Penultimate Version

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Imaginative Attitudes

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Abstract: The point of this paper is to reveal a dogma in the ordinary conception of sensory imagination, and to suggest another way forward. The dogma springs from two main sources: a too close comparison of mental imagery to perceptual experience, and a too strong division between mental imagery and the traditional propositional attitudes (such as belief and desire). The result is an unworkable conception of the correctness conditions of sensory imaginings—one lacking any link between the conditions under which an imagining aids human action and inference and the conditions under which it is veridical. The proposed solution is, first, to posit a variety of *imaginative attitudes*—akin to the traditional propositional attitudes—which have different associated correctness (or satisfaction) conditions. The second part of the solution is to allow for imaginings with "hybrid" contents, in the sense that both mental images and representations with language-like constituent structure contribute to the content of imaginings.

1. Introduction

Like perceptual experiences, beliefs, and judgments, sensory imaginings guide our actions and inferences with varying degrees of success. An imagining might lead an architect to a novel solution to a design problem; or it might cause dangerous miscalculations. An imagining might generate knowledge about how a friend will react to a present; or it might lead to an embarrassing mistake. An imagining might help someone determine the shortest route home from the ballgame; or it might leave him driving in circles. My goal is an account of sensory imagination that tracks these successes and failures in its conception of the veridicality conditions of imaginings.

By 'sensory imagination' I will mean all cognition that involves a sensory mental image as a proper part (though my focus will be on cases involving *visual* imagery). This use of the

term is fairly standard in philosophy (Kung, 2010; Martin, 2002; Noordhof, 2002; Peacocke, 1985), though some use 'perceptual imagination' to mark the same phenomenon (Byrne, 2007; Currie & Ravenscroft, 2002; Gendler, 2005; Thomas, 2007). Throughout I will use 'imagination' as shorthand for 'sensory imagination', and will not directly address the topic of non-sensory, propositional imagination (as treated, e.g., by Nichols & Stich (2000)).

Much of what has been said about sensory imagination conflicts with the idea that imaginings have substantive correctness (or veridicality, or accuracy) [1] conditions at all. There is a tendency to swing between two poles. On the one hand, imaginings are under voluntary control, insofar as what we imagine is usually determined by what we *wish* to imagine, and not by what is before our eyes. So it may seem that an imagining achieves a trivial form of "success" whenever it is about what we intended it to be about. From this perspective, unbidden imaginings may constitute the cases where our imaginings fail us, if they outstrip or contradict our wishes and intentions. Yet, otherwise, our imaginings will be a success: we imagine what we set out to imagine. As this kind of success hardly warrants the name, one might conclude that sensory imaginings do not have genuine correctness conditions at all (see, e.g., the discussion of the "fitless" view, below).

On the other hand, sensory imaginings are closely related to perceptual experiences in important ways, such as in the kinds of (fine-grained) properties they represent (Tye, 1991), their phenomenal character, and in the neural regions underlying their use (S. M. Kosslyn, W. L. Thompson, & G. Ganis, 2006). This leads some to view sensory imaginings as *also* akin to perceptual experiences in their veridicality conditions—and, thus, as veridical only when properties and objects of the kind represented are in fact present before one and causing the experience in the right way.[2] Of course, what we imagine is rarely if ever presently before us and causing the imagining; so, from this perspective, almost all imaginings are (trivially) non-veridical.

[1] I will use 'correctness conditions', 'veridicality conditions', and 'accuracy conditions' equivalently. Some use 'correctness conditions' exclusively to apply to mental states with purely language-like compositional structure.
[2] Examples of this view are discussed under the heading of the "as present" view, below (Section 2).

In swinging between these poles, it becomes difficult to see how there can be meaningful successes and failures of imagination. On either view, the correctness conditions of imaginings do not track the things they ought to track—things like the helpfulness of an imagining to guiding one's action and achieving one's goals. The successes and failures of imagination, on these views, are not substantively linked to the cognitive work that imaginings actually do. The result is that the content and correctness conditions attributed to imaginings are divorced from the functional role they actually play in the broader cognitive economy. Failing to understand the content and correctness conditions of imaginings in functional terms, we fail to understand them in causal terms. Failing to understand them in causal terms, we fail to understand imagination in a way that would allow for publically available means for ascribing imaginings (other than verbal self-report[3]). In short, imagination remains *unnaturalized*. My goal here, then, is to arrive at a conception of the content and correctness conditions of imaginings that coheres with their actual failures and successes, and, in so doing, better the prospects for a naturalistic account of sensory imagination itself.

