What Imagination Teaches

by

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B.A. Philosophy
B.A. Classics
Brown University, 2011

SUBMITTED TO THE DEPARTMENT OF LINGUISTICS AND PHILOSOPHY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN PHILOSOPHY AT THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SEPTEMBER 2016

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Submitted to the Department of Linguistics and Philosophy on August 12, 2016 in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy in Philosophy

ABSTRACT

An investigation of the imagination, as both a mental process and a capacity to acquire knowledge about the world and other minds. It is argued that imagination is a unique mental process, whose primary feature is the capacity to construct and manipulate sets of mental representations. This feature unifies the diverse activities we call imaginings into a single class. In addition, use of this capacity in a rule-based way, under the constraint of prior beliefs, can help us acquire knowledge of everyday facts. An examination is then made into the limitations of such a capacity. It is argued that imagination can aid in rational decision-making, even in cases which may involve substantial transformation of the agent. Finally, a case is made that we can improve our capacity to gain knowledge of the mental states of others by careful application of imagination.

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Acknowledgements

This dissertation could not have been completed without the help of dozens of individuals both inside and outside of the profession of philosophy. That said, it should be clear to the reader that any mistakes in this work are my own, and not that of anyone with whom I had the pleasure of speaking about the ideas herein.

My heartiest and most sincere thanks go to the members of my committee, who have by this point devoted many hours of attention to my feeble and disorganized ramblings. Your input has made me a better writer, thinker, and human being. You have each taught me much, not only about the profession of philosophy, but also about the art of it. For that I owe you a lifetime of solid scholarship; I hope I don't let you down. Susanna: thank you for allowing me time in between your many commitments, for letting me tag along to dinners with Ned Block and Eric Mandelbaum, for inviting me to hang out with the Harvard crowd as one of your flock, and for your irrepressible energy and focused feedback. You showed me how a person could do the epistemology of anything. Roger: thank you for your steady, attentive, methodical approach to advising, for offering up hours of your time on each paper, and for not judging me when I exhibited epistemic irrationality. I hope one day to emulate your steadiness and humility. Episternology could not be one of my sub-specialties without your help. Steve: thank you, not only for your help on my work in this dissertation, but for the important job-seeking work that has fueled my continued philosophical life. Thank you for your lighting-fast philosophical reflexes and for sharing some of your vast mental vault with me. Lastly, Alex: simple thank-yous are not enough for the amount of time you have given me and the patient attention with which you have read countless drafts of each and every one of my papers, and for the hours of meetings that you have always been willing to schedule. Without you, there would be no dissertation to speak of. Thank you for prodding me whenever I would become a hermit. Thank you for asking after my affairs and being pleased when things were going well. I have been blessed to have you as an advisor.

Thanks are also due to the many other individuals at MIT who have attended my MATTIs, DOODYs, and Works-in-Progress, as well as the occasional conference, and given me feedback on my work. I am humbled to be a part of this warm, welcoming community. I will miss everybody here at MIT. I am especially thankful of the helpful input and warm encouragement

of (in no particular order) Melissa Schumacher, Sophie Horowitz, Ryan Doody, Bernhard Salow, Miriam Schoenfield, Ari Koslow, Daniel Muñoz, Kevin Richardson, Lyndal Grant, Samia Hesni, David Gray Grant, Nilanjan Das, Brendan DeKennessey, Rebecca Millsop, Said Saillant, and Dan and Sarah Hagen. Thank you also to members of the faculty all of whose presence and warmth came to my aid at one time or another: Rae Langton, Richard Holton, Jack Spencer, Justin Khoo, Sally Haslanger, Judy Thompson, Kieran Setiya, Tamar Schapiro, Caspar Hare, Agustin Rayo, Bob Stalnaker, Rachel McKinney, Declan Smithies, and Sylvain Bromberger.

Gratitude is also owed to many outside the MIT system from whom I have learned much, including Jeff McDonough, Rusty Jones, Mark Richard, Bernhard Nickel, Zoe Jenkins, Cat Wade, Richard Moran, and Lisa Rivera. I learned a lot at conferences at CUNY, the Rotman Institute, and Amsterdam VU. A big hug to my Amsterdam cousins, Oli, Jeröen, Diego, and Mílan, as a thank you for putting me up for the week.

There cannot be enough praise for the wonderful constituents of the American Association of Mexican Philosophers, my home away from home once a year. Their philosophical camaraderie has been invaluable for my development as a scholar. I am so grateful you took in an orphan Regiomontana. Your objections and ideas are peppered throughout this work.

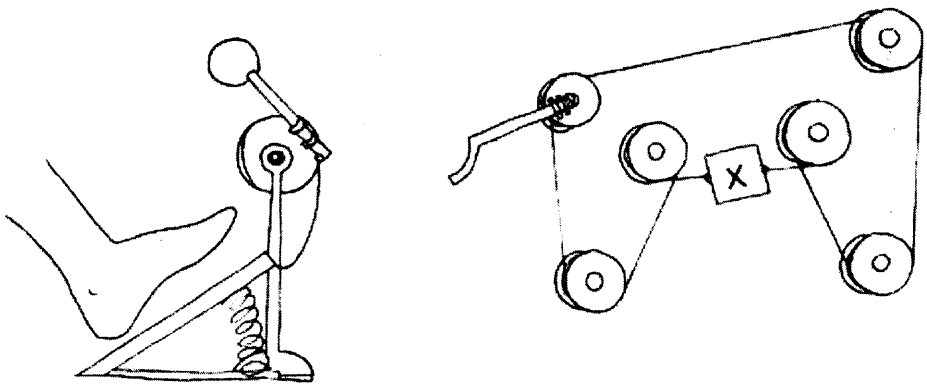
Thank you to my parents for trusting me when I said I could make a living doing philosophy, and for their unconditional support toward this endeavor. Mamá: sin tí no habría doctorado. Eres una inspiración. Papá: gracias por siempre apoyar hasta mis ambiciones más locas. Thank you to my brother for the occasional teasing: you keep me real. Thank you to my sister for your unwavering faith in me, and for sharing cat pictures when I needed them. I can't wait until there are two Doctoras Ortiz. You're going to be a killer medic (I mean that figuratively!!).

Thanks as well to my awesome forever crew: Clau, Carly, Snowflake, Princess, Nelda, Jerry, Wendy, Heather, Sara, Megan, Roman, Roly, Cecy, Gaby. Your friendship has improved my life immeasurably.

Lastly, thank you from the bottom of my heart to Brad Shur, my best friend, who is always eager to talk with me about my work, even at 6am on a Saturday. You're the fuel that keeps me going. This is for you.

How Imagination Teaches

Pulley. Will box X in the pulley system below move left or right when the pedal is pressed?



How do we figure this out?

One response is that we use our imaginations. According to what I will call the *naïve view*, sometimes when we use our imaginations we can acquire new knowledge. The naïve view comes with a metaphor that helps explain the way imagination helps us acquire new knowledge in cases like *Pulley*: we are 'seeing' the pulleys move 'in our heads'.

However, there is an argument which concludes that imagination is irrelevant or superfluous to knowledge acquisition. Let us call those that endorse this argument *pessimists*. The pessimist argues as follows. What we imagine depends on us, not the world. This means that imagination is not restricted to telling us about what is currently true or what might be true given some presuppositions. For example, we can imagine what we wish were true. Therefore, unrestricted imagination is inadequate to help us acquire knowledge. If we do want to target what is currently true or what might be true in our imaginations, we have to restrict what we imagine. For example, we might presuppose only what we believe is true, or only imagine up consequences to our beginning assumptions that follow naturally by logical or inferential rules. But if we restrict what we imagine there is a different problem. It begins to seem as if it is our

restrictions on what we imagine that are doing the work of getting us new knowledge. Therefore, either our imaginings are inadequate to knowledge acquisition because they are insufficiently restricted, or they are inadequate to knowledge acquisition because it is our restrictions on them rather than the imaginings themselves that help us acquire knowledge.

We thus have a puzzle. If the pessimist is correct, the naïve view seems to be incorrect. If we are not willing to give up the naïve view, there are two broad strategies available with which to vindicate it. Those I call *reductionist* optimists believe that both the naïve view and the pessimistic conclusion are on the right track: it turns out our imaginings are just inferential processes, so that when imaginings gets us knowledge, it is because it they are getting us knowledge in the same way inferences do. They have no particularly unique further role and there are no surprises as to how it works. On the other hand, those I call *nonreductionist* optimists choose to reject the pessimist's conclusion wholesale: there is some further reason, beyond the proposed restrictions, that imagination can sometimes help us acquire knowledge.

I am in the optimist camp. I argue that the nonreductionist optimist view is the correct view. In the next section I quickly clarify our target and our terminology. In Section 2, I elaborate on the pessimist as well as the reductionist positions, both of which I then go on to reject on the basis that they leave out salient alternative explanations of the phenomena. In Section 3, I outline a number of non-reductionist strategies with which to respond to the pessimist. I critique these strategies in order to make room for my own optimist account. In Section 4 I argue that there is a candidate non-inferential process that we often make use of in imagination that explains knowledge acquisition via imagination. I call this process a *combinatorial* process: it is what allows imaginings to generate new knowledge using resources we already have. These resources act as restrictions which guide the combinatorial process, while the combinatorial process is what permits us to test out the plausibility of possibilities that

these restrictions leave open. This is how imaginings can allow us to eliminate possibilities we could not eliminate before.

I. Some Preliminaries

Some housekeeping is in order. Imaginings seem like a heterogeneous class of activities.[1] Let us establish that a basic *imaginative state* is a state that at least partially represents a state of affairs that is not immediately perceived by an imaginer, while an *imagining* is a succession of such states.[2] For example, I can imagine a troll (which I am not perceiving) jumping up and down on my bed (which I am perceiving). I will remain neutral on whether the proper *target* of imaginings are objects, propositions, or activities. For simplicity, in this paper I will focus on a subset of imaginative states, *sensory imaginings*. I describe these as imaginings that centrally involve sensory imagery, such as visual, auditory, gustatory, tactile, olfactory, vestibular, or proprioceptive imagery. Sensory imaginings are often contrasted with *conceivings*, which need not centrally involve imagery. However, the focus is pragmatic only. I do not at present want to be taken as limiting any applications of the present account to sensory imaginings.

We should also clarify what the pessimist means when she objects that unrestricted imaginings cannot get us knowledge. She might well agree that I could to acquire knowledge about the possibility that Martians exist by merely imagining Martians.[3] However, the pessimist as I have characterized her is not after knowledge of *broad* possibilia (call these broad modal truths). She means that imagining cannot get us knowledge of more quotidian contingent truths, like whether anyone can come to my birthday party if I schedule it at 11:00 pm, or whether I would be less stressed out now if I had made time yesterday to vacuum my apartment. Call the

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[1] See Amy Kind, "The Heterogeneity of the Imagination," or Tamar Gendler, "Imagination", §1.
[2] This seems a necessary, but not yet sufficient, condition. Other states or attitudes, such as beliefs, can represent things I am not perceiving.
[3] On this issue, see, e.g., Stephen Yablo, "Is Conceivability a Guide to Possibility?", and Alex Byrne, "Possibility and Imagination".

kind of knowledge we are after knowledge of *quotidian modals*.[4] We want to show that we can, by careful imagining, acquire knowledge of what could or could have empirically happened.

II. The Pessimists

Allow me to first go over the pessimist's argument in more detail.[5]

P1. What we imagine is determined by *us* (at least in part), not the world.
P2. (From 1) Imaginings are not restricted to representing what is true, likely to be true, or even what is counterfactually true. E.g., we can imagine what we *wish* were true.
P3. (From 1, 2) Unrestricted imaginings are inadequate to help us acquire knowledge.
P4. When we *do* want to aim at representing what is true, likely to be true, or what is counterfactually true in an imagining, we must restrict what we imagine by using prior knowledge or inferential rules of reasoning.
P5. If our imaginings are restricted, then either they are sufficient for representing what is true, likely to be true, or counterfactually true, or they are not.
P6. If our restricted imaginings are *insufficient* for representing what is true, likely to be true, or counterfactually true, they cannot be used to help us acquire knowledge.
P7. If our restricted imaginings are *sufficient* for representing what is true, likely to be true, or counterfactually true, then it it is the restrictions, rather than the act of imagining, which are responsible for any knowledge acquired as a result.
P8. (From 3, 5, 6, 7) Imaginings are inadequate to help us acquire knowledge.[6]

The first premise seems to follow naturally from the definition of 'imaginative state' given in the last section. One worry might be that the origin claim, 'determined by us', rules out mental states like hallucinations that are not properly said to be determined by either 'ourselves' or 'the world' but do seem to be a kind of imagining. There are two ways to fix this: either we restrict what we mean to those states that are engaged voluntarily, or we understand 'determined by us'

[4] Terminology borrowed from Jonathan Jenkins Ichikawa (2016).
[5] Jean-Paul Sartre (2004), Ludwig Wittgenstein (1967), Alan White (1990) are examples of pessimists: they do not use my terminology but instead argue, among other things, that imaginings are incapable of *surprising* us. I have joined their arguments together and taken the most compelling parts for this reconstruction. For a different take on their argument against imaginative knowledge, see Balcerak Jackson (2016).
[6] Note that this argument is neutral between evidentialism and reliabilism. For an evidentialist reading, interpret 'inadequate' as 'unable to provide us with evidence [that the relevant proposition is true]'; for a reliabilist reading, interpret 'inadequate' as 'unreliable'.

to mean *determined by our mental states*, rather than determined by states of the world, where the requisite mental states can be conscious or unconscious. Because voluntariness has little to do with the epistemic status of a mental state, I take the latter interpretation.[7]

The second premise follows naturally from the first. If our non-factive mental states are among those that can determine the content of our imaginings, then we will not be restricted to imagining states of the world relevant to determining what quotidian modals are true. We will not be able to rule out any possibilities for how the world is. For example, we can imagine sentient mountains, flying cars, vampires, and all manner of fictional entities, states, and activities; and this tells us nothing straightforward about entities we can actually see, states we might actually be in, and activities we might actually do. The third premise then follows easily.

The second part of the argument must therefore be where all of the action lies. The fourth premise leaves some options open for an opponent. For example, there may be other means besides those listed for restricting the progression of imaginings so that they only represent states of affairs that are relevant to the truth of quotidian modals. Alternatively, an opponent could challenge the truth of the sixth and seventh premises. For example, an optimist could hold that an imagining might not completely determine what quotidian modals are true, while still claiming that imagining can substantially contribute to the project of narrowing down what quotidian modals are true.

The **reductionist** as I am understanding her accepts that it is restricted imaginings which help us acquire knowledge, but denies that this means that they have no capacity of their own to generate knowledge. The beneficial restrictions inhere in imaginings, because restricted

[7] This is easy enough to show. Consider that there are many voluntary states that DO aid us in knowledge acquisition (e.g., reasoning is engaged voluntarily) and many involuntary states that DO NOT aid us in knowledge acquisition (e.g., hallucination). Magdalena Balcerak Jackson (forthcoming) discusses the epistemic significance of the voluntariness worry as it is understood by paradigm pessimists such as Sartre and Wittgenstein. She points out that one *might* have thought voluntariness is problematic insofar as some sources of knowledge (perception, testimony) can only grant us knowledge if they are unadulterated by our volition. However, this worry turns out not apply cleanly to imaginings.

imaginings are covert inferences.[8] If restricted imaginings reduce to inferences (leaving open for now what 'inference' means), then imagining itself can be responsible for knowledge acquisition.

I am disenchanted by this view partly for reasons I share with the pessimist. Take for example how Sartre, a pessimist, disparages mental rotation as a means of acquiring knowledge:

> If you turn a cube-image in thought to amuse yourself, if you pretend that it presents its various faces to you, then you will not be more advanced at the end of the operation: you will not have learned anything.[9]

Sartre believes that we can only imagine what we already know. We can imagine a cube rotate, according to Sartre, only because we already know what it looks like. If this is true, then what we imagine won't help us learn anything, because it won't help us rule any possibilities out we could not already rule out with the information we had. Our prior knowledge will sufficiently determine both what possibilities are available and what we can imagine. So, in a strict sense, imagination will not help us acquire knowledge.

The Sartrean complaint applies almost equally to a reductionist view of knowledge gained by imagining. If imaginings that bring us knowledge are just inferences, our prior knowledge should be sufficient to account for any knowledge we gain. The starting assumptions plus the rules of inference will alone determine what possibilities are available. But that means that as soon as we begin imagining a scenario, what we can imagine will be fixed for us. It turns out on this account that imaginings will only help us discover what our prior knowledge or assumptions were ruling out all along.[10] Imaginings will be, in some ways, redundant.[11]

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[8] John Norton (1996) argues something like this regarding thought experiments: the pictorial aspect is just masking an underlying argument structure, and it is the argument structure that makes the thought experiment work. Nichols and Stich (2000) have the cognitive scientific version of this view. Roy Sorensen (1992) shares this view to an extent, except that he argues that thought experiments are much more like *real experiments*, such that we might place him in the optimist camp.

