Imagination and Belief

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Belief and imagination are both states of mind that represent things as being a particular way. So one way of trying to understand the nature of imagination is by considering how it resembles belief and how it differs. If a concise statement of the similarities and differences between imagination and belief helps us understand how imagination works, and perhaps how the mind works in general, it'll provide a simple and illuminating theory of the imagination. While some philosophers propose theories on which imagination and belief are fundamentally similar or on a continuum with each other, others see the differences between imagination and belief as too deep for unified approaches to explain, and argue that these mental states must be understood in fundamentally different ways.

This chapter surveys theories of imagination along both lines. I'll begin by considering the view that belief and imagination are fundamentally different, which is widely accepted by philosophers working on the imagination (including myself). Then I'll consider more unified ones on which there are intermediate states between belief and imagination, or on which they're similar except that we apply the normative aim of truth only to belief and not to imagination. Throughout, I'll focus on propositional imagination, in which we imagine that some state of affairs obtains -- for example, imagining that lava is flowing, as opposed to imagining lava. This may be the kind of imagination for which unified approaches are the most promising, since belief is a propositional attitude -- one can believe that lava is flowing, but it doesn't make sense to talk about believing lava. There are many other philosophically important topics that a chapter on belief and imagination might explore, including the complex relations between belief and imagination in supposition (Arcangeli 2014), aesthetics (Walton 1990), make-believe games (Walton 1993), and philosophical methodology (Gendler 2010). But here I'll address such topics only insofar as they bear on general theories about what kind of mental state imagination is, and how much it's like and unlike belief.

First I'll consider functional properties of belief which imagination doesn't seem to share, and which suggest treating them as broadly different mental states. Second I'll consider functional

properties of imagination which belief doesn't seem to share, which also support seeing the two states of mind as fundamentally different. Third will be the view of Shaun Nichols and Stephen Stich (2000), which accounts for pretense by treating the cognitive mechanisms involved in imagination and belief as fundamentally different. Fourth will be Susanna Schellenberg's (2013) arguments that cases of imaginative immersion demonstrate imagination and belief to be on a continuum ranging from pure imagination to pure belief. Fifth will be Andy Egan's (2008) arguments that accounting for psychological delusions requires mental states intermediate between imagination and belief. Sixth will be theories from John Urmson (1967), Lloyd Humberstone (1992), and Nishi Shah without (2003) and with David Velleman (2005), which explain the differences between belief and imagination not by appealing to the intrinsic properties of the representational states involved, but in terms of whether we apply a norm of truth to them.

1. Properties of belief that imagination lacks

While believing and imagining both involve representations, broad differences between them suggest that they're fundamentally different kinds of representational states that can't be understood in any especially unified way. This section considers some central properties of belief, and describe how imagination doesn't share them. The next section will consider some properties of imagination, and describe how belief doesn't share them.

Consider three properties that are attributed to belief on standard functionalist views, described by Eric Schwitzgebel (2006). First, beliefs create and eliminate other beliefs as the logical relations between their contents suggest. Believing that *p*, believing that if *p* then *q*, and attending to these propositions typically leads to forming the belief that *q*. We're strongly disposed to not believe contradictions when we attend to them. Second, perceptual states dispose us to believe that things are as we perceive them. When perceiving that *p* and attending to this feature of the perceived state of affairs, one typically forms the belief that *p*. Third, beliefs about what would raise the probability of desire-satisfaction interact with desires to motivate action. If one desires that *d* and believes that action

a would make *d* more likely, this will give one some motivation to *a*.[1] As I'll describe, these properties of belief don't in general seem to be functional properties of imagination.