The key is to draw two distinctions: first, between the content and attitude of a sensory imagining; second, between knowing the content of a sensory imagining and knowing whether the veridicality conditions of the sensory imagining are satisfied. These distinctions are familiar in the case of other kinds of mental states, but are rarely extended to the case of sensory imagination. We typically distinguish between the content a propositional attitude, on the one hand, and the particular attitude taken toward that content, on the other. One needs to understand both in order to know the conditions in which the state is veridical or satisfied. And we typically distinguish between the capacity to know the content of a token belief or perceptual experience, on the one hand, and to know whether that state is veridical or satisfied, on the other. A person will generally have an easier time knowing the former than the latter.

[3] And Hurlburt & Schwitzgebel (2007) provide plenty of reason to doubt the reliability of self-reports concerning what is being imagined (or perceptually experienced, for that matter).

I will argue that we should say similar things about imagination: we can relatively easily know the *contents* of our imaginings (in the same way we can know the contents of our judgments), but not whether they "get things right" in some broader sense. Our intentions may indeed determine the content of our imaginings (*ceteris paribus*), of which we have relatively easy and secure knowledge. However, our intentions will not determine whether the veridicality conditions of the imaginative states are fulfilled. Failures of imagination may then occur where the veridicality conditions are *not* fulfilled. And just as we have to look to the attitude of a propositional attitude to understand its correctness or satisfaction conditions—the belief that *p* having different satisfaction conditions than the desire that *p*—so too must we consider an imagining's attitude to understand its veridicality conditions.

Explaining and defending these distinctions is the project of Section Three. An account of one imaginative attitude in particular—our judgment-imaginings (JIGS)—is developed. It allows for substantive links to be drawn between the content, correctness conditions, and functional role of an important class of imaginings. This approach requires that imaginings be thought of as hybrid states, having both imagistic and non-imagistic components. Section Four considers the theoretical costs of this account of sensory imagination, and argues that they are relatively modest. I turn now to providing some context for these arguments and proposals by looking at how some other theorists have dealt with the same questions.

2. Three ways not to think of the correctness conditions of imaginings

Going forward, I will make use of a familiar, and rather generic, notion of representational content. The representational content of a mental state is what the mental state represents, or what it is about.[4] I will assume that both beliefs and perceptual experiences have representational contents; they represent the world as being some way or other and can be considered either accurate or inaccurate (veridical or non-veridical, correct or incorrect) depending on whether the world really is that way. Likewise, imaginings have contents. Our

[4] I use 'representational content' equivalently with 'intentional content'. The representational (intentional) content of a thought or experience can be compared with the contents of a newspaper (Siegel, 2008)—it is what the mental state "says" or (in the case of assertoric states) represents as being true about the world.

question is how to understand the relation between the content of an imagining and its veridicality (and, indeed, whether it is proper to invoke the notion of veridicality in this context).

Knowing a state's content enables one to know some things about its role in cognition. But there are limits to what one can infer from content alone, as the attitude taken toward the content matters as well. A belief and a desire may have the same content (e.g., that it is Friday), while playing quite different cognitive roles. But once we know both the attitude and content of a mental state, we are in a good position to know its likely cognitive and behavioral effects—at least, we better be, if ascriptions of propositional attitudes (and other contentful states) are to be at all illuminating. And while perceptual experiences are not always conceived of as involving taking an *attitude* toward a content, the assertoric (as opposed to conative) force they are assumed to have can easily be seen as akin to an attitude—an attitude of taking the represented objects and properties to be present before one. A rough-and-ready way to conceive of attitude, in the present context, is simply that aspect of a mental state's typical functional role that cannot be accounted for by its content. With this broad conception of attitude in mind, we can ask how (if at all) different theories conceive of imagination's content and attitude, and from there extract a picture of how they ought to view imagination's overall functional role.

As we will see, most do not make any very explicit distinction between content and attitude in the case of sensory imagination, though some offer suggestive remarks. My criticism will be that these theories either leave an explanatory gulf between the content and cognitive role of imaginings (in that one is not tied to the other), or—if we read into them—simply get the correctness conditions and cognitive role of imaginings wrong.

2.1 The "as present" view

On what I will call the "as present" view, imaginings are always misrepresentational, even if harmlessly so. They are like Uncle Bob's "bachelor days" stories: we entertain them, recognizing the positive claims they are making, without any inclination to believe what they say. These views sometimes characterize imagination as "quasi-perceptual experience in the

absence of appropriate stimuli" (Gendler, 2005; Thomas, 2007). To say that a state has occurred in the absence of "appropriate" stimuli suggests that the state is non-veridical—that it misrepresents. On this conception of imagination, when I imagine a flying cow, the flying-cow image occurs in the absence of appropriate stimuli because there is no flying cow present that is currently causing the image. The as present view will typically allow that representational contents are more degraded in the case of imagination, lacking the full richness and fineness of grain of perceptual experience. But, all the same, imaginings (like the perceptual experiences they resemble) represent their objects as present before one and require for their veridicality that such things be present. As such things rarely if ever are present, imaginings can, as a class of mental states, be said to occur in the absence of appropriate stimuli. On such a view, any "veridicality conditions" for imagination will be the same as those pertaining to a comparable visual perceptual experience.