[9] Jean-Paul Sartre, *The Imaginary*. (2004: p. 9)

[10] This can be put in other terms, although they are more loaded, viz.: Imaginings may be able to *generate beliefs*, but they will not generate *propositional justification*, only generate *doxastic justification*.

This is not, of course, as bad as imaginings not having *any* role to play in knowledge acquisition. But it does seem disappointing. It turns out that the reductionist is not playing the same game as the pessimist. The pessimist takes 'acquiring knowledge' to mean 'becoming able to eliminate from consideration possibilities for how the world might be *that were not previously eliminated*'. I openly admit this is not an objection to the reductionist view. Instead, the problem is that the reductionist position is not a robust reply to the pessimist.

There are further reasons to reject the reductionist view. To begin with, when the reductionist says imaginings *just are* inferences, she cannot mean that all imaginings are inferences. She cannot even mean that all restricted imaginings are inferences. As Peter Langland-Hassan (2016) has pointed out, if all imaginings – even all restricted imaginings – proceeded inferentially, we would be unable to explain many of their features. For example, suppose we set out to imagine a baseball game. If we proceeded inferentially, we should expect to imagine a baseball diamond, a number of players standing in certain positions, et cetera. But when we imagine a baseball game, we often imagine things that are not inferentially determined. For instance, we may be able to answer the question, "What color are the player's jerseys?", although the answer does not follow from a rule of inference. If the reductionist replies that the color of the jerseys is randomized, or determined by some further cognitive process, she is in trouble: imaginings will turn out to be not just inferences.

Timothy Williamson (2016) also rejects reductionism. He points out that while inferences are traditionally understood as operating on belief-states, imaginings should not be so understood. If imaginative states were belief-like, they would have to be able to act as the

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Alternatively, imaginings may be *enabling* us to access our evidence, but they will not acquaint us with *new evidence*.

[11] This might depend on what we believe inferences are. If we believe they are *mental actions* (see Boghossian, "What is inference?") then this complaint will not apply. My argument does not ultimately rest on this point.

antecedents of a conditional, the way beliefs can. But according to Williamson it is clear that imaginative states cannot be conditional antecedents. Consider the case of updating our beliefs after using our sensory perception. When "new information ... derives from sensory perception, we are hard put to articulate it verbally in its full specificity, to be the antecedent of a conditional" (ibid., p. 11). However, we are able to integrate this new sensory information into an imagining. So imaginings cannot be masking some covert inferential process, unless we mean to be using the term 'inference' in "a sense so loose as to be entirely unhelpful," (ibid., p. 13).

Williamson points us to further disanalogies between imaginings and inferences. Conducting something like an inductive inference requires remembering past instances of some type of event, while conducting an imagining successfully does not depend on our remembering relevant past experiences. I could come to know that I can kick a soccer ball into the goal net without having kicked any soccer balls before, for example. Furthermore, while running through an inferential argument requires assembling the premises of the argument, we need not assemble any premises to conduct an imagining. For example, while I can easily imagine a kettle boiling over if I keep it on high heat for too long, in order to set out to imagine a kettle with boiling water I do not first have to list my beliefs about kettles and heat and boiling. Lastly, while successfully completing an inference requires us to formulate a conclusion, we need not form any conclusion when we imagine something. As I am running away from a fierce predator, I can imagine leaping over a ravine up ahead before doing so, without this seeming to me like I have *concluded* anything in particular.

The reductionist does get the following thing right: imaginings are indeed subject to rational norms (Williamson 2016). But this does not require that they be classified as inferences.

Considerations like these show that restricted imaginings cannot simply reduce to inferences. They also show that inferences do not sufficiently explain the epistemic powers of

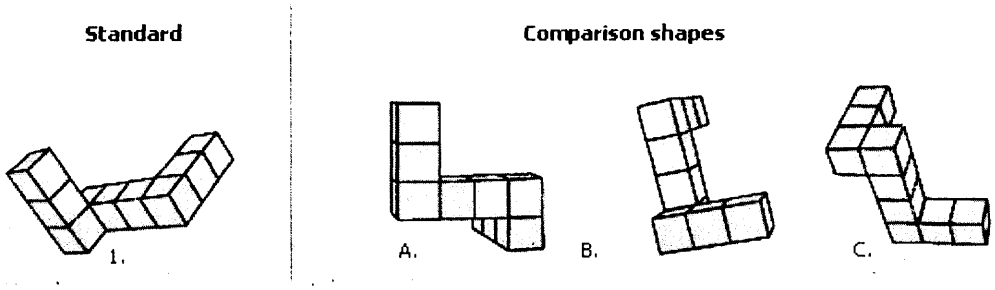
imaginings. In short, we have ruled out the strict reductionist view and explained what imagination is not. In the next section, we will explore theories of what imagination is.

III. The Optimists

We have ruled out the reductionist view. We have two options left: we either find some problem with the pessimist's argument, or we give up on the naïve view.

Let us reexamine why it would be bad to reject the naïve view outright. If we reject the naïve view, but do not like the reductionist picture, we need an alternative explanation for why it seems to us in cases like *Pulley* that we really are learning something. One alternative explanation would be to say that imaginings are only decorative. We could say imaginings are parallel to, but not identical to, other mental processes that do the work of helping us to acquire knowledge. But this explanation is woefully inadequate. Consider the following problem:

Rotation. Which of the figure(s) on the right is/are congruent to the figure on the left?[12]



There is no clear non-imaginative way of solving the problem. When we solve this problem by mentally rotating the figure on the left, our mental rotation is not merely decorative. And mental rotation is an act of imagining.

So there must be a problem with the pessimist's argument. What are our options? One thing we can do is reject the supposition that the only ways to restrict our imaginings are to

[12] From Shepard & Metzler, "Mental Rotation of Three-Dimensional Objects." Only A is congruent.

either use our prior knowledge or reason inferentially. This is roughly the **simulation** reply strategy. Another thing we can do is reject the premise that if the restricted imaginings do not completely determine the truth of a quotidian modal, then they cannot aid in knowledge acquisition. I will call this the **corroboration** reply strategy. We could also reject the claim that if restricted imaginings are sufficient to determine the truth of a quotidian modal, then the restrictions rather than the imaginings are responsible for any knowledge gained. I will call this the **apportion** reply strategy. These strategies are not incompatible, and many optimists adopt more than one. Let us examine each in turn, and see if they cannot be improved upon.

3.1 The Simulation Strategy

What I call the simulation strategy says that imaginings bring us knowledge because imaginings are simulations. This strategy bases itself on a **simulationist** model of imagination. The simulationist model originated as a an answer to the question of how we get knowledge of other people's minds: roughly, we can 're-create' or 'enact' the mental states others might be in within our own minds.[13] Because we share some mental architecture with other people, such as that which enables us to make decisions on the basis of a certain set of cognitive and conative states, we can use 'simulated' versions of other people's mental states to discover what they might do, believe, or desire, et cetera. We generate belief-like states or desire-like states to mimic the other person's, and then allow our existing cognitive architecture to operate on them to produce a decision-like or behavior-oriented state. For example, I am wondering how a close friend will react if I send her flowers for her birthday, so I pretend I have her preferences. I notice that when coupled with a pretend belief that I have gotten flowers for my birthday, my pretend preference leads to a pretend delight. So I conclude flowers are a good gift for my friend.

[13] Proponents of simulationism include Gregory Currie and Ian Ravenscroft (2002) and Alan Goldman (2006). For the opposing theory of mindreading, see Shaun Nichols and Stephen Stich (2000).

Optimists use simulationism to show that there are things besides our prior knowledge or our use of inferential rules that can produce reliable predictions about the world, such as features of our mental architecture. For example, we can engage our perceptual processes while we are not directly perceiving the world, or our decision-making processes when we are not ourselves trying to make a decision. Our extant cognitive architecture will ensure our simulations remain within the realm of what is true, could be true, or could have been true. It functions as a restriction on imagining.

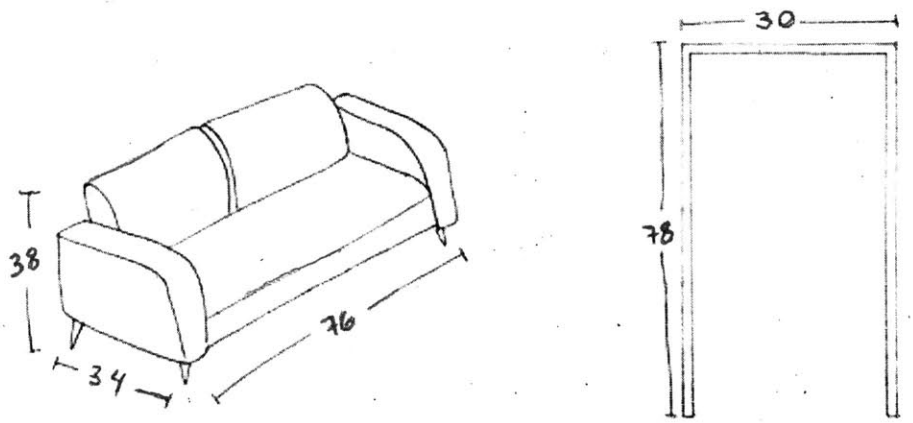
One immediate problem for the simulation strategy as a response to the pessimist is that many optimists about the epistemic power of imagination use this theory to argue for the epistemic value of simulation in realms besides predicting others' mental states. For example, many theorists contend that past perceptual experiences can train the mind such that a person could successfully simulate, in imagination, what will occur next in a certain physical causal sequence, given a certain starting perceptual or quasi-perceptual state. The problem is that there is a disanalogy between the realm of mental prediction and the realm of physical prediction.

In mindreading simulations, the simulat*or* and simulat*ed* share a causal structure, the mental architecture for decision-making. This makes the mindreading mechanism a very good predictor of what mental states others might be in. Our situation is different in the case of other kinds of prediction, such as non-mental causal prediction. Here the simulator is made up of mental states linked to each other in ways that depend on the order of activation of prior mental states, while what is simulated is made up of states of the world whose sequence is entirely *independent* of the way prior mental states have been activated in the simulating subject. The analogue between mind and world is less optimal than the analogue between mind and mind. We thus lose a powerful predictive link between simulator and target.

The simulationist could contend that, barring general skepticism about the validity of induction, as long as I have not been not widely misled in my previous perceptions my imaginings are in fact reliable predictors of ways the world might be. Some theorists suggest that perceptual predictive processes can be used reliably in imagination.[14]

But this begins to look like nothing more than an associationist model of inductive inference.[15] On this model, it will turn out that imagination is just an imagistic or picturesque analogue to inductive inferential reasoning. The main difference between the epistemic function of imagination and other inferential processes will turn out to be based on what kinds of representations imagination operates upon: optimists will have to contend that imaginings cannot be reduced to inferences just in case imaginings manipulate one kind of representation and inferences operate on another. The debate that concerns this issue is called the 'imagery debate'.[16] But we should not want our ultimate anti-pessimist, anti-reductionist stance to depend on the outcome of that debate. Here is a quick argument why. It is plausible that the following problem can be solved by means of an imagining:

Couch. Can this couch fit through this doorway?[17]



[14] Williamson (2016), Kind (forthcoming), and Balcerak Jackson (forthcoming) all rely on this strategy.
[15] David Hume is the most salient proponent of such a view. See Hume, *A Treatise of Human Nature*.
[16] For contributions to this debate, see Block (1983), Tye (1991), Pylyshyn (2002), Kosslyn et al. (2006).
[17] (Solution in the Appendix)
Text from http://mathwithbaddrawings.com/2013/08/30/the-humor-writers-and-the-too-big-sofa/.

However, many of the elements of the problem are given in different symbols: numerical, pictorial, and verbal. If we base our optimistic position on the supposition that the representational basis of imagination and inference are different, we will have pronounce on undecided issues. Is there some further process that is converting each of these kinds of symbol into one common mental format (and will this encoding rule in favor of or against the reductionist)? Is there one unitary kind of mental representation?[18] That debate should remain orthogonal to the present one. In spite of what our commitments in the imagery debate might be, we are in agreement that the given examples, such as *Couch* and *Pulley*, centrally involve imaginings, regardless of whether they involve inferences.[19]

3.2 The Corroboration Strategy

One way of vindicating the simulation strategy would be to couple it with the corroboration strategy. Recall that the corroboration strategy tries to show that imaginings might make significant epistemic contributions without thereby completely determining the truth of quotidian modals: imaginings *corroborate* their truth. An excellent example of this strategy is Magdalena Balcerak Jackson's reply to the pessimist. According to Balcerak Jackson, when we simulate perceptual states in imagination, perhaps by using extant perceptual architecture or perceptual predictive processes, we gain direct information about 'the way things look or could look', what she calls "phenomenal evidence".[20] This is contrasted with "physical evidence," which is evidence about how things *are*, and which we get directly through perception. The

[18] This might be a problem with Williamson's rejection of reductionism in the previous section. We may therefore need other reasons to reject reductionism. The positive account given in Section IV will also cover reasons to reject reductionism.

[19] Alex Byrne (2007, p. 135) also considers the debate orthogonal; although he is concerned with knowledge of broader modal truths, and is not attempting to refute the *reductionist* picture as I understand it here.

[20] Balcerak Jackson (forthcoming), p. 16

phenomenal evidence provided by imagination can grant us *prima facie* justification for beliefs about the structure of human experiences and even, indirectly, metaphysical possibility. Coupled with perhaps some additional presuppositions or additional inferences, it might be able to guide us as to how things *are*; but the abilities of the imagination alone are more limited.

This is a concessive strategy and avoids many of the pitfalls of the stronger version of simulationism. She does not fall prey, for example, to the complaint that simulating minds and simulating the world are distinct. Moreover, she can account for part of our sense that imagination is operating as more than an inductive process: on her picture we gain evidence as well as make use of evidence we already have, and this is evidence about appearances, rather than evidence about causal relations.[21]

Additionally, on Balcerak Jackson's view imagination comes with a distinctive method of inquiry. Methods of inquiry are ways to acquire and engage with evidence: for perception they include observation and data collection. Being a distinct capacity, imagination is used with a distinct method, the 'method of imaginative variation,' "in which one forms a series of imaginings that systematically recombine elements of perceptual contents in order to test hypotheses about the structure of one's experience".[22] We can use imaginative variation, for instance, to rule out the possibility of an object being both green all over and red all over. Balcerak Jackson allows us to say that insofar as we *are* repurposing any information we had from perception or memory, we are directly learning, not about the objects we imagine, but about how we represent those objects.

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[21] The validity of induction is often thought to depend on a presupposition like that *there is regularity in the world*, which is what licenses the conclusion that *Y will follow X in the future* when we have evidence that *X has followed Y in the past*. However, Balcerak Jackson's phenomenal evidence tells us *things will look this way in the future* when *things have looked this way in the past*; it relies not on a world-regularity principle, but rather an appearance-regularity principle, which is something that is granted (if it is) only by the structure of experiences as such, rather than the structure of the world. So even if what she describes is an inductive process, it is not the same one we use in non-imaginative circumstances. This is an improvement.

[22] Balcerak Jackson (forthcoming), p. 19

At least one question remains unanswered by her view, however. We must still explain what the difference is between this role for imagination and the role typically ascribed to introspection, which is also meant to inform us about the structure of our experiences. If the two turn out to be the same, she has not found a unique role for imagination.[23] She does not have a reply on hand, so we can only speculate. Perhaps, as her 'distinctive methods' reply hints, she believes that imagination supplies a method of inquiry to apply to the objects of introspection, and that this method enables us to form conclusions about matters that go beyond our own idiosyncratic experiences. We need this in order for imagination to get us knowledge of experiential perspectives more generally, which we can then use with other resources to acquire knowledge of broad modal truths and quotidian modal truths. Alternatively, perhaps she believes that the introspection and imagination are in fact more closely linked or are somehow equivalent. I would invite her to elaborate on this question. If imagination and introspection share the role of informing us about the structure of our experiences, this would be surprising. The naïve view had suggested imaginings targeted objects in the world.

One final thing to say is that although this view as sketched is a reasonable defense of the intuition that imagination gets us knowledge, it is much weaker in its scope than the apparent scope of the naïve view we presented at the outset. This is perhaps a general feature of corroboration strategies against the pessimist, as corroboration strategies will all rely on additional mental capacities to explain cases of knowledge acquisition in quotidian modal realms. If it were available, a stronger view with a wider scope would be preferable.

[23] If the two *did* turn out to be the same, then imaginings would be processes of introspection, and nothing more. This is a much weaker claim than that which we set out to prove. Additionally, it would be harder to see how this process could justify beliefs even in broad modal truths: it is not obvious that regularities that I could detect in my experiences should have any relationship to necessities or possibilities. The attraction of Balcerak Jackson's view is meant to be that it is something about *perspectives in general* that we learn through imagination, not something about the contingent features of my mind.

3.3 The Apportion Strategy

The final strategy that I will consider before introducing my new proposal wholeheartedly rejects the pessimist's assumption that, if any restrictions are used on imaginings and this results in knowledge, it is the restrictions that do all of the epistemic work. The pessimist wrongly *apportions* responsibility for knowledge acquisition. In my mind, this strategy is entirely correct. However, I think the clearest proponent of this strategy fails to make use of its full potential.