First, belief and imagination don't have the same logical relations with each other that each has with states of its own kind. One can easily imagine that *p* while believing that not-*p*. I can imagine that I'm Spider-Man while believing that I'm not Spider-Man. As with belief, there are strong psychological pressures against explicitly imagining contradictions -- it's hard to simultaneously imagine that I'm Spider-Man and that I'm not Spider-Man, just as it's hard to believe both of these things. But if *p* is the content of belief and not-*p* is the content of imagination, or vice versa, we can easily hold onto both at once. It's easy to imagine that you're Spider-Man while believing that you're not Spider-Man. Our capacities for reasoning also lead us to imagine the logical consequences of what we imagine, when we attend properly to the premises and the conclusions. But even if beliefs interact with each other in the same way that imaginings interact with each other, belief and imagination don't in general interact with each other in these ways. If I imagine that I'm Spider-Man, and believe that Spider-Man doesn't exist, this won't lead me to believe or imagine that I don't exist. And if I imagine that I'm Spider-Man trying to shoot webs, and believe that if I try to shoot webs I'll fail, this won't lead me to imagine that I'll fail. While our beliefs about the world often influence what we imagine, we don't draw conclusions from a mix of believed and imagined propositions that we're attending to in the swift way that we believe the logical consequences of believed propositions that we're attending to, or in the swift way that we imagine the logical consequences of imagined propositions that we're attending to. When we fill in imagined scenarios with believed details, it's because the rules governing what we're supposed to imagine specifically allow us to do so, as Kendall Walton (1990, 1993) describes.

Second, imagining comes unmoored from one's immediate sensory experiences far more easily than belief does. Readers of novels imagine characters and their interactions instead of the pages they see. Daydreamers imagine pleasant or exciting situations instead of their boring surroundings. Players of make-believe games imagine that objects in their games have properties different from those

1 Schwitzgebel notes a fourth property: people are disposed to assert what they believe, under conditions favoring sincere assertion. But since assertion is an action, this seems to be a special case of the third functional property instead of a distinct fourth one.

sensation presents. Believing that things aren't as our sensory experiences suggest typically requires a reason to doubt our experiences, and can involve some cognitive strain. But we typically imagine things being different from how our senses present them.

Third, one doesn't usually act on imagined means to ends in the way one acts on believed means to ends. Daydreaming about being Spider-Man typically doesn't result in actually trying to shoot webs, and imagining that one is Harry Potter while reading of his adventures doesn't usually result in trying to cast spells. Sometimes in the context of make-believe games or Choose Your Own Adventure books, people do act on what they imagine. David Velleman (2000) claims that this demonstrates imagination to have motivational power, much as belief does. But even then, action on imagined means is highly restricted. When playing at making mud pies, children don't usually eat the mud. And in Choose Your Own Adventure books, one's real action isn't the imagined action of actually entering a time machine, but the believed action of turning to the page corresponding to the choice to enter the time machine. Even though action is involved in these cases, the behavioral roles of imagination and belief differ. Arguments along these lines from Paul Noordhof (2001), Lucy O'Brien (2005), and Neil Van Leeuwen (2009) that carefully consider the relation between imagination and motivation seem decisive against Velleman's claim.

2. Properties of imagination that belief lacks

While there's less agreement about the nature of imagination than about the nature of belief, imagination clearly seems to have some properties that belief lacks. These properties provide further reasons to regard the two states of mind as fundamentally different, and further obstacles for unified approaches.

One difference between belief and imagination is that it's easy to perform an intentional action of imagining something that isn't the case. It's hard or impossible to perform an intentional action of believing something that isn't the case. (While our desires can affect our beliefs in wishful thinking, that typically doesn't involve an intention to believe otherwise.) If I intend to imagine that someone is juggling pineapples in front of me, I can do so. But if I intend to believe that someone is juggling

pineapples in front of me, I'll fail. My sensory experiences and other beliefs strongly dispose me to believe that there's no pineapple-juggler in front of me. Any intentions to the contrary will be in vain, unless (for example) they move me to hire a pineapple-juggler so that I'll form the belief by the standard sensory means. Imagination is free from such constraints. While we don't always imagine things intentionally -- Amy Kind (2001) provides the example of unintentionally imagining gruesome scenes from horror movies that we'd rather get out of our heads (91) -- we can do it if we want.

