginative evidence alone.

7. Conclusion

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¹² See also Norton 1996 and Mallozzi 2021.

¹³ See also Balcerak Jackson & Balcerak Jackson 2013.

The epistemology of imagination is a young but rapidly burgeoning field. Philosophers have traditionally been skeptical of the justificatory force of the imagination due to its allegedly voluntary, world-insensitive, and unreliable nature. But recently, many philosophers have begun to acknowledge that the imagination can justify empirical belief when it is appropriately constrained to capture the world as it is. However, even if optimism is beginning to replace pessimism as the dominant view, there are many questions about the nature, structure, and scope of imaginative justification that are only just beginning to be systematically investigated. For this reason, the epistemology of imagination is fertile ground for future research.¹⁴

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