That proponent is Amy Kind. She is someone who thinks responsibility should be better apportioned by the pessimist. Like Balcerak Jackson, she relies on simulation theory as part of her response. Her particular pessimist espouses what she calls the 'charge of epistemic irrelevance': the accusation that imagination can aid in discovering new possible truths, but not in confirming their truth.[24] On her opponent's view, imagination can generate ideas, but not justify our believing them.[25]

Kind rejects this form of pessimism on the grounds that it ignores an essential role of imagination in knowledge acquisition. She argues that when we're trying to solve a problem we need a way to "bring the prior beliefs to bear on the current situation".[26] For example, a successful inventor and layperson might both have a similar collection of beliefs about gears and valves, but the insight of the inventor comes in the form of a 'capacity to bring those beliefs to bear' on engineering problems. The engineer can 'see' how a particular arrangement of gears

[24] Kind (forthcoming)
[25] Shannon Spaulding (2016) argues along these lines. According to Spaulding, we need other cognitive tools, which she calls 'knowledge-plus', to justify beliefs generated from imagination.
[26] Kind (forthcoming), p. 13

and valves will produce a useful machine. The value of imagination is thus in how it can bring beliefs to bear on problems. This capacity supports a justificatory role for imagination.[27]

This is an interesting insight. However, more needs to be said about the 'capacity to bring to bear'. As the description stands, the capacity to 'bring beliefs to bear' seems to bolster the reductionist and pessimist approaches. Making information available for use is an important cognitive role. But it is unclear that this role as currently described is unique to imagination. Inferential reasoning can also 'bring beliefs to bear' on problems. What we need to show is that imagination is epistemically important independently of non-imaginative mental processes.

We could take Kind to be suggesting that the imaginative capacity is one that can somehow make use of beliefs that are otherwise inaccessible, either because the beliefs resist access (they are implicit beliefs, or are held by a different fragment of the self), or are of a particular type (say, they are kinds of imagery, rather than being propositional[28]). This could be an important epistemic role indeed. But the result seems much weaker than we had initially hoped it would be. Unless we wanted to get into some substantial argument about what counts as implicit knowledge and generated knowledge,[29] we would be giving up on the claim that imagination can get us new knowledge.

There must be a better way to make use of the apportion strategy.

3.4 In Short

All of the strategies we have seen so far have failed to address salient and important questions about the operations of the imagination, and how imaginings allow us to gain knowledge in a

[27] Spaulding herself does not reject the idea that imagination is useful in *some* way; however, she thinks imagination is irrevocably dependent on other processes in order to get us knowledge, and so it cannot be thought principally responsible for justifying belief.

[28] We earlier gave reasons to resist diving into the imagery debate. I will continue to resist doing so.

[29] For the purposes of this paper, I do not want to delve into that argument. There is a workaround.

way that differentiates them from other mental processes. I will remedy these issues with the optimist account in the next section, which relies most heavily on an apportion strategy to reject the pessimist's consequence.

IV. My Proposed Solution

There is a better way to reply to the pessimist without succumbing to reductionism. Could we turn the tables on the pessimist and show that our prior knowledge plus our inferential capacities were themselves jointly insufficient for accounting for knowledge gained via imaginings? This would show imaginings are sometimes essential to our acquiring knowledge.

We could start by showing what we can represent in an imagining is underdetermined by our prior knowledge plus the rules of inference. For example, we can imagine a person eating a chicken. We can also imagine a chicken eating a person. Both imaginings require us to use our knowledge of chickens and humans and eating. However, each of the two imaginary situations do not represent the same states of affairs. While we might have seen people eating chicken, we probably have not seen chickens eating people. The syntactic or *format* properties of these imaginings are underdetermined: and it is just these properties we can modify by imagining, while using the exact same knowledge as a base.

We have shown that it is possible for resources we already possess to restrict our imaginings without fully determining them. This will only solve part of the pessimist's challenge, however. We must still show whether and how shifting the format of what we represent and already know about can ever get us knowledge of quotidian truths. If our format manipulations do not reveal anything true about the world, they will be worthless in our current pursuit. But I

do think imaginings can provide us with knowledge on the basis of changing the arrangement or format of what we represent.

As we have shown, we can keep what we are representing in imagination constant (chickens, humans, eating), but change the format of our representations. Now we just need to give an example where this reformatting gets us knowledge:

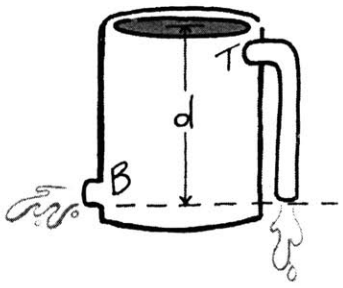
> **Frames.** I have a collection of frames that I want to hang on my wall. I know their sizes and shapes. In my past home, they were hung all in a row on a wide wall. The wall in my new home, however, is taller than it is wide, and I want to know the best way to hang them in the new space.

There are many possible arrangements of frames compatible with the sizes of frames I have, that is, compatible with my knowledge. Put another way, my knowledge alone does not determine one best arrangement, and does not determine what I will come to know. Still, when I swap the frames around, my knowledge of their sizes is restricting my options. It is disciplining my imagining. For example, I know the frames can't all be hung in a row if the wall is too short, and that they cannot overlap or float in mid-air.

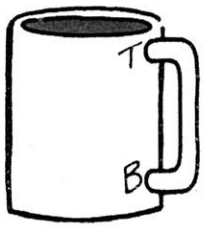
Now, can the imagining serve to eliminate possibilities the prior knowledge alone could not? Yes it can. After imagining the possible arrangements of frames, I can come to know which arrangement I prefer over the others that are possible, as well as discover which arrangements I disprefer.[30] Here is another example:

[30] Plausibly, one can also formulate this in terms of objective aesthetic properties: which arrangement is *most appealing*? I have chosen the preference attribution form for convenience. If there were objective aesthetic properties, however, it might be that imagining and perceiving them would be singular ways to grasp them.

Outpouring. A tank of water has two holes of equal area, one at top and one at bottom. The top one leads to a downspout, so that both holes discharge their water at the same level. Ignoring friction, which hole produces the faster flow of water?[31]



In constructing this example, it turns out that the explicit suppositions I use to restrict what I imagine are insufficient to determine the correct answer. The correct answer is that neither hole discharges water at a faster rate. Here is the explanation. Assume that one of the two holes produces a faster flow. If we connected the two holes (as below), then we could produce perpetual motion inside the tank, and that would not make sense.



It turns out that imagination operating on the format or arrangement of what is represented (a disconnected spout and a hole versus a connected spout and hole) can reveal aspects of a problem or a solution that might have remained unseen. This previously unseen aspect can then serve to refute a presupposition we were holding onto. It can eliminate a possibility that was open to consideration. Even if inferential processes or explicit knowledge must be used in addition to the imaginative process to determine the answer to a tricky problem, the imaginative

[31] Image and text from http://www.futilitycloset.com/2012/07/19/outpourings/ by way of Roy Sorensen's *Thought Experiments*, originally from Lewis Epstein's *Thinking Physics Is Gedanken Physics*.

process is essentially contributing to the knowledge that is gained. In our example above, if we had not reformatted the problem, we could not have obtained a solution to it. This is the apportion strategy in action.

In fact, we have clarified part of the way in which imaginings can 'bring beliefs to bear' in a unique way, one that while disallows that the examples might be equally explained by a purely inferential process. This format-changing is not something that can be easily done in a purely inferential process. The format change must be explained by something else, something particular to the imaginative process. I will elaborate on this next.

4.1 The Details

On my view, the imaginative process at its core is a *combinatorial process*.[32] In imagination, we can rearrange, compare, join and disjoin physically separate and logically distinct elements. This is what makes imagination unique, both what allows us to dream up fantastical creatures and locations and to more mundanely reconstruct scenes from information stored in our memory banks. Most importantly, the combinatorial process is what allows imaginings to generate new knowledge using resources we already have. These resources act as restrictions on the combinatorial process, while the combinatorial process is what permits us to test out the plausibility of possibilities that these restrictions leave open. This is how imaginings can allow us to eliminate possibilities we could not eliminate before.

Let us go into a bit more detail, first about what restrictions are, and then about how they interact with imaginings. The pessimist is right about there being at least two primary kinds of restrictions. Firstly, as we have just illustrated, the knowledge and beliefs we already have can limit the space of possibilities under consideration; but this does not fully determine what we

[32] Albert Einstein in his collected *Ideas and Opinions* describes his thought process in similar words: "Combinatory play seems to be the essential feature in productive thought" (1958: pp. 25-26).

will come to believe or know. Secondly, rules can be applied to imaginings that limit how imaginative states can change over time. The rules can come from either explicit reasoning, such as inferential reasoning, or from other cognitive resources, like perceptual or motor processes that predict perceptual outcomes or motor movements.

Lastly, the simulationist is correct to assert that a subject's cognitive architecture itself can serve to restrict what we can imagine. This is what explains why we might sometimes be unable to imagine what might in fact possibly occur or exist: for example, we cannot imagine ourselves undergoing the Müller-Lyer illusion, or visualize a polygon with a thousand sides.

Now, how does the combinatorial process interact with other processes? Other cognitive resources serve to guide the combinatorial process. The effect of applying inferential reasoning to an imagining should be clear. If I believe my apartment is flooding, I can and do assume my floor is getting wet, and I cannot rationally (or easily) imagine my apartment flooding without my floor getting wet. I can also apply predictions from perceptual or motor processes to guide an imagining. *Forward modeling,* for example, is a process which prepares us for how objects will appear when we move in relation to them. We could say that forward models are why we are sometimes surprised when interacting with a sculpture constructed using forced perspective: what we in fact see or feel in these cases does not match what our forward model predicts.[33] Sculptors probably make use of these predictive processes, by imagining these sculptures and the audience's reaction to them before they are built. Finally, we are further guided and restricted in what we can imagine by our own cognitive architecture, as in simulating other minds.[34]

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[33] It is possible that these processes are available for use in perceptual or motor contexts and are *not* available in imaginative contexts, in which case we cannot use them to restrict what we imagine. This is something that would be determined empirically, however.

[34] Successful restriction does not mean *all* available resources must be employed for each imagining. What must be preserved in imagining for successful guidance varies. For example, say I were to ask you to count how many times you turn left on your route to work. It doesn't matter to answering this question that you represent the streets' real length when you imagine your trip to work. What matters is that you include all

Note that the combinatorial process operates separately from all of these other cognitive elements. Imagination on the present view is the capacity to change the *formats* of the representation (call this a **format change**) or change *what is represented* in a scene (call this a **unit change**) either automatically or at will. Inferential processes, by contrast, can only advance an imagining deterministically: particular states of affairs being represented will necessitate or instigate that other particular states of affairs be represented next. Also, when knowledge, belief, memory, or supposition guides an imagining, it informs which representations or which representational formats will be permitted in the imagining. However, in most imaginings, this will leave free the possibility of switching between allowed representations and allowed formats: these presupposed states will not be sufficient to limit us to a single imaginative event. Lastly, our cognitive architecture may restrict what can be imagined more broadly, but in most cases it will underdetermine what imaginings will be most informative for a quotidian problem. I might not be able to imagine six-dimensional figures due to the way my mind is built, but this seems irrelevant to my solving, say, our *Couch* problem.

Let me also say more about these format and unit changes. Format changes preserve what objects are represented while changing their represented relationships. Imaginings call for format changes when object properties are compared or when we imagine ourselves moving through space. For example, we might wonder whether two distant objects are the same size, and this requires us to mentally 'move' the objects for comparison. This kind of change has been demonstrated in our *Frame* and *Outpouring* examples. A unit change, on the other hand, preserves what relations between objects are imaginatively represented, but changes the objects or object properties that are represented. For example, when we imagine painting our walls a

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of the streets or all of the turns, that you remember the *whole* trip, that you do not add to your imagining any movements that are from a different route to a different location. In this case it is episodic memory, memory of crossing each and every one of the streets, that must operate actively on the imagining. The picking and choosing of what information has to be preserved or relied upon must often be effortful.

new color without throwing away our old furniture, we are making *unit changes* in our imaginings. In a unit change we can substitute one object for another in a scene, like testing out flower types in a flower arrangement, or replacing elements in a recipe. [35]

Imagination preserves justification through such changes when any format change does not necessitate a unit change, or when a unit change does not necessitate a format change. As long as we keep representing things at their real size, for example, we can mentally compare our couch to new possible coffee tables without fear of getting things wrong. Sometimes this kind of preservation of represented properties is tricky to do, and this is when imagination fails to get us knowledge. For example, if we try to swap out a component in a recipe imaginatively, but the old and new ingredients have different chemical reactions to each other, we will incorrectly predict the taste of the food. Other failures of getting knowledge through imagination will be due to failures in other processes. For example, we could fail to remember the exact color of the couch when buying new living room curtains. With all of that said, however, when things go right – when we represent the objects and their relations right, no matter which objects and relations we happen to be imagining – the pessimist is wrong: we can gain knowledge through imagination. Indeed, we can gain knowledge about the way the world is, or the way it could be or could have been; and not just about ourselves, or about what is distantly possible.

4.2 Summary

Here is the proposal, in full: imaginative *states* are mental states which at least partially represent states of affairs the subject is not currently perceiving. What states of affairs are

[35] Frameworks that might accommodate this format and unit distinction are given by theorists who support all sides of the imagery debate. They include Gentner's classic (1983) paper on structure-mapping theory (or Gentner and Smith 2012 for a contemporary summary) and Barsalou (1999) on perceptual symbol systems. For a general discussion of the plausibility of maplike or non-sentential representations, see Camp (2007).

represented by an imaginative state may depend on any number of things, including the imaginer's memory, prior knowledge, and held belief, along with her behavioral goals, desires, and emotional state. What is represented may be restricted by what we know, by predictive processes that we use in reasoning and in perceptual and motor contexts, as well as by our own cognitive architecture. However, what is represented can be directly modified by the primary imaginative process, which is *combinatorial.* This means that it can operate, within given restrictions, to test out the possibilities that are not ruled out by those restrictions. In some cases this testing will lead us to eliminate possibilities we had not formerly ruled out: and this is a paradigm way of acquiring knowledge. Simply put, imaginings can centrally contribute to knowledge acquisition.

The possibility of preserving justification through combination and recombination in imagination shows both how it is epistemically important and how it is distinct from the cognitive states and processes that it can rely on to discipline the bounds of what might be imagined on a given occasion. Although gaining knowledge from an imagining will often crucially depend on the contribution of other mental states and even other mental processes, it is possible for the imaginative process to contribute to knowledge acquisition *uniquely.*

Thus, I adopt both corroboration and apportion strategies to reply to the pessimist. The corroboration strategy argues that even if an imagining is insufficient for definitive knowledge acquisition, it is making an epistemic contribution; moreover, it is not an epistemic contribution that is the same as that made by the restrictions that may be applied to it. The apportion strategy shows that if an imagining is sufficient for knowledge acquisition, this does not mean that the restrictions required to arrive at knowledge are thereby wholly responsible for knowledge acquisition, to the exclusion of the imaginative process.

It is of course possible for no combinatorial processes to be used in an imagining. Think, for example, of how you answer the question, "How many times do you turn left on your route to work?," where episodic memory seems to, on its own, wholly determine what knowledge can be gained by the imagining, and where no format or unit changes are being imposed on it. However, this simple possibility does not mean all imaginings fail to contribute to knowledge whenever restrictions are applied. Indeed, in many cases, it will turn out that we cannot get knowledge in any other way. I think our introductory example, *Pulley*, is one such case. In order to solve it, we need to imagine the direction of movement of the distinct elements; that is something we simply cannot do with non-imaginative mental processes.

3.3 Conclusions

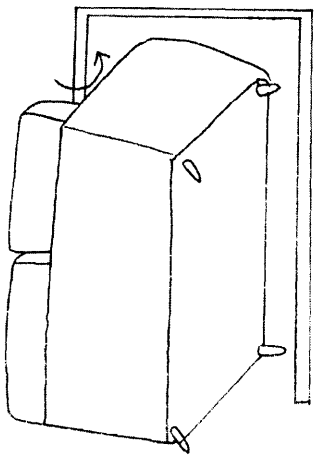
Ultimately, the present account shows how imagination is not the same as the process that generates new beliefs from our old beliefs. Inferences operate on imaginative states in distinct ways from the imaginative process, which is combinatorial. And imagination can plausibly generate knowledge we did not possess before, as we demonstrated. In giving this account, we hopefully vindicated plausible intuitions about the reliance of imagination on other processes, the sense in which imagination can follow rules, and the sense in which imagination might be able to replicate predictive processes from perception. We have also explained what it means for imagination to 'bring beliefs to bear' on problems and what might enable us to use the 'method of imaginative variation'.

A striking upshot of the present view is that at least one central properly imaginative process is distinct from both perception and inferential reasoning. The states it generates, however, can interact with states generated by many mental processes. In the future I would like to explore what possible models of mental representation might be compatible with the

predictions of the present view, as well as whether these models will support the vision of cognitive taxonomy I have tried to argue for here on philosophical grounds. I would also like to explore whether the present account might be a good starting point for a unifying account of the many heterogeneous activities we call imaginings.