A second difference is that phenomenology is more closely tied to imagination than to belief. Kind provides an example and a strong statement of this view:

> Suppose that I were to imagine my friend's orange dress. My imagining clearly has a phenomenology. Moreover, the qualitative feel involved in my imagining is essential to it. Most importantly, however, there is nothing special about this particular imagining that provided it with its phenomenology. No matter what I imagine, my imagining will involve an experiential aspect. Without such an experiential aspect, a mental exercise is not an act of imagining (93-94).

She notes an experiment by C.W. Perky (1910) in which subjects faced a blank screen, and were told to imagine objects on the screen. Faint images of these objects were projected onto the screen with increasing intensity until they'd be visible to anyone entering the room. Subjects asked to imagine a banana didn't report having genuine visual images of a banana when a banana was actually projected onto the screen. Instead, they said that the imagined banana had simply changed in size or spatial orientation. While Robert Hopkins (2012, 2013) argues that the banana images weren't literally perceived but were instead pictorially represented in a fashion that doesn't count as perception, Bence Nanay (2012) argues that standard views of pictorial representation preserve the conclusion that imagining and perceiving "are phenomenally very similar."

If Nanay and Kind's interpretation of Perky's results is correct, imagining and perceiving have been experimentally demonstrated to be similar enough that it's hard to tell the difference between them. While these cases involve imagining a thing rather than a state of affairs, propositional imagination seems similar in its connection to phenomenology. Imagining that one's friend is wearing

an orange dress and imagining that there's a banana on the screen seem to have similarly rich phenomenological effects. Examples like this can only show that imagination often has a rich phenomenology rather than demonstrating that this phenomenology is essential to it. But they still provide striking demonstrations of how phenomenologically rich imagining can be. Neuroscience provides further empirical evidence of similarities between perception and imagination. Research by O'Craven and Kanwisher (2000) demonstrates that imagining faces and places activates very similar regions of the brain to those involved in actually seeing those faces and places.

Belief doesn't have such a strong sensory phenomenology. If it did, evidence from sensation couldn't easily change our beliefs. Our beliefs could simply produce nonveridical sensations supporting them, even when we were in position to perceive otherwise. Falsely believing that my phone is on the bedside table won't create the visual experience of a phone when I look at the bare table. Belief and imagination differ in the direction of their strongest causal relation with experience. Imagination mainly causes us to experience things as being as we imagine them, while our experiences cause us to believe that the world is as we experience it.

This is not to deny that belief and imagination have intriguing common features. They both involve mentally representing the state of affairs that is their content in some way. And while I've distinguished their relations to desire and action, they both interact in desire in some way to cause pleasure. Humeans like Timothy Schroeder (2004) and myself (2009, forthcoming) note that if you desire something strongly, you'll be pleased either when you discover that it's more likely to come about, or when you vividly imagine it in a daydream. Perhaps a unified way to describe this relationship with desire this is that either believing or imagining something desired causes pleasure, in proportion to the degree to which the desired situation is represented.[2]

I hope the list of differences in this section and the previous one explain why most theorists don't see belief and imagination as fundamentally similar. It would be impressive to tell a unified story about how the two mental states are basically similar except for some simple fact that explains all of their differences. And it's very hard to do, as impressive things often are.

2 See the entry on "Imagination and Desire."

3. Nichols and Stich on pretense

Shaun Nichols and Stephen Stich's influential paper, "A Cognitive Theory of Pretense", provides an account of how the imagination works in cases of pretense. They argue that imaginative mental representations are store in an "Imagination Box", separate from the mental compartment in which beliefs reside.[3] Their main reason for invoking a separate mental compartment for the imagination is to explain the phenomenon of "cognitive quarantine" -- how we can believe that things are things are a certain way, while imagining that things aren't as we believe them to be. Since beliefs and imaginative representations are of different types, believing that not-*p* and imagining that *p* are compatible.[4] Philosophers who use "cognitive" in areas like metaethics should note that in their title it doesn't mean "belief-based", but something more like "psychological". A strong psychological distinction between believing and imagining is at the core of their view, and allows them to explain cognitive quarantine.

Nichols and Stich, like many theorists addressing psychological questions, seek to describe the various types of human mental states and how they interact to cause the observed psychological phenomena. A useful metaphor for this purpose is that of several boxes in the mind, one for each type of mental state (belief and desire being two examples) in which the contents of the mental states are held. To have the content "I am Spider-Man" in the belief box is to believe that one is Spider-Man, to have it in the imagination box is to imagine that one is Spider-Man, and to have it in the desire box is to desire that one be Spider-Man. Nichols and Stich offer box-and-arrow diagrams displaying these mental state types and the causal relations between them that explain psychological phenomena. I can imagine that I'm Spider-Man while believing that I'm not Spider-Man because these representations are in different boxes. Pairs of contradictory representations don't last long in either the belief nor the imagination boxes. To put it in non-boxy terms, it's hard to believe contradictions or imagine

3 Their original paper calls it the "Possible Worlds Box", and Nichols' later work (2006) renames this compartment the "Pretense Box". "Pretense Box" is a better name, as possible worlds are invoked in many contexts other than pretense. Doggett and Liao provide the best name, calling it the "Imagination Box", which I use here. Like belief, imagination is a type of mental state. Pretense is one among many activities employing the mental state of imagination.

4 See Gendler (2003) for further discussion of the phenomena.

contradictions. So splitting up the pairs to put "I'm not Spider-Man" in the belief box and "I am Spider-Man" in the imagination box explains how I can pretend I'm Spider-Man despite not believing that I am.

Nichols and Stich describe two psychological processes important to understanding how imagined scenarios develop. Since our representations of imagined scenarios can change rapidly and fluidly in response to new information, they invoke an "UpDater" that changes the contents of the Imagination Box. This explains how new events in the course of make-believe games can shift what's imagined, just as new evidence can rapidly change our beliefs. For example, if it's in the Imagination Box that a teddy bear at a tea party has started drinking vodka instead of tea, the UpDater may add the proposition that he'll soon become drunk. And since many new things that happen in pretense aren't simply entailed by representations of the pretended scenario and beliefs about how scenarios usually play out, they invoke a "Script Elaborator" that fills in additional details of the scenario, possibly in creative ways. The introduction of vodka to a properly innocent stuffed animal tea party would likely be the product of a mischevous imaginer's Script Elaborator. Nichols and Stich don't say much about the processes by which the Script Elaborator works, but one might expect that the agent's desires that the imagined scenario proceed in a particular way would play an important role.

Nichols (2008) clarifies further similarities and differences between belief and imagination. The emotional effects of imagining the destruction of the world in black comedies like Dr. Strangelove and in some philosophical thought experiments, as he notes, are very different from those of believing that the world has been destroyed. The difference is not only in degree, but in kind -- one may be amused by the way Slim Pickens rides a nuclear bomb to his doom or be intrigued by the thought experiment, rather than being horrified by the deaths of billions. He suggests that these differences concern the greater flexibility in how desire and imagination can interact to cause emotions.[5] If we were to focus on the deaths of billions, we'd be overwhelmed by horror, but our desires concerning philosophy and black comedy lead us to think about these topics in ways that don't involve imaginative engagement with horrific features of the situations. The resulting view treats belief and imagination as different

5 See the entry on "Fiction and Emotions".

mental state types which interact with desire in different ways, but are expressed in a "single code" that leads to similar affective responses.

Views along the lines Nichols and Stich suggest, on which belief and imagining involve fundamentally different types of mental states, are described as "the orthodoxy in contemporary debates about the imagination" by Sam Liao and Tyler Doggett, who note that they're shared by Currie and Ravenscroft (2002), Doggett and Egan (2007, 2011), Kind (2011), and Weinberg and Meskin (2005, 2006). While Nichols and Stich's distinctive terminology for the psychological components they describe hasn't caught on, most philosophers share their view that believing and imagining are deeply different states of mind.