Appendix

Couch: The solution is to tilt the couch so the longest side is vertical, and then manoeuvre it by rotating it through the doorway:



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The Unity of Imagination

When we mentally visualize monkeys swinging on trees, try to predict what our family members will think of our new date, animate a puppet for a small child, feel Holden Caulfield's teenage angst in *The Catcher in the Rye*, or consider how the world might have developed if Napoleon had not lost against the Russians, we say that we are 'using our imaginations'. These activities (visualization, mindreading, pretense, engaging in fiction, and counterfactual thinking) are ways of using 'our imagination'. Even collected volumes of essays on these different activities group them under this label (some recent examples: *The Architecture of the Imagination*, *The World of the Imagination*, *The Routledge Handbook of Philosophy of Imagination*).

However, this categorization has recently been questioned by Amy Kind (2013). She thinks that it cannot be the case that *one single thing*, 'the' imagination, can explain the kinds of things we do when we make-believe, engage with works of fiction, use counterfactual reasoning, *and* figure out what other people are thinking or feeling. According to Kind, these different roles for imagination are simply incompatible. For example, imagination is supposed to explain both why we feel emotions such as fear when engaging with fiction and why we are not inclined to move in response to it. We don't run away when we read scary stories, but we do run away when a child pretends to be a monster. The same mechanism cannot explain *both* why we produce motion in one context and why we do not produce motion in another. Kind's reasoning is strongly motivated by her critique of a particular unified view of imagination, the *simulationist* view.

In the conclusion of her paper she summarizes her claim as follows:

> ...Is there such a thing as the phenomenon of imagining? This discussion has suggested that we must answer in the negative: There is no single 'something' that can play all of the explanatory roles that have been assigned to it. When

> philosophers invoke imagination to explain one of the phenomena that we've been discussing, the thought is that there is something special about imagination itself that can do the explanatory work. In each individual context, this claim may well seem plausible. But once we look at the contexts together, the initial plausibility of the claim dissipates. (Kind 2013, p. 157)

We could interpret her claim more or less radically. The more modest claim is this: although there is something we can call 'the' imagination, it does not explain all of the things we philosophically expect it to. We can call this the *disunity* claim. There are actually two further ways to divide this claim: on one way, there is a 'central' or 'proper' notion of imagination, which can explain an important subset of the things we want explained, but not all of them. Call this a *disunified, reductive* view. For example, the category 'bear' properly encompasses brown bears, black bears, and polar bears; but it does not properly encompass panda bears. Although people call them bears, pandas are not proper bears. Therefore, the category 'bear' can be used to explain some of the things we want explained (about black, brown, and polar bears) but not all of them (about pandas). On the other way to divide the claim, there is no 'proper' notion – each activity can be properly described as a form of imagination, but the activities have little in common. Call this the *disunified, nonreductive* view. The category 'jade' is a good example: there is such a thing as jade, but it is a disunified category, consisting of jadeite ($NaAlSi_2O_6$) on the one hand and nephrite ($Ca_2(Mg,Fe)_5Si_8O_{22}(OH)_2$) on the other (Putnam 1975). We cannot reduce jade to either jadeite or nephrite exclusively. Because of this disunity, the category 'jade' is limited in its explanatory power.

The more radical claim denies altogether that we can categorize our phenomena. It says that, because there is nothing that fits all of the roles we ascribe to imagination, there is no such thing as 'the' imagination: all we have is a collection of quite distinct activities which can be explained by unrelated mechanisms. The semantics of it presupposes a unified category, but

there is none. Call this the *absence* claim. To draw an analogy, the *absence* claim about jade would say that there is no natural kind, 'jade': only the natural kinds jadeite and nephrite.

Amy Kind seems to endorse the more modest of these claims, a version of reductive disunity:

> It is perhaps worth my noting explicitly that I do believe that there is a distinctive mental activity properly picked out as imagining. However, this comes with two qualifications: First, a commitment to a distinct activity of imagining is different from a commitment to a distinct faculty of imagination. Second, as I will argue in the text, I do not think that the distinct mental activity of imagining can carry all the philosophical weight that has been placed on it (Kind 2013, 142, fn. 1)

However, as soon as we endorse the disunity of so-called 'imaginative' activities, we might be naturally lured toward the absence claim. After all, if we're already splitting up tasks that are typically ascribed to the imagination, what is left of 'the' imagination as we originally conceived it? Perhaps there was nothing there all along – just an unrelated set of mechanisms that often interact to produce mental activities we call 'imaginative'. Whatever the case may be, both the modest and radical versions of the explanatory challenge rule out a *unified* account of imagination.

My goal is to reject Kind's claim and defend a unity view. I will do this in two parts. Firstly, I will elaborate Kind's challenge. Then I will give a positive account of imagination that overcomes this challenge, by providing a characteristic of imaginative activities that I believe they all share, in virtue of which they can help explain our varying abilities across imaginative contexts.

A Brief Word on Alternatives

There are good and bad reasons for being a disunity theorist. On the one hand, there are many distinctions drawn by theorists of imagination between different imaginative states and activities. There are proposed distinctions between 'object imaginings' and 'propositional imaginings' (Yablo 1993), between 'supposition-imagination' and 'enactment-imagination' (Goldman 2006), and distinctions between imagining as a belief-like attitude type and imagining as a particular capacity (Van Leeuwen 2013), to give only a few examples. Leslie Stevenson makes a whopping 12 distinctions (Stevenson 2003). Many of these distinctions are meant to have important explanatory benefits: for example, the distinction between supposition and other forms of imagining is meant to explain why some things we colloquially call 'imaginings' do not trigger emotional responses and others do. However, these distinctions do not directly suggest Kind's challenge. Many leave open the possibility that someone could account for this diversity of imaginative activities in a unified way. So these are not good reasons for being a disunity theorist.

On the other hand, there are increasingly diverging literatures on different contexts for the use of imaginative states and capacities. There are three main contenders for how we understand the mental states and behavior of others, and two of these do not make reference to the imagination (Jane Heal 1995 believes that even in predicting others' mental states we bring in multiple tools). There are also multiple contenders for how we make sense of fictional propositions, some of which also do not make reference to the imagination (e.g., the 'metarepresentational' account). Lastly, there are multiple contenders for how we designate certain contexts as *pretense* contexts, many of which do not make reference to the imagination (e.g., Harris et. al. 1993 propose a 'flagging' theory of pretense). This means that, were one to be tempted by a disunity view, one could account for these distinct activities by reference to

non-imaginative explanations. Having separate explanations for these phenomena is a good reason to be a disunity theorist.

That said, there are ways of being a unity theorist without being a defender of the unity of imagination. Many theorists, not all of them simulationists, do think there is a single system that explains abilities and activities as different as like mindreading and pretense (Nichols and Stich 2000, 2003; Langland-Hassan 2012; Goldman 2006; Currie 1995). They key is that not all of these theories think of this system as an *imagination* system, at base. These unified non-imagination views could be examples of *absence* views.[36] In my previous chapter, I have argued that there is an epistemic role for imagination that cannot be filled by non-imaginative processes. I will therefore not contest these alternative views here. However, they are able to gain much less traction if we find a satisfactory unification view.

Unification and its Discontents

The intended target of Kind's challenge is a particular account of imagination according to which all of these distinct activities stem from a unique system or process. Before we generalize her challenge to unity views as a whole, we may find it instructive to study her complaints against this particular account. *Simulationism* is, roughly, the view that we have a specialized mental mechanism for replicating or attempting to replicate the mental states of others within our own minds. Many simulationists, such as Currie (1995), Currie and Ravenscroft (2002), and Goldman (2006), either presuppose or argue for the idea that the 'simulation' or 're-creation' of mental states can explain activities other than mindreading, such as pretense, engaging with fiction, and modal reasoning. Kind is actually sympathetic to

[36] Although Gilbert Ryle (1949) would certainly be the best example of an absence theorist, Ryle's target was imagination viewed as seeing pictures in the head, what he viewed as mistaken intentionality – not our contemporary view of mental imagery or imagination.

simulationism. In her other work (e.g., Kind 2016) she relies on it for an explanation of our mental modeling and predictive capacities. She just does not think that simulation can account for all of the epistemic work we take typically ascribe to 'the' imagination.

Simulationism is named after its claim that 'the' imagination is a mental *process* (as opposed to a faculty or a particular type of attitude) which can produce facsimiles of other mental states, such as beliefs. For example, suppose I am trying to figure out what my opponent will try to do next in our game of Checkers. Simulationism says that I generate some belief-like states that resemble the actual beliefs of my opponent, and run these through the same decision-making process that *I* use to figure out what moves I am going to make next in the game. This process will yield a prediction about what my opponent will do.

Different proponents of simulation diverge on what states our internal 'simulator' can actually re-create: some think the simulator can produce desire-like or even emotion-like states (Currie 1995, 1997 and Currie & Ravenscroft 2002 allow for desire-like states but not emotion-like states; while Goldman 2006 allows both, to some extent). Others deny that we can produce facsimiles of either desires or actions (Van Leeuwen 2013, 2014; Funkhouser and Spaulding 2009; Nanay 2013; Schroeder and Matheson 2006). Many simulationists also believe *supposition* is a particular species of imagination (Currie and Ravenscroft 2002; though see caveats in Goldman 2006, 48). This subsumation is controversial, however (see Doggett and Egan 2007, and Meskin and Weinberg 2006).

Simulationism has gained most traction as a theory of how people go about predicting the states of mind and the behaviors of other people. Its rival in this context is called the *theory-theory*, which postulates that, rather than utilizing a specialized system built for mimicking mental states, we predict the mental states and behavior of others by making use of folk-psychological theories. As noted earlier, however, some varieties of simulationism also

postulate that our internal 'simulator' can be used for more than predicting the mental states and behavior of other people. On one picture, this is because the system we use for predicting mental states and behavior is a special use of a system that originally evolved to help us plan our own actions (according to Currie 1995, the proper function of imagination is 'strategy testing'; Williamson 2016 concurs). It also, on some views, can account for our engagement with fiction, our understanding of folk physics, and certain other activities (Goldman 2006, Currie and Ravenscroft 2002).

This makes it easier for us to see where Kind's criticism is coming from. She points out that simulationism has trouble successfully explaining the differences other theorists see between supposition and other forms of imaginative engagement, as well as how certain forms of imagination, like mindreading, are disengaged from action, while others, such as pretense, crucially require imaginative mental states to lead to movement. "Insofar as philosophers have invoked imagination to explain these very varied activities, they have not always had the same sort of mental activity in mind" (Kind 2013, 143). Let us go through each of her main criticisms in turn.

In her first main criticism, Kind notes that many simulationists just "do not draw a sharp distinction between supposition and imagination" (Kind 2013, 147). These simulationists see supposition as a sub-species of imagining. For example, Goldman thinks that suppositions are just a special kind of belief-like imaginings (Goldman 2006). But Kind thinks this is a major problem. "If we collapse the distinction between imagining and supposing," she says, "We sever the evidentiary connection between imagination and possibility" (Kind 2013, 151). She also thinks that "acts of supposition do not of themselves have the power to cause emotional responses" (ibid., 153), which would complicate the simulationist account of engaging with

fiction. If imagination is to explain the way that we typically engage with fiction, it is critical that our imagination be able to engage our emotions.

The differences between our use of supposition and our use of imagination, Kind considers, may be rooted in a difference of effort, engagement, or participation (she follows Walton (1978, 1990), Gendler (2000), and Moran (1994) here). In the words of Tamar Gendler, "Imagination requires a sort of participation that mere hypothetical reasoning does not" (Gendler 2000, 80).[37] Moreover, following Meskin and Weinberg (2006), Kind points out that we can suppose just about anything, including 'patent contradictions' and 'ethically repulsive propositions' with no trouble; while we seem unable to unproblematically do this imaginatively. We can suppose that murdering kittens is acceptable, but we cannot *imagine* that murdering kittens is acceptable; we can suppose that 5+7 does not equal 12, but we cannot *imagine* that 5+7 does not equal 12.[38] This consideration has fueled the philosophical position that nothing we imagine can be absolutely impossible (Hume THN; for more contemporary discussion on whether it's possible to imagine the impossible see Walton 1990 and Sorensen 2002; or see Yablo 1993 on imagination/conceivability as a guide to possibility). So there are two important roles here for a unified theory to explain: firstly, the difference in emotional engagement between supposition and imagination; and secondly, the difference in how supposition and imagination each relate to possibility.

There is a related explanatory problem here in the case of mindreading. According to simulationism we predict the decisions and behavior of others by forming 'belief-like' and 'desire-like' states within our own minds. But recall that simulationists think suppositions *just are* belief-like imaginings. It doesn't typically seem to us that we use suppositions to predict the

[37] Goldman, however, spends quite some time rejecting this sort of Humean sentimentalism or phenomenalism, on the grounds that *it* is explanatorily inadequate (Goldman 2006).
[38] Cf. Gendler 2000; also see Weatherson 2004.

behavior of other people; mentally simulating someone else's state of mind can often feel more participatory and engaged. Suppositions, Kind argues, are not the kinds of mental states that would explain these features; so simulationism is wrong to think suppositions are just belief-like imaginings.

Kind's second major criticism of simulationism as a unificationist view concerns the compatibility between the simulationist account of pretense and the simulationist account of engagement with fiction. A consumer of fictions, such as movies and books, does not generally take actions in response to the fiction. However, someone engaging in pretend play often must perform actions in response to what is going on in the pretense context. For example, the audience members in a movie theater, although they may feel fear, do not generally try to run away from movie monsters. They stay 'passive' in the face of emotions inspired by fictional situations. (See Walton 1978). On the other hand, a boy pretending to be a robber actually does run away from his friend playing the cop.

Simulationists like Currie (1995, 2010) explain the passivity of fiction-consuming audiences by invoking *simulated desires* (Currie calls them 'i-desires'): the audience's 'desire' to get away from the monster is not a real desire but a pretend one, an imitation of a desire that is not linked up to action in the way that real desires are (also see Doggett and Egan 2012 on i-desire and emotion). Kind points out that this explanation complicates an explanation of behaviors in pretense contexts, such as when a child playing a robber pretends that he is scared and runs away from his friend playing the cop. The simulated beliefs and desires in this context seem very tightly connected to action: the child's pretend-desire not to be caught by the policeman directly causes his running away. "If we are to see these states [as disconnected from action], then they cannot be what explains pretense" (Kind 2013, 156; clarification by myself in

brackets). So it would seem simulationists must give up explaining both fictional engagement and pretense using the same system.[39]

To sum up, Kind thinks simulationism cannot do everything it must do to explain each and every one of the following: our understanding of possibility and impossibility, our engagement with fiction, our use of pretense, and our understanding of other people's mental states and behavior.

We can perhaps generalize Kind's challenge so that it applies to any unified view, rather than simply simulationism. Her principal point is that the explanatory requirements across different contexts are straightforwardly incompatible. There are reasons to think, she says, that supposition is not a form of imagination. An account that assumes this won't be able to make sense of how supposition as a kind of imagining explains our ability to reason unemotionally and successfully consider contradictions, while at the same time making sense of how other forms of imagining explain our ability to engage emotionally with works of fiction, to take appropriate actions when engaging in pretense, and to gain reliable guidance about what is possible. No single mental activity, she thinks, can account for these diverging requirements.

Walk Down the Explananda

It may be helpful before we proceed with a rebuttal to list and describe exactly what the explanatory requirements are for a unified theory of imagination. A unified account of imagination would ideally:

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[39] Kind also has an argument that what explains our mindreading ability cannot be the same thing as that which explains our capacity for modal reasoning, but to be honest I did not understand her argument fully. She says at first that the problem is that supposings are belief-like imaginings, and that simulationists think we need belief-like imaginings to explain mindreading; but then she says that imaging ourselves as someone else is an impossible task, and that that is the issue; but finally she concedes there are many ways to make sense of the proposition. She indicates this is somehow sufficient to show that mindreading cannot be explained in the same way as modal reasoning. See Kind 2012, p. 151-152.

1. Show how imagination explains **action** in different contexts. In particular, show how in some contexts imagination (ex. in pretense) causes action, while in other contexts (ex. engaging with fiction) its central feature is not causing action.
2. Show how imagination explains **emotion** in different contexts. In particular, show how in some contexts (ex. engaging with fiction) imagination reliably triggers emotional involvement, while in other contexts (ex. suppositional reasoning) it does not.
3. Explain in what way imagination is **an attitude distinct from belief**, while still being able to feature in reasoning.
4. Show how imagination explains our grasp of **possibility** across contexts. For example, in some contexts (ex. suppositional reasoning), we can 'imagine' impossibilities, while in others (ex. visualizing) we find it difficult or impossible.

I also want to suggest the following desiderata for a truly complete theory of imagining – these "Reach Goals" are desiderata Kind herself does not include:

5. Explain **'non-primary' (?) uses** of the term 'imagination', such as its use to describe false or badly-based beliefs, and its use to describe creative or original thinking. (Nota bene: this is not a desideratum in Kind's original challenge).
6. Explain how imagination can be triggered both endogenously (ex. pretense) and exogenously (ex., dreaming, engaging with fiction).
7. Explain whether imagination occur or be used unconsciously.
8. Explain the phenomenon of imaginative resistance in a way consistent with the explanations of the above.