An interesting objection to this orthodoxy comes from Peter Langland-Hassan (2012), who argues that pretense doesn't require a distinctive mental state of propositional imagination in addition to belief. To make the speech-acts and perform the other actions involved in pretending that teddy bears are having a tea party, I merely need to have a variety of beliefs about how one should act in make-believe games, and a desire to act as I should. So instead of imagining that the teddy bears like tea and acting on desires to affect the imagined scenario in various ways, I believe that I should act as if the teddy bears like tea and act on desires to do as I should. On Langland-Hassan's picture, I need not believe or imagine simply that the teddy bears like tea -- instead, I believe that the norms of the game require me to act as if they do. Since I don't have any attitudes strictly contradicting my belief that the teddy bears are inanimate objects who can't like tea, there's no problem of cognitive quarantine that would require the addition of a separate mental state type to house the otherwise contradictory belief.

While Langland-Hassan provides an elegant theory of the mental states driving our actions in cases of pretense, his picture doesn't seem to support a general account of other activities commonly explained in terms of imagination. While the behaviors performed in pretense can be understood in terms of believing that one should act as if things are different than they actually are, daydreaming and engaging with fiction involve less behavior and more phenomenologically rich representations. So they seem to require a different treatment that will invoke a distinct cognitive attitude of imagining.

Imaginative immersion in pretense -- the topic of the next section -- may require a separate treatment as well. So while Langland-Hassan offers us a simpler explanation of one type of imaginative activity, it's hard to see how his arguments would lead us to reconceive the mental state of imagination in general.

4. Schellenberg on imaginative immersion and the belief-imagination continuum thesis

Now I'll turn to approaches that suggest a continuum between belief and imagination, with intermediate states that have some of the properties of each. Susanna Schellenberg (2013) uses cases of imaginative immersion to argue that belief and imagination are on a continuum that allows intermediate states. Imaginative immersion involves vivid imaginative representations that affect action and belief-formation with spontaneity like that of belief. A typical example involves children engrossed in make-believe games, acting spontaneously on what they imagine. If two young friends are trying to hit each other with sticks while immersed in imagining that they're dueling, they need not have explicit thoughts about how striking a friend in reality interacts with the rules of the game to constitute the make-believe action of killing the rival and winning the imagined duel. The imagined representation that striking would kill the rival interacts with their desire to win the imagined duel as spontaneously as beliefs interact with desires, motivating the act of striking. These representations are belief-like in how smoothly they seem to interact with desire in motivating action, and also imagination-like in representing the imagined scenarios themselves rather than anything genuinely believed. There are many similar examples of spontaneous action emerging from imaginative immersion in adults, involving method actors and participants in live-action roleplaying games. For an example of imaginative immersion in which beliefs interact with each other to produce further beliefs rather than interacting with desire to motivate action, consider scientists imagining future experiments and forming beliefs about the results. The experience of imagining what would happen in an experiment and the experience of coming to believe that these things will happen when the experiment will happen may be exactly the same. Schellenberg claims that "the phenomenon of imaginative immersion can be fully accounted for only if the functional roles of imaginings and beliefs

are understood as being on a continuum" (508). Her view draws support from the seeming unity of imagining something and acting or forming a belief that follows from it in these cases.

If there are states of mind that are produced in the way imaginative representations are and not in the way beliefs are, but which also have the effects of belief and not of imagination, they would stand in the middle of a continuum between belief and imagination. Schellenberg accepts that we may have pure imaginings and pure beliefs at either end of the continuum. She argues that we should also countenance mid-continuum states, seeing imaginative immersion as involving a single state of mind with the content of imagination as well as the cognitive and motivational effects of belief: "The point is that accounting for imaginative immersion requires accounting for the possibility of moving seamlessly from mental states that could be called pure imaginings to mental states that are at least to some degree belief-like" (509). Invoking one state of mind intermediate between belief and imagination makes the transition from imagination-like and belief-like states seamless, as it simply involves having one state and doesn't involve extra transitions between states of two different kinds.

Liao and Doggett note some unappealing consequences of Schellenberg's view that being immersed in imagination involves a somewhat belief-like state of mind. They offer a case in which a mother goes from being dragged into pretending she's a cop in a make-believe game with her daughter to becoming "gripped by the game, totally into being a cop" (7). She goes from having occurrent beliefs about pretending to be a cop to full imaginative immersion into being a cop, where she doesn't have any experience of conscious thought about how she's playing a make-believe game. But as they note, "At no time did Mom imagine herself to be a mother who is pretending to be a cop in a game or believe herself to be a cop" (7). If imaginative immersion involved a mid-continuum mental state with the content "I'm a cop", Mom would to need to believe this instead of imagining it, to whatever extent the mental state fell on the belief side of the continuum. Instead, it seems that Mom's imaginative immersion instead involves her coming to imagine more and more vividly that she is a cop. She need not enter into an even partially belief-like state with the content that she is a cop. Liao and Doggett point out that to whatever extent such a state was belief-like, it would be irrational. Furthermore, it predicts implausible actions. Mom is unlikely to note that she hasn't received a

paycheck from the police department, and make a phone call inquiring about why it hasn't arrived.

Regarding imagination as perceptual rather than belief-like, along the lines suggested by Kind (2001), might account for the seamless transition between imaginings and belief-like mental states that Schellenberg discusses. If imagining an experiment involves seeing it in one's mind's eye, and imagining one's daughter as a robber in a make-believe game involves seeing her as a robber, the seamlessness that Schellenberg describes can be explained in terms of how experience causes belief. This need not simply be a belief that her daughter is a robber -- all the beliefs can end with "in the make-believe game." So mom's experiences make her believe that her daughter is a robber in the make-believe game, that catching her daughter will be catching a robber in the make-believe game, and so on. Even though sensation and belief are distinct mental states, the transition between them is often phenomenologically seamless, just like the transition between imagining and belief in imaginative immersion. Perceptual representations of desired objects can seamlessly generate beliefs about how to satisfy our desires. When I'm hungry and I see tasty food on my plate, the perceptual representation quickly generates belief that it's there and that I can eat it by putting it in my mouth, just as imagination seamlessly generates beliefs that the imagined scenario is a particular way and performing a particular action will change it in a desired way. In neither case do we need to explicitly think about how the imagined or perceived state provides evidence for the means-end belief.

Understanding imagination as broadly perceptual in this way allows us to achieve the benefits of the continuum thesis without accepting it or its drawbacks. Just as the close causal connections between sensation and belief don't suggest that there are mental states intermediate between them, the close connections between imagination and belief don't suggest that there are mental states in between them. Close causal connections don't in general support continuum theses. That smoking causes cancer doesn't entail the existence of anything whose nature is on a continuum between smoking and cancer. In addition to providing a positive story about imaginative immersion, treating the imagined state of affairs as the content of a perception-like state avoids entailing that imaginatively immersed people actually believe to some extent that things are as they imagine. So a perceptual account of imaginative immersion could provide the benefits of Schellenberg's continuum thesis, without the

costs that Liao and Doggett's arguments reveal.

5. Egan on delusions

Another argument for intermediate states between belief and imagination comes from Andy Egan, who considers psychological disorders involving delusions. Especially prominent in his discussion is Capgras delusion, in which patients claim that their friends, family, or even pets (Wright et al, 1994) have been replaced by impostors. A typical example involves a 59-year-old man who believed that his wife was such an impostor:

> Fred's wife reported that about 15 months from onset he began to see her as a "double" (her words). The first episode occurred one day when, after coming home, Fred asked her where Wilma was. On her surprised answer that she was right there, he firmly denied that she was his wife Wilma, whom he "knew very well as his sons' mother", and went on plainly commenting that Wilma had probably gone out and would come back later. (Lucchelli and Spinnler, 2007: 189).