In what follows, I will try account for these different desiderata with a single, unified account of imagination. It is important to note, however, that while at points my account will seem

compatible with a simulationist perspective, I reject many of the most common features of simulationism.

Constructing a Unified View

I will begin my positive account by employing a broad taxonomy of imaginings described by Neil Van Leeuwen. On Van Leeuwen's (2013) model, we can characterize three things we talk about when we talk about imaginings. One of those notions is of imaginings as propositional attitudes distinguished from beliefs. He calls these *attitude imaginings*. Another notion is of imaginings as mental processes that feature imagistic representations or which operate only on imagistic representations. He calls these *imagistic imaginings*. The third kind of notion we have of imagining is of what Van Leeuwen calls *constructive imagining*, which he characterizes as the capacity to assemble or dissemble mental representations.

I will try to show that we have good reasons to take *constructive imaginings* as our core notion of imaginings, and that, using this core notion, we can explain how other notions of imaginings arise. This will enable us to make a case for the unity of a the much larger class of processes and activities that we tend to call *imaginings*. If we take constructive imagination to be our basic notion of imagination, many of these problems can be resolved cleanly. Though what follows will be but a sketch of solutions, it should serve as sufficient proof that the theory of imagination as construction is a strong contender for the best unification theory of imagination. Our account does rely on the idea that there is a primary sense of the notion of 'imagination' which explains the other senses. Not everyone agrees there is a primary sense of imagining.[40] The hope is that the explanatory power of the view will be its own best defense.

[40] But some explicitly endorse this suggestion: see Scruton 1974, White 1990

Firstly, a word on Kind's challenge. Kind's challenge works if we take our account to be describing imaginings as all being a single *attitude* (cf. Langland-Hassan 2012). It seems as if *supposing that square circles exist* and *imagining that square circles exist* cannot be the same; the former is doable and the latter is not doable. However, none of the simulationists are understanding imaginings as unified under a single *attitude* type. On the contrary: simulationists see imagination as a *process* that generates wholly distinct attitude types. On their account pretend desires and pretend beliefs, distinct attitude types, are both produced by simulation. What our simulation ability explains is our ability to generate a whole assortment of pretend attitudes; the pretend attitudes, in combination, are meant to explain differences in "the downstream consequences" (Van Leeuwen 2013, 220), like emotion and action, of the attitudes. The fact that supposition is a subset of imaginative attitude types does not mean that it must have the same downstream consequences as other imaginative attitude types.[41]

In much of the discussion above, the central issue was whether different imaginative attitude types could explain these different 'downstream' consequences of imaginative representations. Is there one attitude produced by an imaginative process that is connected with emotion, and another that is not? Before we can best answer this question we should begin by explaining in what way imagination is an attitude distinct from belief, while still being able to feature in reasoning, and determining whether supposition is a proper subset of this attitude type, or a wholly distinct attitude altogether. Since supposition is typically understood to be disengaged from emotion, an explanation of the difference between supposition and imagination could confirm whether we could have a single process account for both engagement and disengagement with emotion.

[41] However, it may be that, if we understand all pretend-states (both i-beliefs and i-desires) as essentially disconnected from action, we will have an issue that Kind is right to worry about. The suggestion here is that we may be wrong about what distinguishes pretend-states from 'real' ones: it is not their difference in connection to action, but rather, their difference in employment in reasoning.

Van Leeuwen discusses three candidate theories accounting for the difference between the attitude of imagining and the attitude of belief: Humean 'sentimentalism', according to which the difference is phenomenological, in terms of vividness of content; Velleman's (2000) 'teleological' approach, according to which the difference is one of the different aim of these attitudes; and Sinhababu's (2013) 'inferentialist' approach, according to which we can tell the attitudes apart because they cannot intermix. He ultimately rejects all three, favoring a modified version of the third.[42] Van Leeuwen claims that the difference between imaginings and beliefs is in their inferential asymmetry: "There is an anti-symmetric relation among classes of cognitive attitudes. Beliefs partly constitute the informational background for inferences from imaginings to other imaginings, but not vice versa: imaginings don't do this for beliefs" (Van Leeuwen 2013, 795). To illustrate: a *belief* that Alex is in his office can help me go from: imagining that, if someone is in Alex's office, he can fly; to: imagining that Alex can fly. However, *imagining* Alex is in his office can't get me from: the belief that if Alex is in his office then his son is still at school; to: a belief that his son is still at school. While beliefs can justify inferences between imaginings, imaginings cannot easily justify inferences from beliefs to other beliefs.[43]

While this helps us distinguish broadly imaginative attitudes from belief, Van Leeuwen says nothing about how we are to think of suppositions as contrasted with imaginings. His barebones description of attitude imagining – that it is a "cognitive attitude besides belief" (Van Leeuwen 2013, 221) – seems broad enough to include suppositions. It may therefore seem as if he, like the simulationists, subscribes to a view on which suppositions are subsets of imaginings. However, Kind's aforementioned concerns about a collapse of this distinction ought to motivate us to say something more.

[42] I will not elaborate on his whole critique of these approaches here; for the full account, see Van Leeuwen (2013).
[43] For possible exceptions, see Ortiz-Hinojosa, previous chapter.

Like the simulationists, I take imaginative attitudes to be *outputs* of the imaginative process. As a result, I also think of suppositions as belief-like analogues. However, I have more to say about what this amounts to.

Recall that, on my view, our core notion of imagination ought to be of *constructive* imagination. Constructive imagination is a process that builds attitudes out of representational components. Plausibly, mental representations are a diverse set: they come in multiple formats, from sensory representations to sentential and, plausibly, even map-like or tree-like representations (Camp 2007, Dove 2009).[44] On my view, the kinds of attitudes we call suppositions are built up by imagination using explicitly *sentential* representations. It is this *representational* type, rather than a difference in the kind of imaginative process or the kind of cognitive attitude, that explains 'downstream' consequences of suppositions as contrasted with other types of imaginative attitudes built by constructive imagination. It is not hard to form the sentence, "The ball is both red all over and green all over," for example; but producing an imagistic representation of the same proposition may not even be possible.[45]

Now we can account for our first, second, and fourth desiderata – how imagination relates to action, emotion, and our ability to discover what is possible and impossible. Van Leeuwen (2011, 2014) and others (Funkhouser and Spaulding 2009, Nanay 2013, Schroeder and Matheson 2006) propose an alternative to the simulationist paradigm on engagement with fiction and pretense which Van Leeuwen calls 'The Direct Approach'. They have suggested that "imaginative representations structure or 'guide' pretense and other actions directly, without

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[44] Representational pluralism is slowly becoming more widely adopted: Camp 2007 defends the existence of maplike representations; for a defense of 'multimodal' representations, see W. Martin Davies 2004, Guy Dove 2009. See Prinz 2002 and Barsalou 1999 for a defense of multimodal perceptual representations. Note that pluralism about mental representations is not the same as and has a complicated relationship to the imagery debate. For a recent summary of the imagery debate between Pylyshyn and Kosslyn, see NJT Thomas 2014.

[45] Crane and Piantanida (1983) have been cited as contradicting this; but their evidence does not actually show that it is possible to imagine red and green simultaneously. Rather, they seem to have shown that is possible to perceive reddish green or greenish red.

needing i-desires to motivate or various forms of belief in between the imagining and the action" (Van Leeuwen 2014, 798). Van Leeuwen's own view, which I find most compelling (although it has similarities to Bence Nanay's 2013) is that imagistic imaginings "substitute for percepts" (ibid., 798), and that this immediate similarity in role accounts for their effect on both action and emotion. "So the Direct Approach to imagination and emotion says this: however it is that percepts impact emotions, *that's* how imagistic imaginings do it" (ibid., 799). Percepts are undoubtedly linked to both emotion and action. It seems natural that, if there are imaginative analogues to percepts, they would be similarly (although importantly, not identically) tied to emotion and action.

Although Van Leeuwen does not go so far as to explicitly acknowledge his commitment to representational pluralism, his invocation of imagistic imagining, which is distinguished by its sole operation on imagistic representations, strongly presupposes such pluralism. This means that, like myself, he probably takes it to be the case that the nature of the representations themselves accounts for some of the difference in causal impact between these distinct imaginative attitudes. (Although, it is important to emphasize, Van Leeuwen does not think imagistic imaginings are *attitudes*, generally speaking; I am happy to call them attitudes, partly because I am fine with the idea of perceptions and related states having propositional content). That said, Van Leeuwen does not offer a direct link between imagistic imagining and constructive imagining. I want to suggest that, while the different 'imaginative' attitudes have distinct roles, the *process* that builds these distinct attitudes (attitudes such as what I have called supposition and what Van Leeuwen calls imagistic imagining) is *the same process.* Constructive imagination is responsible for generating both suppositions and imagistic imaginings; and other attitudes and states besides. Their differing downstream consequences on

action and emotion are due to their being built out of different representations, rather than on their being, as Kind hypothesizes, entirely distinct activities.

This also, I argue, accounts for differences in the justificatory force of these attitudes. Imagistic imaginings (also called 'sensory imaginings' elsewhere) play a special role in modal reasoning, as I and others have argued (Ortiz-Hinojosa, previous chapter; also see Kind 2016, Williamson 2016, Balcerak Jackson 2016). It also has limitations, as Kind points out, in depicting impossible scenarios. However, these limitations are due to the kinds of representations at play, rather than a difference in the underlying cognitive process. To reiterate what was said earlier, supposition has no such limitations because sentential representations do not: it is entirely straightforward to sententially represent a contradiction, such as, "the sky is both blue and not-blue," or to refer (*or seem to refer) to an impossible figure, such as a squared circle. On the other hand, it is quite difficult, and perhaps impossible, to find an imagistic representation of a direct contradiction or of an impossible figure (Sorensen 2002).

Someone like Kind might here interject that many people find it entirely possible to *imagine* (as contrasted with supposition) without imagery (Kind 2013); and so that an account on which imagery alone explains engagement with fiction or pretense simply leaves out an important kind of imaginative activity. My response is pretty straightforward: not all representations which we can call up using imagination are imagistic. It is plausible that there exist higher-level representations that are straightforwardly amodal (as on a Fodorean picture), conceptually abstract (representations of 'love', 'justice', or 'negation'), or otherwise non-sentential but still multidimensional, like Camp's (2007) maplike and diagram-like representations. It may be that these representational types have unique 'downstream' effects on action and emotion. Whether there are non-imagistic, non-suppositional imaginative attitudes on a final unity theory will depend on what ontology of representations we decide to adopt. For

the time being, I am not committed to rejecting the existence of any particular kind of representation. Instead, I aim to show that representational types can themselves carry a lot of explanatory weight if we allow them.[46]

So far, we have accounted for our first four desiderata. Kind's rejection of a unified theory of imagination relied only on these four, which means that, so far, we are on good footing. Nevertheless, I believe our account can do yet more explanatory work than this.

Other Desiderata for a Unified Theory

Our fifth desideratum was to explain the relationship between our 'core' notion of imagination and certain phenomena that are often described with similar terminology, such as false belief, on the one hand, and creativity, on the other. Both, I think, can and often do arise from the application of constructive imagination, which is why imagination-terms are used to describe them.

When I say that my fear of a burglar being in my house was "just my imagination," or talk about having an "overactive imagination," I am describing a constructive process that engaged emotion-linked representations. Sometimes this process is endogenously triggered (by, say, a high pre-existing level of anxiety); while other times it may be exogenously triggered (for example, if my cat knocks down an object in the next room). The activated representations trigger fear, which trigger a fear response; on a dispositionalist account of belief, this is sufficient for me to count as having a false belief that there is a burglar in my house. Of course,

[46] On that note: because constructive imagination builds attitude *contents* out of representations, it actually seems quite compelling to me to say that they will all turn out to be the same *class* of attitudes: *cognitive* attitudes. The kinds of representations we employ won't explain the difference between desires and beliefs, since the differences between these attitudes are not differences in propositional content at all. As a result, I expect constructive imagination won't be able to totally jump attitude classes, either, and will be unable to produce *conative* attitudes. Thus, on my view, there aren't any desire-like imaginings! 'Pretend' desires, insofar as they consist in *acting as if* one has a desire, are plausible, of course, but I think those are maybe just types of behavior, rather than a result of generating real conative attitudes.

false beliefs can be produced in other ways – but the link to constructive imagination creates a natural verbal association in our linguistic communities. (It would be interesting to see whether this language is prominent outside of English; I can report that we do speak this way in Spanish, and that there are relevantly similar phrasings in Japanese and Russian).

Secondly, the use of 'imagination' to describe creativity, originality, and inventiveness seems much more closely linked, on the present view, to other things we call imaginings than Kind seems to think likely (Kind 2013, 144-5). Some theorists, such as Currie and Ravenscroft (2002) explicitly differentiate *creative imagination* from what they believe to be the basis of simulation, namely *recreative imagination.* I think this is a mistake. It is evident that constructive imagination can describe a process of assembling representations that results in either a *re-creation* of representational content, or in the 'creative' generation of new representational content (for example, when I imagine a snake with bird wings flying through the air in my room). Although there are differing theories on what creativity amounts to, and on what we mean to say when we attribute creativity or originality to someone's thought process or the product of someone's thought or action, it is fairly safe to say that we tend do so as a form of approval. Our social understanding of creativity involves the notion of achievement. It may be an *aim* for certain uses of constructive imagination.

Although not every constructive process will be called 'creative' in this sense, and indeed some attributions of creativity will not apply to any uses of constructive imagination (Kind gives the example of V.S. Ramachandran, whose discovery of an effective therapy for patients with phantom limb pain allegedly involved only his willingness to experiment using a mirror, and no prior reflection) it is clear enough that the use of constructive imagination is the most direct path towards this achievement.

Conclusion

In this paper, I have shown that Kind's challenge can be successfully met by a unified theory of imagination, according to which one central process, constructive imagination, explains both paradigmatic features of imaginings as an attitude type, and their varying downstream consequences. We are correct to describe both children playing house and our friend reading a novel as *using their imagination*. Moreover, we are correct to say that imagination can help us grasp what others may be thinking or feeling, and that it can aid us in considering alternative scenarios.

Heterogeneity is not a problem for imaginative activity types because it stems from variability in the representations manipulated by constructive imagination, rather than variability in the core process that underlies these distinct activity types. I will suggest an analogy with perception: we can process visual, verbal, and other sensory information types through perception. Perception forms a unified class because of its epistemic role in aiding our gathering of evidence. In addition, we do not speak of perception being an illusory or unhelpful category merely because, for instance, some perceptions cause behavioral responses and others do not. Therefore we are correct to speak of 'imagination' as unified, even though it manipulates more than one kind of representation, and even though its behavioral outcomes are variable. Our talk of imagination is not superficial. It cuts the mind at its joints.

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Imagining Oneself

Flipping a coin is typically not a good way to make important life decisions. When we are deciding whether to buy a car, for example, it is important to weigh different factors against each other. How much money are we willing to spend? What kind of mileage do we get? What does the car look like and how big is it? How difficult is it to get the car repaired? How safe is it: will Junior be okay in the back seat? And so on. Of course, we're susceptible to choosing the wrong car, even when we consider the options and the evidence carefully. Nonetheless, everybody thinks we should make the decision slowly, carefully, *deliberately*, as best we can. Even if the car we buy turns out to be a lemon, as long as we have thought about it enough, we can at least say we are not to blame for not having perfect information about the true value of the car. We would prefer to *know* what the right decision is, but barring that, we think making a *justified* decision is about as good under the circumstances.

We also typically believe that most of our difficult life decisions can be made in a way similar to that in which we decide whether to buy a car. We can make *prospective judgments* about which of several options is the right one to choose. We have evidence about the value of outcomes that we must weigh carefully, on which we can rely in forming prospective judgments about the value of those outcomes, and with which we can come to a justified decision. However, L. A. Paul rejects this second claim in her recent book, *Transformative Experiences* (Paul, 2014). While she agrees that there are decisions like the car buying one that we can make in the ordinary way, there are many others for which we simply do not have enough evidence of the right sort. We just can't take the previously advertised decision-making approach to them.

One example she likes to discuss is the decision some of us face regarding whether or not to have a child. Paul argues that there is no way to make this decision *rationally*, the way we

ordinarily try to make car-buying decisions. People change in several important and often unpredictable ways after they have children: they come to know things they did not know before and come to have preferences they did not have before. In contrast, they do not change much after buying a car. Paul maintains that drastic prospective changes in a person's preferences or beliefs can block that person's ability to imagine themselves after the change. It would therefore be impossible for a prospective childless parent to imagine what it is like to have a child. The information about *what it's like to have a child* is important for a person to have when subjectively assessing the value of having a child as compared to not having a child. For Paul, "you must know what an experience of [of a particular] type is like to know its value" (ibid., p. 13).

We can generalize this argument:

The Transformation Challenge

1. There are experiences that are so transformative that a person who had not had the experiences could not projectively imagine what it would be like to have the experience.
2. Several important decisions we must or might have to make in our lifetimes are choices between options whose outcomes depend on or involve transformation of the relevant kind.
3. If we cannot projectively imagine an outcome, we cannot rationally judge its subjective value.
4. If we cannot rationally judge the subjective value of an outcome, we cannot rationally make decisions between options involving that outcome.