Egan argues that people like Fred don't simply believe that their wives have been replaced by doubles, noting that delusions aren't supported by ordinary sensory evidence as beliefs are, and that they persist in the face of strong contrary evidence. Their effects on patients' broader belief system and behavior aren't as broad as those we might expect from ordinary beliefs. Currie and various co-authors accommodate these differences between delusions and ordinary beliefs by regarding the content of delusions as imagined rather than believed. But as Egan notes, delusions still have some belief-like effects, leading patients to sincerely assert that they're dead or that their families have been replaced. Their behavioral effects are displayed in sad cases where Capgras patients attack the supposed impostors. To accommodate all the belief-like and imagination-like aspects of delusions, Egan suggests thinking of them as mental states intermediate between these types. He adds, "We shouldn’t expect to see the peculiar hybrid roles all over the place because they're pretty maladaptive" (275). Delusions, then, display the existence and maladaptiveness of states in between belief and imagination.

The moral of Egan's story is that we should explore the possibility of mental states that mix and match the functional roles we see in familiar states of mind like belief and imagination. He aims at "undermining the all-or-nothing-roles view which, if we endorsed it, would rule out such intermediate roles, states, and representations" (270). He regards delusions as such intermediate representations.

While Egan is right that patients with delusions aren't just believing or imagining, psychologists seem to be converging on a different explanation that invokes no intermediate states of mind: Capgras' delusion involves an emotional impairment where one loses the feeling of familiarity in looking at a face, causing the delusional belief in an impostor (Bredart and Young 2004). Hadyn Ellis and collaborators describe two different psychological pathways involved in facial recognition. One pathway is impaired in Capgras' delusion and the other is impaired in a disorder called prosopagnosia that leaves patients unable to say whose a face is (Ellis and Young 1990, Ellis and Lewis 2001). When I look at my friend Ben's face, I can identify the face as Ben's, and I also have a feeling of familiarity that I don't have when looking at a stranger's face. This feeling of familiarity has physiological effects. Normal subjects have higher skin conductance responses (a bodily indication of emotional arousal) when looking at familiar faces than when looking at strangers' faces. If I had prosopagnosia, I wouldn't be able to identify the face as Ben's, but I'd still feel the familiarity and have the accompanying higher skin conductance. Patients with prosopagnosia have elevated skin conductance responses like normal people seeing familiar faces, suggesting that they feel the familiarity despite being unable to say whose faces they are (Bauer 1984). And even though they're right about which of two faces they've seen before only 53% of the time (barely better than chance), they prefer faces they've seen before 70% of the time (Greve and Bauer 1990). This seems to be because these faces feel more pleasantly familiar. Capgras delusion is the reverse of prosopagnosia, with patients attaching a name to the face, but having neither the feeling of familiarity nor the elevated skin conductance (Ellis and Young 1997). Positing two separate aspects of facial recognition explains the two separate facial recognition disorders.

This emotional explanation leaves no need for mental states intermediate between belief and

imagination. If I had Capgras delusion and I saw Ben's face, the eerie absence of the usual familiar feeling would make me believe that I was looking at an impostor with Ben's face. If I lacked any good theory about why this had happened, I might just believe that a stranger had Ben's face, with minimal changes to the rest of my belief system. This isn't because imagination is doing anything, but because the loss of that specific emotional response only affects a narrow range of beliefs. This can happen when we have vivid experiences that contradict a narrow range of beliefs but have little direct bearing on other beliefs. If I woke up one morning and it kept looking like my whole body was blue, I'd probably come to believe that I was blue but be unsure why. So it wouldn't significantly affect my other beliefs. And apart from behaviors directly involving my blue skin (trying to wash the blue off or going to a UNC basketball game) I might not act very differently. My confidence that my skin was blue might wane if I didn't see myself for a while -- I might think that I was misremembering my past experiences or that I'd been in bad light, since my other beliefs generate inferential pressure against thinking I'm blue. But seeing myself again would reinforce the belief that I was blue. One could understand the epistemic phenomena associated with Capgras' delusion along these lines (Breen, Caine, Coltheart 2000).

If the moral of Egan's story is that we should consider new mixes of functional roles, the moral of my story is that psychological mysteries are often solved by looking down into perception and emotion, not by looking up for fancy new cognitive states. This lets us keep the list of mental states tidy and simple -- belief, desire, imagination, attention, and a few others with clearly defined properties, as well as the rich assortment of emotional and perceptual states we need to explain the richness of experience. Learn about the varieties of perception and emotion, consider how these experiences affect belief-formation, and elegant explanations of psychological phenomena will build themselves from the bottom up.

6. The norm-application theory

Some philosophers argue that imagining that *p* is like believing that *p*, except that it doesn't involve applying a norm of truth to one's representation that *p*, which is necessary for a mental state to

be a belief. This norm-application theory of how belief and imagination differ fits nicely with an intuitive normative distinction between the two states of mind. One ought to believe what is true, while it's not the case that one generally ought to imagine what is true. And most people in fact apply the norm of truth to their beliefs but not to their imaginative representations. Norm-application theorists don't draw the distinction by saying that believing that *p* involves believing that *p* is true. Imagining that *p* also involves imagining that *p* is true, so this wouldn't successfully distinguish belief from imagination. Instead, they hold that having a further mental state that applies a norm of truth to a representation that *p* is necessary for believing that *p*. If no such norm is applied, the mental state is one of imagining that *p*, or perhaps some similar state like assuming that *p* for purposes of argument.

Norm-application theorists differ about which mental state one has when one applies the norm. According to John Urmson (1967) and Lloyd Humberstone (1992), it's the mental state of intending that a representation be true. So we intend our beliefs to be true, while we have no such intention regarding our imaginings. According to Nishi Shah and David Velleman (2005), it's a special mental state of accepting a norm of truth, which seems to operate along the lines suggested by Allan Gibbard (1990). (None of them take applying the norm to be believing that a norm of truth applies. Invoking beliefs about norms to explain the nature of belief would be a circular explanation.) They all agree that applying a norm to one's representations is necessary for making them beliefs, at least in human psychology, and perhaps in all metaphysically possible believers. Representations where one doesn't apply the norm of truth, then, remain in the realm of imagination.

I've argued (2013) that the necessity claim accepted by norm-application theorists faces decisive counterexamples. Ceasing to accept a norm of truth doesn't turn all of one's beliefs into imaginings. If Priscilla wholeheartedly embraces a pragmatist view of epistemic norms, and ceases to apply norms of truth to any of her mental representations, the necessity claim at the heart of the norm-application theory entails that she ceases to have any beliefs. With no norm of truth applied to her mental representations that *p*, they all cease to be beliefs that *p* and become imaginings that *p*. Whatever problems pragmatic or otherwise non-truth-oriented accounts of epistemic norms may have, it's bizarre to think that accepting them turns all of one's beliefs about the world into mere acts

of imagining. Since one can retain one's beliefs without applying the norm of truth to any of one's mental representations, the distinction between belief and imagination can't be that we apply the norm of truth to the former and not to the latter.

It also seems possible to apply a norm of truth to one's imaginative representations without turning them into beliefs. If I accept a norm of imagining that someone loves me only if she actually loves me, perhaps because I feel that it's unjust to imagine people loving me when they actually don't, this doesn't transform my imaginative representations of her love into beliefs. This is especially clear in cases where I get carried away and violate my own norm, perhaps with the intensity of my desire for her love driving me to uncontrollably fantasize that she loves me. Such cases involve having a representation that she loves me and applying the norm of truth to it, so the norm-acceptance theory entails that I believe she loves me. But my runaway fantasy that she loves me doesn't become a belief that she loves me just because I apply a norm of truth to it. Accepting the norm might make me feel guilty even as I fantasized about her love. And if I believed that she loved me, as the norm-application theory predicts, why would I feel guilty? I wouldn't believe I was doing anything wrong. All this suggests that the norm-acceptance theory can't be reconstructed as providing sufficient conditions for turning imagination into belief.

Accepting and recognizing the consensus that beliefs ought to be true while no such norm applies to the imagination, then, shouldn't move one to accept a norm-application theory of the distinction between belief and imagination. One can withhold the norm of truth from one's beliefs and apply such a norm to one's imaginings without converting one mental state into another. Rather than taking belief and imagination to be intrinsically similar forms of representation that differ in virtue of whether we apply a further attitude to them, we should see them as differing broadly in their intrinsic properties.[6]

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