5. **Conclusion**. Several important decisions we must or might have to make in our lifetimes are not decisions we can rationally make, because they potentially involve the transformation of the decision maker.

I think we should resist the conclusion of this argument. While many objections to Paul have focused on the third premise (see in particular Dougherty, Horowitz, and Sliwa 2015), or her related claims about the rationality of decisions under preference change (see Briggs 2015 or Harman 2009), I want to address Premise 2. I want to show that, although there *are* cases where we cannot obtain relevant evidence about the subjective value of an outcome due to the inaccessibility of our future selves, they are not as prevalent as Paul supposes. As a result, although we *may* face radically transformative choices in our lifetimes that are imaginatively inaccessible and unevaluable, most of our choices *will* be at least potentially evaluable.

I will argue that the kinds of game-changing experiences that restrict our access to evidence about our future selves are quite rare. Not all transformative experiences, that is to say, are unimaginable to inexperienced subjects. This indicates that there are in fact *fewer* experiences that are problematic for decision theory than Paul supposes. However, there is a positive upshot to this analysis, which is that it may help us much more precisely identify both *which* experiences may prove the most problematic for decision theory and *who it is* that may be facing transformative choice. As I will argue, transformations that are radical enough to be inaccessible to inexperienced subjects are more likely to be transformations that change our perspective, where our perspective is dependent on our lived material reality, such as our physical composition or our social position.

How does Paul understand transformative experiences?

Paul zeroes in on a class of transformative experiences that are both *personally transformative* and *epistemically transformative.* Epistemically transformative experiences are those that substantially change a person's knowledge or belief base. Personally transformative experiences are those that substantially change a person's preferences. Paul gives examples of experiences that are transformative in *both* ways, such as "experiencing a horrific physical attack, gaining a new sensory ability, having a traumatic accident, undergoing major surgery, winning an Olympic gold medal, participating in a revolution, having a religious conversion, having a child, experiencing the death of your parent, making a major scientific discovery, or experiencing the death of your child" (2014, pp. 15-16). Paul thinks that when one experience is both *substantially* personally and epistemically transformative, it will be *unimaginable* to those who have not had the experience. That is to say, Paul believes many personally and epistemically transformative experiences (PETEs) will be inacessible to inexperienced subjects.[47]

We must agree that on Paul's view it must be *to the extent that* an experience is substantially personally and epistemically transformative that it will be inacessible to inexperienced subjects, and that those subjects will have difficulty evaluating potential transformations. However, more minor personal and epistemic transformation may be insufficient to block projective imaginings entirely: after all, we undergo both changes in our preferences and changes in our knowledge all the time. This does not typically impact our ability to projectively imagine our future selves.

[47] The motivation for this belief is straightforward. Say that I will undergo a PETE, such as having a spell cast on me that will give me a sixth sense. My sixth sense will help me recognize an amazingly alluring quality in durian, a fruit I definitely do not enjoy eating now. It is clear why I would count as being both personally and epistemically transformed by the experience: I will know about a durian-property I don't know about now, and I will prefer to eat something I do not prefer to eat now. It is also pretty clear why I now might have trouble imagining being myself after such a spell was cast, and that this difficulty imagining my possible experiences is due, perhaps entirely, to the differences in my current and future knowledge and preferences. I will bring this up again later in the paper.

There are also transformations of even radical kinds along both dimensions which are still relatively imaginable. For example, I may change my preferences and beliefs *back* to what they used to be before a prior change. Suppose I become a Born-Again Christian, or reconnect with my parents' political party. For any instance on which I *can* imagine being myself after such changes, it is the case that I do have evidence about the subjective value of what my situation will be post-transformation. Transformation cannot thus be sufficient for unimaginability.

Paul could argue, by way of reply, that perhaps the evidence I have in these cases is not complete enough, because preference or epistemic change directly blocks a proper evaluation of these post-transformation outcomes. Perhaps the value comparisons before and after radical personal and epistemic transformation are not actually possible. This is a different problem, however, from the one I am interested in pursuing. I am interested in finding out, not whether the evidence is comparable or evaluable, but in whether the evidence is accessible. (For an interesting discussion of the value comparison issue, see Briggs 2015; for interesting discussions of the epistemic comparison issue, see Van Fraassen 1999; Carr 2015).

So our first premise takes it for granted that there are experiences we can undergo that are inaccessible to inexperienced subjects. I am also taking it for granted that these experiences are a subset of the personally and epistemically transformative experiences (although, of course, it is possible that there are unimaginable experiences that are not PETEs).

What does it take for an experience to be imaginable?

When we talk about something like an experience being imaginable or unimaginable, we can mean one of various things. First of all, we must get clear on what is meant by the word

experience. Then we must also know what it takes for an experience to be imaginable or unimaginable.

On one reading of *experience*, experiences are (discrete) mental events with accompanying phenomenal character. For example, I might have an experience of seeing a yellow banana, or an experience of breathing cold air on a chilly day.[48] Call these *phenomenal experiences*. On another reading of *experience*, someone's experience is that person's practical contact with an extended event. For example, I might experience the Red Sox beating the Cardinals, or experience raising a baby animal. Call these *ordinary experiences*.

We can see that practical contact with an extended event ('the experience of raising a baby animal') might involve the occurrence of *many* mental events with phenomenal character in the subject ('experiencing the texture of puppy fur', 'experiencing the smell of baby formula'). That is to say, it is plausible that ordinary experiences can encompass many phenomenal experiences.

It might be objected that I have made a distinction without a difference. After all, the way I have described phenomenal experiences, they may just be ordinary experiences of short duration: phenomenal experiences may just be practical contact with *un*extended events. This is a natural worry. However, this interpretation of the distinction does not harm the analysis. Let me explain.

Ultimately, all I want for the distinction to do is to enable us to make similarity judgments about distinct experiences. For example, suppose Colorado is a man who can see colors, and suppose his friend Achilles is achromatopsic, unable to see color. It is plausible that Colorado and Achilles could have many ordinary experiences that were broadly similar and

[48] Another way to define this same reading that avoids phenomenology talk is to understand an experience as practical contact with a token of a property in the world. In this way, I can be said to have experienced redness or experienced coldness. I prefer the former characterization, but for the phenomenologically squeamish, this one will do just as well.

which they could be said to share or potentially share, such as the experience of raising a baby animal or of watching a Red Sox game. But Colorado and Achilles could not be said to even potentially share all of their phenomenal experiences: they could not share the experience of seeing red, say, when gazing upon a ripe tomato. There is a property Colorado can have practical contact with, or represent, that Achilles cannot. They can both experience the Red Sox beating the Cardinals, but they cannot both (phenomenally) experience redness. Of course there will be many phenomenal experiences Colorado and Achilles *can* share, such as the experience of middle C, or of coldness, or of roughness.

Saying that these distinctions between experiences exist is not the same as saying one has no dependence on or relation to the other. A member of the Deaf community might be unable to have an 'ordinary' experience of listening to the radio, precisely because she is unable to have any of the phenomenal experiences that are necessary for having this ordinary experience.

We can describe experiences in additional ways. For example, we can classify phenomenal experiences according to category (e.g., visual experiences, auditory experiences) and intensity (e.g., loud auditory experiences, sharp tactile experiences); and differentiate between frequencies in the occurrence of phenomenal experiences, like experiencing sadness occasionally versus experiencing sadness every day. We could also, if we like, distinguish between a phenomenal experience *token* and a phenomenal experience *type*: I could experience *the yellowness of this banana in the sun* (a token), or experience *yellowness* (a type). We can also distinguish between an ordinary experience token, like experiencing *the Red Sox winning the World Series in 2013*, and an ordinary experience type, *the Red Sox winning the World Series*.

When we look at Paul's argument, we must treat the word *experience* consistently. Going through a war and living through the death of a loved one are instances of what I have called 'ordinary' experiences. However, the case of Mary the vision scientist instead implicates

phenomenal experiences, such as the phenomenal experience or redness. I will show that, when we speak of experiential outcomes being evaluable, we are speaking of the evaluability of *ordinary* experiences.

Now we must consider what we mean when we say an experience is *imaginable* or *unimaginable*. For example, when I say it is unimaginable to me now what it might be like to have a daughter, being that I am currently childless, I can mean one of various things. It might mean that I cannot imagine having a daughter because the phrase, "my daughter," simply does not have a reference when uttered by me. Or, when I try to imagine having a daughter, there is no object to be imagined: it is like trying to imagine the present King of France. We'll call this *denotational unimaginability*. This is probably not what Paul has in mind when she claims that certain transformative experiences cause outcomes to be unimaginable, although they may play a role in explaining all of the dimensions of unimaginability in certain cases of transformation.

She seems to have another sense of unimaginability in mind, one that is more about perspectival accessibility. For example, she emphasizes "subjective points of view" (Paul 2015, p. 8) and "experiential" outcomes (ibid., p. 26). In Frank Jackson's classic thought experiment (Jackson 1982), Mary the vision scientist cannot imagine what it is like to see red before leaving her black-and-white room. Trapped Mary does not grasp *redness* in an important way, however that might be described, and even though she may be able to identify objects that *would* be red outside her room: she cannot put herself in the position of someone seeing red; or she does not know a certain kind of proposition; or she lacks an ability or a concept of some kind. The thought experiment stipulates that Mary will be unable to grasp redness in the relevant way until she is in direct contact with it. If she were able to imagine redness, that would be a way for her to come into contact with it. This is the sense of imaginability relevant to Paul's argument.

Imaginability applies in different ways, I contend, to phenomenal and ordinary experiences. Phenomenal experiences are either absolutely imaginable or they are absolutely unimaginable. For example, Hume's missing shade of blue is either imaginable or it is not; it could not be halfway imagined. On the other hand, ordinary experiences can be imaginable to different degrees. For example, I might be able to empathize with someone who has depressive anhedonia, a lack of emotion, even though I have not myself felt anhedonia before. What I mean is that I can imagine parts of the ordinary experience, even though I cannot imagine the phenomenal experience of anhedonia. When we say imagining an experience is hard but not impossible, we probably are thinking of an ordinary experience, rather than a phenomenal experience. In order to imagine an ordinary experience to some degree, one need only grasp some partial or narrative aspects of the experience. One need not have an exact or precise sense of all the elements of an ordinary experience.

The thought that experiences are imaginable to different degrees is supported by Elizabeth Barnes (2015), who asserts that *transformativeness* can itself come in degrees (see in particular pp. 173-4, 175-8). For example, "current social conditions for affluent, educated people might make it easy for having a child to be very transformative, or transformative in specific ways ... In different social conditions, having a child might tend to be somewhat less transformative, or might tend to be transformative in different ways" (ibid., p. 178). In her reply to Barnes, Paul seems not to contest this claim, saying that she "agree[s] with much of Barnes' excellent paper" (Paul 2015b, pp. 508-509).

Although Paul uses the term 'imaginability' relatively consistently, she refers to examples which include both what I call phenomenal experiences and what I call ordinary experiences. Going to war, for instance, is an 'ordinary' kind of experience; Mary's first vision of redness is a phenomenal one. This is a problem because, as I will argue, it is imaginability of ordinary

experiences, and not imaginability of phenomenal experiences, that we need in order to rationally assign subjective values to outcomes, for most outcomes. So I'll try to show that Paul's examples don't generally hinder our ability to evaluate outcomes, because they are either examples on which the experiences involved are ordinary (and thus more likely to be imaginable to some degree), or examples on which the experiences involved are phenomenal, and therefore not necessary for evaluating the outcome.

Why ordinary experiences are more relevant to determining value.

It seems to me that Paul's argument (see this paper, page 2) only works if the target experience is an *ordinary experience*: I contend that is ordinary experiences that are relevant for determining the subjective value of outcomes. Why is that?

First, consider Mary. On my view, Mary could probably imagine the ordinary experience of seeing a red tomato, but definitely not imagine the phenomenal experience of seeing red. What do I mean? Well, Mary grasps *some* things about the event she might experience: she knows that she'd be standing in front of a tomato, that she would feel some strong emotion upon learning about this new phenomenal experience, and might even anticipate remarking to herself, "So *this* is what red looks like." She might not be sure exactly which emotion she will feel, but she can probably imagine some possibilities. She does, after all, know what brain areas are activated when other people see red. As far as she knows, seeing red is not unpleasant for other people.

Of course, it is possible that *seeing red* would be unpleasant for *her*, even if not for anybody else. But she shouldn't really think it's more than minimally likely; no one else has reported finding redness *intrinsically* unpleasant. It is not irrational for her to think it is

therefore not very likely she will find redness unpleasant. If this reasoning is correct, Mary can reasonably and justifiably place a subjective value on the event of *seeing red*, even though she does not have direct contact with redness, and cannot imagine redness. Of course, a *perfect* evaluation would require complete knowledge of the ordinary experience, but, as I suggested in my introduction, all we need for rational decision-making is justification.

Secondly, Paul herself seems to need ordinary experiences to make her ultimate point about assessing subjective value. As she argues in her reply to critics such as Kauppinen (2015) and Sharadin (2015), "the subjective value of a lived experience is not merely a matter of the phenomenal character of the internal characteristics of one's inner life. It's a richer value... That is, it encompasses the value of what it's like to live in a particular set of circumstances, where those circumstances may include the external environment" (Paul 2015b, p. 478). It is clear that her assessment requires us to understand experiential outcomes as *ordinary* experiential outcomes.

This fact, coupled with the fact that transformativeness comes in degrees, will make it harder for any single transformative experience to be unimaginable. For an ordinary experience to be full-on unimaginable, it would have to be the case that *no phenomenal part* of the experience were imaginable. What is an example of this? Suppose I could be gradually turned into an octopus. Octopus perceptual and motor mechanisms are so different from human perceptual and motor mechanisms that it is likely I cannot imagine any phenomenal part of an octopus experience (see Godfrey-Smith, 2013). Of course, people do not frequently get turned into octopuses, and no real person has yet had to choose between becoming an octopus and not becoming an octopus. It would be nice if we could find an example of a decision we might face in daily life with an unimaginable outcome, so that fit Premise 2. The decision to become an octopus is simply not common enough.

Paul has one good suggestion of a decision some people do face that may have unimaginable outcomes. It is a decision some hearing parents of deaf children face: the decision between giving their child a cochlear implant through surgery, which would allow them to hear sounds, or not giving their child a cochlear implant. Someone who has never been deaf cannot know what it's like to go from being deaf to hearing sound; indeed, someone who has never had a cochlear implant cannot even know what it's like to hear sound by means of a cochlear implant. As a result, both available options will present imaginative barriers for the parents: many potential experiences in the child's future life will be not only difficult for them to imagine, but very nearly unimaginable altogether.

Although this leaves the conclusion of Paul's' argument generally intact, we have reduced the possible class of experiences that both qualify for the relevant sort of transformation (satisfy Premise 1) and that are common to decision-making situations (satisfy Premise 2). The obvious examples that fit our requirements are either unusual decisions to have to make or are transitions that are metaphysically extravagant: losing or taking on a whole new sense modality, or becoming an entirely different kind of creature.

Is being really difficult to imagine enough to be unevaluable?

Paul insists, contrary to this suggestion, that the experience of having a child, which many parenting books advise we all must try to imagine if we are to rationally decide to have a child or not have a child, *is* transformative in the relevant way. However, if we take the distinction between ordinary and phenomenal experiences seriously, it is not clear having a child is completely unimaginable to an inexperienced subject. First of all, many components of the ordinary experience *are* imaginable. Take, for instance, the event of giving birth. I can imagine

what the birthing room might look like, what the baby might look like (probably small and very red), a range of possible states of health of the baby, a range of possible states of pain I might experience during childbirth (at least I can expect that I will be in some pain, even if I cannot imagine the exact intensity, location, or duration of the pain), and even my possible attachment to the baby and emotions toward the baby (although, again, I might have trouble grasping the intensity of this attachment, or being very sure about which of the available emotions I will feel). Paul also grants, in response to Barnes, that certain individuals may find it easier to imagine having a child than others (Barnes 2015; Paul 2015d).

Maybe Paul thinks that, if an experience is *really hard* to imagine, either because it is very complicated or because the event is very extended in time, it will be almost impossible to evaluate in a *justified* way. Let's take having a child to be our test case for whether we can imagine and evaluate outcomes that we agree are at least 'really hard' to imagine, and that are 'really hard' to imagine precisely because of a significant preference change we undergo when we have the relevant experience. I have argued previously that it takes more for ordinary experiences to be rendered unimaginable than for phenomenal experiences to be rendered unimaginable because they have many components; and they will be imaginable precisely to the extent that each of those components is imaginable.[49] As I suggested above, there seem to be many subsets of having a child that are imaginable. But are these subsets *enough* to secure a justified evaluation of an outcome? Some of the phenomenal experiences that make up the ordinary experience could be crucial. For example, if I cannot now imagine a kind of emotion I

[49] An exception might be experiences of events that are so large, long, or complex that a person could not hold all of it in her mind at once. In some sense of imagine, it is true that I can't imagine a year of high excitement, although I can imagine one second of it. The more precise way to put the intended point is: ordinary experiences will be imaginable (in a sufficient way to be evaluable) to the extent that each of its components is imaginable. Thanks to Stephen Yablo for raising this objection.

am likely to experience as a mother, and that is a large component of determining the value of having a child, I might not be said to be justified in evaluating the event of having a child at all.

Here are reasons for thinking that, in general, particular phenomenal experiences will *not* make or break the estimated subjective value of an outcome. Remember that Paul includes "more than the phenomenal character of the internal characteristics of one's inner life" in what is relevant to determining subjective value. When evaluating complicated outcomes that are extended in time, unless we are hedonists, it will be more important for us to have information about what states of affairs will hold ("Will I still be pursuing projects I currently know I value?" "Will my relationships with people I hold dear change for the worse?") than information about the minutiae of day-to-day life. Simply put, the information about what states of affairs will hold will be easier to come by than information about the phenomenal character of our experiences. And sure, if it turns out that what states of affairs will hold will *depend* on some particular phenomenal experiences I will be undergoing (say, horrible birthing pains that result in my contracting PTSD), then finding out about *those* will be more important — but, presumably, their subjective value or *dis*value will generally have more to do with what states of affairs will hold than with what the phenomenal character is. Moreover, the subjective value of a phenomenal experience on its own depends more on its *valence* than its particular quality: is it an overall good (tasty, pleasant, soft) or overall bad (gross, painful, jarring) sensation? Information about valence, insofar as it is more general, is easier to acquire than information about specific quality.

There are exceptions to my generalizations about subjective value. If there is a strong possibility I could experience some intensely negative or intensely positive emotion for an extended period, for example, this may affect whether phenomenal experiences ought to receive more attention in my preference allocation. However, on my view, these *are* things I could find

out about using my imagination. I may not know exactly what it would be like to have a third eye, but I can imagine both the additional visual stimulus being overwhelming and the additional visual stimulus being relatively unintrusive or even pleasant. The fact that I am uncertain *which* of these outcomes will occur is a further and distinct issue.

We should thus conclude that many experiences proposed by Paul as transformative are not unimaginable to an inexperienced agent, and so are not problems for decision theory. For example, I would like to suggest that the argument I sketched at the outset does not apply to parenting decisions, which, although transformative, and difficult to imagine, are not comprehensively unimaginable.

Paul has further things she can say against the rationality of choosing to be a parent or not to be a parent: for example, she can object that we do not know how likely it is that we'll experience one scenario or another; or that it is inauthentic to use other's testimony or to use scientific evidence to enrich our imaginative projections regarding possible outcomes, as many think we should. She has further arguments defending these other claims (in Paul 2014, 2015a, 2015b, 2015c, 2015d). These issues have been taken up by others (e.g., Dougherty, Horowitz, and Sliwa 2015). For now, it is enough for me to have shown that, if we indeed *cannot* make a decision about parenthood or other options that are difficult to imagine rationally, it will not be because those outcomes *are impossible to imagine.*

Final Thoughts About Transformation

The significance of transformative experiences does not, of course, rest on their being imaginatively inaccessible, or even on their being relevant to decision theory. Both personally transformative experiences and epistemically transformative experiences are interesting objects

of analysis, evaluation, and critique (see in particular McKinnon 2015). Their significance does not even rest on their being *experiences*: transformation is, in itself, a worthy object of study. However, there are aspects of transformation and unimaginability that make transformative experiences interesting in themselves.

What, for example, makes an experience or event *unimaginable*? That is to say: what causes an event to make one's future self *totally inaccessible* to oneself? Paul proposes that changes to our beliefs or our preferences could be sufficient. On her view, even being a different person could be sufficient, "different subjective points of view... can be fundamentally inaccessible to each other" (Paul 2014, p. 8). However, I would like to speculate that unimaginability for an inexperienced subject much more clearly depends on *structural* change. If one's physical makeup changes significantly, this can be enough to render one's future self more unimaginable or inaccessible to one's present self, even if one's beliefs and preferences remain largely the same, or adapt as minimally as possible to the relevant changes.

Suppose I were to suddenly become a frog, like Tiana in *The Princess and the Frog*. The world would suddenly look very different to me; my body would feel very different to me. At least at first, I might know and value largely the same things I used to: I would still love my friends and family, and my favorite foods; I would still know the date and my states and capitals, still hold the same political and religious beliefs. But the experience of *being a frog, from the perspective of a frog* is not any more imaginable to me simply because I am considering the scenario. Imaginability for transformative change might be a matter of perspective shift, where perspective is materially determined. We could, of course, incorporate the thought about structure into the way we define *epistemic transformation*, but I believe that it may be helpful to distinguish, at least in principle, change in mental properties from change in physical properties.

The understanding of radical transformation as perspective shift may also lead us to draw attention to shifts in social position (as Barnes 2015 does and McKinnon 2015 does). It may be *because* an event is a shift in a social position that it is also an instance of epistemic and personal transformation, inaccessible to an inexperienced subject. Degrees of unimaginability are also clearly important to issues of social justice. If *your* social position is imaginatively inaccessible to me, if knowing what your experiences are like would require a *radical* transformation in me, then we have a real issue on our hands. You and I may be unable to communicate.

Thus, it is important to try to develop a theory on which the experiences of others, or of my transformed future self, could be, at least in the majority of cases, potentially accessible to someone willing to work hard enough.

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Misimagining Others

It is not our differences that divide us.
It is our inability to recognize, accept, and celebrate those differences.
- Audre Lorde

Perhaps you have heard this story:

> The following is a transcript of a radio conversation between a US naval ship and Canadian authorities off the coast of Newfoundland in October, 1995.
>
> Americans: Please divert your course 15 degrees to the North to avoid a collision.
>
> Canadians: Recommend you divert YOUR course 15 degrees to the South to avoid a collision.
>
> Americans: This is the captain of a US Navy ship. I say again, divert YOUR course.
>
> Canadians: No, I say again, you divert YOUR course.
>
> Americans: THIS IS THE AIRCRAFT CARRIER USS ABRAHAM LINCOLN, THE SECOND LARGEST SHIP IN THE UNITED STATES' ATLANTIC FLEET. WE ARE ACCOMPANIED BY THREE DESTROYERS, THREE CRUISERS AND NUMEROUS SUPPORT VESSELS. I DEMAND THAT YOU CHANGE YOUR COURSE 15 DEGREES NORTH. THAT'S ONE-FIVE DEGREES NORTH, OR COUNTERMEASURES WILL BE UNDERTAKEN TO ENSURE THE SAFETY OF THIS SHIP.
>
> Canadians: This is a lighthouse. Your call.

This popular joke[50] has variants that are easily 60 years old. The punchline is funny because it shows an overly presumptuous individual hoisted by his own petard, so to speak. False presuppositions can hinder our ability to reason with common sense. (They can also make other people hate us). We have all, at some point or another, witnessed someone in a position of authority failing to notice the obvious or listen to countervailing testimony due to their own prejudices and presuppositions. The striking thing about many of these cases is how *avoidable* the error seems. The offending party must simply ask themselves why the other person might be

[50] The US Navy was at one point forced to post the following, clarifying its status as urban legend: http://web.archive.org/web/20070703184133/http://www.navy.mil/navydata/navy_legacy.asp?id=174

saying what they are saying or behaving the way they are behaving. All it takes is to imagine being in the other person's shoes.

Sometimes, however, imagining being the other person seems really difficult, like a mental tongue-twister. We are plagued by our own biases. Try to imagine being an ardent supporter of a politician you happen to hate, for example.[51] Alternatively, try to imagine being someone with religious beliefs you have never held. Or try to imagine being someone who loves a food you cannot stomach. I want to ask you: is it possible, or just really hard?

Many philosophers who talk about impossible things to imagine being often talk about creatures of different species or from different planets with wholly different, or entirely absent, cognitive phenomenology. Thomas Nagel proposed, for example, that we cannot imagine what it is like to be a bat; Peter Godfrey-Smith that we cannot imagine what it is like to be an octopus.[52] There are also discussions about whether we can imagine what it is like to be a zombie, or to be a vampire,[53] and so on. There seems to be a quiet consensus that there are more or less in principle boundaries to imagining the lives of other creatures, at least if they are sufficiently differently constituted. But what few mainstream philosophers have asked is: what about regular, everyday *people*? Are we taking for granted that there *are* no imaginative barriers among the human family? Are all other humans, in general, imaginable?

II. That Which Divides Us

There is at least one good reason to think that they might not be. The reason is one acknowledged by sentimentalists such as David Hume: we seem much more adept at imagining

[51] For evidence of people struggling with this question, just type the words "Why X is popular," into a Google search box, for any political X.
[52] Nagel 1974; Godfrey-Smith 2013, "On Being An Octopus," *Boston Review* https://bostonreview.net/books-ideas/peter-godfrey-smith-being-octopus
[53] L. A. Paul, *Transformative Experiences*.

[54] the minds those we are closer to or more similar to (Hume, T 2.2). Hume resolves these issues for himself during the course of his *Treatise*, assuring us that generally, "the minds of men are mirrors to one another" (Hume, T 2.2.5). His mirror analogy is quite intentional. For Hume our minds naturally reflect, and in some sense redirect or eventually decay, the passions, sentiments, and opinions of others. Nonetheless, I think there are reasons for concern Hume does not discuss.

Here is an illustration of what I mean. Many of us have at some point dismissed certain types of people as simply irrational. Take, for example, those who support Donald Trump as a candidate for President. We just can't seem to square a rational person voting for someone we find so distasteful. But our assessment is probably wrong. It is far more likely that most Donald Trump supporters, numbering as they do in the millions, rather than being irrational, have motivating reasons for preferring him. It is possible for someone to be rational and wrong. Maybe they are just having a tough time, and see no future in the traditional political process. Maybe they have benefitted from Trump's business advice or enjoyed one of his golf resorts. Maybe the codify Trump's language and temperament differently from the way we do. Plausibly, we on the left are unable to *imagine* what it's like being, for example, a working-class unemployed white male from West Virginia who has seen the industry he used to work for crumble. It is possible we are unable to imagine what being a Trump supporter is like because we are just too different from the average Trump supporter. Similarly, a Trump supporter may be unable to understand how anyone could see anything good in Bernie Sanders or Hillary Clinton. They are unable to imagine what it is like to be one of us, to have our motivating reasons. Plausibly, our social position affects our imagination. But why?

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[54] Hume primarily discusses *sympathy* rather than imagination in his work covering moral sentimentalism. However, because my focus here is on accessing the mental states of other people generally, I take Hume's notion of 'sympathy' to be related enough to our project that I can treat it as a subset of our capacity for imagination in this context.

One place we might look to for an explanation of this sort of imaginative barrier is *standpoint theory*. Standpoint theory, as formulated by contemporary philosophers such as Nancy Hartsock and others, holds that our social position, such as our ethnic and racial background, our assigned gender, our bodily condition as abled or disabled, and our class status, can affect knowledge claims and their justification (see in particular Hartsock 1983, Wylie 2003). They influence, for example, "Which concepts are intelligible, which claims are heard and understood by whom, which features of the world are perceptually salient, and which reasons are understood to be relevant and forceful, as well as which conclusions credible" (Rouse 2009). In our present case, it is plausible standpoint theory predicts that our social position influences which experiences are imaginable.

Standpoint theory is not merely the claim that people with different experiences will have knowledge of different things. Most standpoint theorists agree that it is not mere social location, but social location plus a certain vantage point, a *standpoint*, that makes for epistemic advantage (although Wylie 2003 believes the effects of "systematically defined" social locations should also be discussed). This epistemic vantage point is *achieved*, rather than inherited automatically from the agent's social position (Hartsock 1983). Theories differ slightly on the manner in which a standpoint can be achieved, but popular ways to think of attaining a standpoint include developing a 'critical consciousness', such as an effortful or motivated perception of social space and social hierarchy; engagement with a community of similarly located individuals; and the adoption of certain political or normative ends (Wylie 2003, Harding 2006, Rolin 2006, Intemann 2010). Some standpoint theorists believe standpoints can *only* be achieved collectively, and that standpoints accrue, not to individuals, but to communities (for recent overviews of this debate, see Grasswick 2013 or Intemann 2010). I will

gloss over these details regarding standpoints in what follows, as I am interested in an issue that is brought up by most ways of understanding them.

We find a good example of the epistemic effects of a standpoint in Hegel. An enslaved man plausibly has a different epistemic perspective on and conceptual framework for the meanings of chains, childbirth, and punishment. This knowledge he has depends on his particular material and social circumstances. Call this the *Situated-Knowledge Thesis* (Wylie 2003, Intemann 2010). His knowledge is also *privileged*: he has more warrant for his knowledge, or knows more in general, than his captors. Call this the *Thesis of Epistemic Advantage*. To apply it to our concern here, it is plausible standpoint theory would predict that although the enslaved man can imagine what it is like to be his captor, the slave master may not be able to imagine what it is like to be a slave.

The thesis of epistemic advantage stems from work by Marx and Lukács (Hartsock 1983, Young 1980). According to this tradition, an individual's level of knowledge is proportional to his level of oppression: the more oppressed he is, the more he can be said to know or understand. In contemporary versions of standpoint theory, this claim is tempered slightly: recall that standpoints are understood as achievements rather than automatic features of conditions of oppression, and also as falling under an umbrella of many forms of oppression (Young 2009). So contemporary standpoint theory does not predict, simply, that we will have automatic imaginative barriers wherever there are differences of, say, race or class or gender. But it may well predict that we will have imaginative barriers when there are achieved differences in epistemic outlook that originate in social differences.

Critics of of the Situated-Knowledge Thesis worry about accepting that knowledge access depends on a knower's perspective. Critics do not want to accept the thesis because it would seem to destroy the possibility of objectivity in knowledge-building practices, which they

see as antithetical to scientific values. More to the present point, the thesis also questions the assumption that we would be able to uniformly imagine the minds of others. There will be no Humean "common point of view from which [persons] might survey their object, and which might cause it to appear the same to all of them" (T 3.3.1.30).

We may be tempted to reject standpoint theory wholesale simply because of its apparent challenges to objectivity. We might have thought that if we want to accept standpoint theory we have to turn to some kind of relativism. However, Rebecca Kukla (2006) argues convincingly we can have claims that have ontological objectivity *without* aperspectival objectivity. That is to say, it is not necessary that our claims be independent of the character or context of persons for them to be objective. Two individuals can be exposed to the same causal inputs and each have differences in warrant for believing the same claim. She clarifies:

> In claiming the perspectival validity of warrant [...] I am not claiming that *truth* is relative to a perspective, but rather that different perspectives can yield different forms of *rational access* to independent truth. (Kukla 2006, 87, my emphasis)

We can thus have situations in which two agents live through the same events and have entirely different warrants, based in wholly contingent features of each agent, for asserting the same claim. So we cannot dismiss standpoint theory on the grounds that we do not wish to give up some notion of objectivity.

Now we can see why I am seriously worried about the problem of imaginative barriers. There is a very real possibility that we may be so awful at imagining what others are thinking or feeling, particularly when they are quite different from us, that we would be better off not trying at all. Taking standpoint theory's main claims seriously (as I believe we ought), as a twenty-something white Mexican woman living in the United States, can I ever hope to comprehend the mind of a, say, male Vietnamese cook living in 1920s France? If he knows many

things I do not know, and I know many things he does not know, and we have warrants for believing in wholly different sets of claims because we belong to different communities, and have developed a different critical consciousness, perhaps he is just too different from me for me to understand. Perhaps there is an *in principle* barrier to my imagining the mental states of certain individuals.

III. A Rejoinder

This is a conclusion we ought to resist, whether we are standpoint theorists or not. (Indeed, most standpoint theorists would be keen repudiate it). One very good reason is that accepting this conclusion would have morally problematic implications. If we are just not *able* to imagine what others are thinking or feeling, just because they have acquired a standpoint and we have not, or just because we have acquired a standpoint and they have not, perhaps we have no obligation to try to.[55] Another good reason is that we have many examples of generally successful imaginings of the mental states of people quite different from ourselves. In her 2003 novel *The Book of Salt*, Monique Truong, a straight female Vietnamese-American author, succeeds in crafting a vivid inner portrait of a gay male Vietnamese cook living in 1920s France. And, had Harriet Beecher Stowe, a White woman, not been able to emotionally connect with Josiah Henson, a formerly enslaved Black man, through his 1849 autobiography *The Life of Josiah Henson*, she may not have been able to write *Uncle Tom's Cabin*, which (while flawed) was, for the mid-19th century, such a compelling portrait of the horrors of slavery from the point of view of Black men and women that it bolstered the abolitionist movement and made an

[55] Even if we reject the claim that 'ought' implies 'can', we would have to make many clarifications or adjustments to some basic moral assumptions if the conclusion were true. For example, we would have to explain what would count as following a rule such as 'try to put yourself in the other person's shoes' if there is no chance of success.

indelible impression on American culture. We should also not forget the scattered White male authors, like Shakespeare, Henrik Ibsen, Fyodor Dostoyevsky, and JD Salinger, whose female heroines feel critically real. Writing (and reading!) these works requires reaching out to, and grasping, the minds of others. Some of us *do* seem able to connect with people significantly socially different from ourselves. But standpoint theory teaches us that we cannot take this ability for granted. We must prove that we have it. We must prove that we can overcome our differences somehow.

Hold on, you might say. Aren't there psychological theories that explicitly posit a specific capacity for grasping the mental states of other people? Are we just going to throw those out the window? My answer is no, we are not. However, these psychological theories are answers to the question, "*How* do we understand the minds of others, when we do?" and not answers to the present question, "*Can* we understand the minds of others?" An answer to the latter is a prerequisite to answering the former. Generally speaking, these theories assume that it *is* possible to imagine the mental states of others, that we *do* have an ability to do so.

They do also, of course, each predict that this ability will break down in certain situations. For example, *simulationism* easily predicts our 'projection bias', our inclination to imagine that other people are more like ourselves than not; and the *theory theory* easily predicts that we will make more mistakes in imagining others the more incorrect our folk-psychological theories are. Neither theory tells us that we could easily bootstrap our way into understanding someone with very different experiences from ourselves, however. That is the catch.

Perhaps these theorists are assuming some kind of uniformity principle, according to which, insofar as people differ psychologically when the environment is controlled for, it is principally a matter of differing in their beliefs, their preferences, and their temperaments: psychological, but not social, variants. It is in some sense assumed by these theories that

individuals with differing characteristics along other dimensions are fairly interchangeable, for the purposes of studying individual abilities to 'read other minds'. It may be an instance of the WEIRD bias that is now well-documented and worried about by psychological researchers (e.g., Heinrich, et. al. 2010). Or perhaps this issue is simply getting pushed further down the road.

Whatever the case may be, we cannot rely on these theories as they are to find our way out of the problem posed by standpoint theory. If our social position has an effect on what we can know and whose minds we can learn about, neither the theory theory's reliance on folk psychological generalizations nor simulationism's reliance on simulated beliefs and preferences will be sufficient to generate accurate assessments of the minds of people unlike our own selves.

One positive note, before we continue. I have been drawing a contrast here between our ability to imagine people *un*like us and our ability to imagine people closer to us or more similar to us. There is a perfectly good reason for this. It would be silly of me to deny, for example, that many of us are pretty reliable at telling when a loved one is 'hangry'. It would be silly of me to deny that we can understand why someone would reach for a box of Kleenex while watching *The Notebook*. We should not advocate an unmitigated skepticism of our capacity to access the minds of others. But we should not grow overconfident and think that having reliable access to the minds of our nearest and dearest on mundane occasions is proof that we can access the minds of people we do not know well. The fact that it is possible for us to succeed on limited occasions does not show that we are really very successful in general.

What we have to do now is identify where, exactly, the issue is. When are we in a good position to imagine the mind of another person, and when are we not? When are their barriers to our imagining the mind of another person, and when are there not?

IV. Ways of Misimagining

In order to make the discussion more precise, we have to set down some standard for what constitutes successfully imagining the mind of another. What does it mean to correctly represent or imagine another individual's mental states?

> Adam Morton suggests we define imagining another's mental states thus:
>
> To imagine that a particular person is in a particular state of mind is to be oneself in a state such that one is thinking of the person as being in a state like that state. (Morton 2005, p. 58)

He then proposes that there are two ways to be in the same state as someone else. One way is to be in a state with the same *objects* (call this *target accuracy*); another is to be in a state with the same objects arranged in *the same way* (call this *perspectival accuracy*). This makes it clear how you can 'misimagine' the state someone else is in:

> If the goal is to imagine a particular thing, then you *mis*imagine if you imagine something different. (ibid., p. 59, my emphasis)

If your goal is to imagine another person's *exact experience* when, say, walking to work in the morning, you need put yourself in a state that is *both* target-accurate and perspective-accurate. You need to represent the correct streets, street corners, sidewalks, buildings, and trees, as well as the order in which they are seen, from the point of view in which they are seen. Other goals – such as deducing what a loved one might actually want for their birthday – may require more or less parameters of accuracy. I will refrain from discussing other parameters until we have laid out all of the possible ways to misimagine some aspect of another person's mental life.

You may be wondering just *how* accurate we need to be in imagining another person's mental states in order to count as *succeeding* at imagining their mental states. Frankly, the criteria will vary widely depending on what the goals of the exercise are. You will succeed in imagining your mother's mental states for the purposes of buying her a gift if, at the end of the

exercise, you end up with a judgment about (say) her perfume preferences that reflects her actual preferences well enough that she is happy with your gift. We can therefore say imaginative success is goal-dependent.

There are 'muddy' cases, of course, even beyond cases with fictional persons as target subjects. Suppose you are trying to choose between buying your mother a nice perfume or making her a handmade gift. If in actuality she would dislike either sort of gift, the proposed goal-dependence formulation of imaginative success would predict you would fail in your imagining before you began. However, there *is* a sense in which you at least could succeed in figuring out, by means of imagining her mental states, whether your mother would prefer perfume over a handmade gift, even if she *did not actually want* either. The goal is not met, but some progress is made. I am not going to try to give an account of success that fully explains all of these 'muddy' cases. However, it is worth keeping them in mind as we proceed, as they are relevant to the question of whether our failures in imagining others are unavoidable.

I want to suggest that Adam Morton's account of misimagination is incomplete. So far we have two kinds of imaginative failures: first, failures to represent the same objects being represented by the other person, and second, failures to organize those objects in the same manner. I believe there to be many more ways of failing to represent someone else's mental states than this. But rather than argue for this claim directly, I will show you what I mean.

Let us invent a target person to try to imagine, and see how many ways there could be of failing to connect with her mental states. Let us call this person Oneida. Suppose Oneida is a female historian of some Iroquois ancestry who lives in New York State. She has a dog named Jericho, who she likes taking to the local dog park. When Oneida is not doing research, digitizing her sources, or commuting in from the suburbs to work, she enjoys going to art museums, taking

Tae Bo classes at the gym, and growing vegetables in her container garden. She has a small close-knit group of friends, and a large extended family. She thinks cilantro tastes soapy. Sometimes Oneida struggles with dietary intolerances: she used to love dairy products, but they now make her sick, so she avoids them when she can.

Let us now invent a person who is trying to figure out Oneida's mental states. Let us call this person Thomas. Thomas is a man in his 60s, a divorced accountant with three grown children and two young grandchildren who lives in Texas. He enjoys doing crossword puzzles, watching historical dramas, and going to baseball games in his free time. He loves classic cars and hates sushi. He is trying to learn to cook healthy food, as his doctor thinks he should lower his sodium intake.

Suppose Thomas and Oneida meet on a flight from JFK to IAH. Oneida is on her way to give a talk at Rice; Thomas is heading home from a business trip in New York City. In a reflective moment, Thomas wonders what Oneida could be thinking about as she looks out the window. He imagines that Oneida, being a woman in her 20s, probably has a boyfriend in New York, and might be missing him. Actually he is wrong about that – Oneida has not really made time for dating recently, and anyway, if she had, she might be more likely to acquire a girlfriend. Thomas is wrong about the *content* of Oneida's mental state, about what Oneida is currently representing in her mind. This is what Morton calls the 'target'.

Suppose Thomas now asks Oneida whether she's thinking about a boyfriend. Oneida turns and says, "No, I am not thinking about my boyfriend. I am going over my talk for Rice."

Now Thomas, having been given the content, supposes that she must be nervous about her talk. He is himself frequently nervous about public speaking. While he is a sociable person, he doesn't enjoy being the center of attention. In reality, however, Oneida has given this talk before in New York and is not nervous about it. She is just annoyed. Before leaving JFK, she was

told she has just 30 minutes to present her work rather than the 40 she was expecting. This time, Thomas is wrong about Oneida's *attitude* toward what she is thinking about. Is her attitude part of Thomas' 'target' in imagining her states, or is it something else?

Suppose he asks what she is worried about. Oneida says, "I am not worried; I am just trying to decide what would be better to leave out."

Thomas surmises that perhaps it is best to leave her to do her work and pulls out the airline magazine. He turns to the back page and starts a crossword. About an hour later, he has finished the crosswords and the *sudoku* puzzle and tries to see if the in-flight movie is worth watching. They are playing *Mamma Mia!* Thomas turns to Oneida and asks her if she has ever seen the movie.

"No," she says, "but I once saw the musical on Broadway."

Thomas is glad to have something to talk about. "Did you? I saw it a few years ago. Wasn't it great?"

"I didn't really enjoy the musical," Oneida says.

Thomas mentally puzzles through this. He remembers that the acting was great, and that the singing was on key; the dance numbers and costumes were dazzling. He can still picture the beautifully made set quite clearly. Although he knows they both watched the same musical, and he knows what her feelings were about it, he cannot figure out what caused them.

"What didn't you like about it?" he asks, a bit taken aback.

"I was still a college student, so I could only afford seats at the back of the theater," Oneida says. "I couldn't see anyone's face, and I completely missed anything that happened too far stage left."

Here Thomas' imagination has misled him due to an error with *perspective*, one of the factors Morton was considering. Thomas, who makes a good salary, had seen the musical from

the good seats. Although Thomas and Oneida both saw the same musical, their experience of it was made markedly different by their position in space.

"That's a shame," Thomas says, imagining seeing a tiny, cut-off version of the same musical. "It sounds like it was a frustrating few hours."

Oneida surprises him again by laughing. "Well, I didn't really enjoy the musical itself, but it wasn't a bad experience overall. I was very happy to have air conditioning for a few hours. It was the middle of summer, and our air conditioning unit was broken."

Here poor Thomas is wrong because the mental state he was making a prediction about, her mood, happens to be bundled up with many other mental states she has. Call this a *background* mistake. Oneida's mental setting has an effect on what else she will think or feel. Is this a part of Morton's 'perspective' component?

There is a related error here, which we may find familiar from our discussion of standpoints above. We may call it a *standpoint* error. Thomas and Oneida have not only a different position in physical space, but a different position in *social* space as well. Oneida's social relationships are different from Thomas' social relationships. This will probably result in important differences in their mental lives.

For example, suppose Thomas now asks Oneida what he sees as an innocent question. "Where are you staying in Houston?" Oneida doesn't want to answer, however; she politely evades his question. He is an older white guy she just met on a plane; he is asking her lots of questions; she feels a bit uncomfortable. She has had stalkers before. As it turns out, *she* is wrong about his intentions. Thomas is just trying to be polite. But he had ignored that Oneida's social position, as a younger woman in contemporary North America, will have taught her to be cautious of seemingly innocuous questions asked by older men. In a manner of speaking, Oneida

is aware of a wider plethora of social meanings for Thomas' actions than Thomas is. Thomas, at last, picks up on her discomfort. He apologizes for bugging her and fishes for his headphones.

Poor Thomas is prone to making so many mistakes in part because of his limited starting information. He has, after all, just met Oneida. Most of his mistakes are blameless, and not very serious. But I used Thomas and Oneida to show the ways in which simple errors can proliferate from even earnest attempts to make sense of another person's mind. We may make errors along at least five dimensions (although there may be more): they include misascriptions of mental content or target objects, propositional attitude or emotional state, relation to objects in the environment or spatial location, or not accounting for relevant background assumptions or background knowledge, as well as social factors, including standpoints, which may influence the way the world is conceptually organized by the subject, how claims are processed and understood, and what features of the environment they find relevant or salient.

This is the point at which I ought to convince you that, in spite of the abundance of errors we make in imagining others, we should not be rampantly skeptical about our abilities to imagine the thoughts and feelings of other people.

V. Amendable

We make so many different kinds of mistakes in trying to imagine what other people are thinking or feeling. Is there any way these mistakes can be *fixed*? Can we correct ourselves and our judgments, so that we get better at imagining people? If there is a way, then we do not have a crisis on our hands. However, if there is no way, or if the way of fixing our mistakes is out of reach, then we do.

I think there is a way. We can get better at this complex task, just as we could get better at fixing a car, or playing the guitar, or doing philosophy. But getting better requires a specific commitment. It also requires knowing, not just *that* we are going wrong, but also *where* we can go wrong. Most people can read a Check Engine light; but it takes a trained car mechanic to know what exactly needs checking. When I open up the hood of a car, all I see are big metal bits in certain shapes and big plastic bits in certain shapes crammed in together. But when a car mechanic opens up the hood of a car, she sees reservoirs for coolants and transmission fluids, oil and air filters, a car battery, belts and hoses, fuse boxes, alternators, spark plugs and engine valves. She knows what it would look like for one of those components to be off.

So it is helpful that we have already gone over the kinds of mistakes we can make. Now we just have to identify how to correct each kind, and what to look out for.

We are all already familiar with mistakes in ascribing mental content. There is a lively debate about what mental content even is (for an overview, see Pitt 2013) – but, for our purposes, we can just mean *what things* the person is thinking about, what objects or people are the target of her thoughts. It is pretty clear that Thomas has an ability to correct his imagination in this sense. He can imagine Oneida thinking about something different than what she is thinking about: not about boyfriends, but about speeches. So that's not a barrier.

Now, what about when we misimagine the attitude or emotional state of another person? Thomas imagines Oneida being stressed out; but really she is annoyed. If those are emotional states he is familiar with, there is no barrier here, either. Had he imagined that she believed something she disbelieved, or prefered something she dispreferred, or wished for something she knew to be actual, he could have corrected himself there, too. So there will only be a barrier if he has never held the relevant attitude. This is good news for us because there are not so many dimensions of human emotion and attitude that a reasonable adult would not have

held or experienced most of them. How many adults do you know that have never experienced fear, or anger, or sadness, or happiness, or ever had desires or wishes or beliefs? We can therefore conclude that our second class of errors are not a problem for us.

Now what about fixing a mistake in imagining where the other person is located in space? Thomas imagined Oneida sitting in the center orchestra watching *Mamma Mia!*, when she was really further away. He does seem capable of imagining the view from *there*. He may even be able to imagine the view of the audience from the stage, or the view of the stage from the wings. He may need to remind himself that these are options – places you can be and still be at the event. He may also, of course, need to be familiar with the location. So physical point of view is not a barrier to imagination, either – at least not in principle. If one is having trouble imagining the setting for another person's experience, one could go out and examine similar settings, in person or through photographs. Our third class of error is therefore not a problem, either.

A harder correction to make is a correction in what we take the other person to presuppose. This is harder because what someone presupposes has many 'downstream' effects, on what they will notice (what their thoughts or feelings are *about*), on what they believe they are seeing or hearing or feeling, and on whether the experiences they are having merit positive or negative reactions. It is also harder because there are so many distinct combinations of background assumptions a person could have.

But I want to suggest that the real problem here is not a problem of imaginability; not a problem of accessing mental states, of being able to imagine what a person might think or feel, but a problem of ruling out irrelevant mental states, and of focusing on the correct ones. The best way to remedy this problem is to gather information about the people we are trying to understand. What kinds of things do they believe? What kinds of experiences do they have on a

day-to-day basis? What are the material circumstances of their day-to-day life? Who do they interact with? What have they learned in their communities about other people and about the world? What do they find likely or possible? It is not that we would be somehow fundamentally unable to imagine any one set of everyday experiences. It is rather that, without doing the legwork, or doing the listening, we might not know what everyday experiences they have had that we have not; or which experiences we have had that they have not. There is a barrier here, I want to concede, but it is a barrier in specification and in skillset. It is a barrier in proficiency. It is not an uncrossable obstacle. Thomas isn't *unable* to fathom enjoying a place just because it has air conditioning. He is just neglecting that, for Oneida as a college student, air conditioning is a luxury, something that makes a place noteworthy. The kind of correction needed here is a bit like the correction a novelist needs to make when his characters are too flat.

Lastly, I want to suggest that the issues posed by a difference in social position are issues that arise from the *former* problem, not issues that arise uniquely from social facts. This is because, just as standpoint theorists assert, our material circumstances make up our social circumstances and determine our epistemic environment (Hartsock 1983). Of course, certain presuppositions may be rendered more robust by certain social locations; and certain presuppositions may more easily attain knowledge status due to being held from a certain standpoint. Without existing among the background conditions Oneida finds herself in, Thomas will take longer to see his attempts at conversation as unwelcome. And, for Oneida, it is her social peers that have made her able to label and categorize Thomas' behavior as part of an overall pattern, rather than a momentary fluke.

So the problem that we, insofar as we are liberals, have when we have trouble imagining the point of view of a Trump supporter is a problem of information possession, rather than a problem of information access. Our trouble is that we don't know the sociology of Trumpism.

We do not know the material circumstances that produce the beliefs, attitudes, and other background assumptions of someone who loves Donald Trump. Our hard-won, situated knowledge is *not* what is keeping us from understanding the pro-Trump voter. It is not that we know too much, or possess warrants they do not. And we should not assume that Trump supporters are inaccessible to us because *they* do not have rational capacities. Trump supporters are not bats, or octopuses, or aliens. They are human.

If they are human, then there is a way for us to correctly imagine what they might be thinking or feeling. We can come to make predictions about what they might say or do. We can predict what, if anything, might convince them to engage in dialogue with us, and to make similar effort in return. We just need to do the legwork.

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