Now, in the case of visual perception, the notion of an appropriate cause is tied to its normal role in cognition, which is to provide information about how the world is before one, through current and ongoing causal interaction with the environment. Thus, when perceptual experiences as of nearby *x's* are *not* caused by nearby *x's,* we have a good reason for saying they have occurred in the absence of appropriate stimuli, and are non-veridical. For in such a case the state is not playing its proper role, and is likely to lead to epistemically unfavorable beliefs and inferences.

However, when one imagines a flying cow, one is not at all inclined to think that there is a nearby flying cow, or to make any dangerous inferences. People of sound mind more or less never come to believe that the object of their imaginings is present before them. Given that imaginings do not tend to cause epistemically problematic beliefs in the presence of their objects, why think that they are failing of their cognitive roles—that is, occurring *in the absence of appropriate stimuli*—whenever they are not caused in the way that veridical perceptual experiences are caused?

On the face of it, one's intention or desire to imagine a flying cow is a perfectly appropriate cause of a flying cow image. That's because imaginings (unlike perceptions) are under voluntary control. And to be under voluntary control is to be apt to be caused in a

particular way by one's desires and intentions. So, if a particular imagining is caused by one's desires and intentions, there are no grounds for saying that it has occurred in the absence of appropriate stimuli. Like perceptual experiences, imaginings *as causes* have an important role to play in successfully guiding behavior. But it is not the same role as perceptual experience. Imaginings do not guide our behavior by telling us what is currently present before us, but (often enough) by telling us how things were, will be, could be, or are somewhere else. Better, then, to pursue an account of the contents and success conditions of imaginings that coheres with this role—and with the very different *appropriate* causes and effects they have, compared to perceptual experiences.

Conceiving of the contents and correctness conditions of imaginings as strongly akin to those of perception is, I think, simply an overreaction to the undeniable similarities between imagining and perceiving. It is well known visual imagery and visual perception draw on partially overlapping neural networks (Kosslyn, Thompson, & Alpert, 1997; Slotnick, Thompson, & Kosslyn, 2005); and it may even be that they both represent objects by means of a common, non-discursive "pictorial" cognitive format. But these are not in themselves reasons to conceive of the overall contents and correctness conditions as the same. It is quite possible that the brain re-uses localized neural networks and capacities for a variety of processing tasks that are functionally distinct (Anderson, 2007). So the kinds of neurological data to which, e.g., Goldman (2006b, pp. 151-157) appeals in arguing that imaginings and perceivings are "intrinsically pretty similar" do not support such a *strong* comparison to perception as the *as present* view proposes.[5]

Others point to behavioral and phenomenological data as support for the as present approach. Alex Byrne finds it intuitive that:

> If sensuous imagination involves the appearance of anything, it's the appearance of *actuality*, not possibility. What "appears to be so", when one imagines a purple polar

[5] Goldman of course allows that visual imaginings and visual perceivings do not share *all* their neurological and functional properties. The important question is whether he holds that they share the property of representing their objects as present. It seems he does, as he assumes the task of explaining how it can be that imaginings share significant properties with percepts, even if they do not lead one to *act* as if the things they represent are present (see his discussion of a visual experience of the surf that does not lead one to go surfing (2006a, p. 47)).

> bear, is that purple polar bears exist, not (merely) that they could have existed. (Of course, one will not believe that things are as they appear). (Byrne, 2007, p. 134, emphasis added).

According to Byrne, our imaginings give rise to the appearance of various things as actually existing (and also *as present*, we can assume, lest an imagining of a white polar bear be counted as offering veridical appearances). Of course, we are not so easily duped—we "will not believe that things are as they appear." He suggests that reinforcement of his claim is available through consideration of the "Perky effect," which he glosses as "mistaking perception for sensuous imagination."

As the Perky effect comes up often in comparisons of imagination to perception, it deserves some attention here. Through a painstaking process (described in detail (1910, pp. 428-431)), Perky and her colleagues were able to create conditions where subjects sometimes mistook dimly and hazily projected images on a back-lit screen for mental images of their own creation. A number of philosophers have taken Perky's results as an indication that imaginings have much the same representational properties as percepts (Goldman, 2006b, p. 152; Kind, 2001, p. 94; Nanay, 2010, p. 252; Tye, 1991, pp. 14-15).

However, the very fact that such special circumstances need to be put in place before such confusion occurs points in the opposite direction. As Perky reports, when there was any sort of "technical error" (a camera wobble, an edge of light showing in the corner of the screen, etc.), the participants immediately determined that they were not imagining the figure in view. One could more easily argue that Perky's experiment shows that imagining is very *different* from perceiving (even different from *dimly* perceiving), given the great lengths to which one must go in order to make someone confuse the two. And, at any rate, the confusion between imagination and perception can easily be attributed to shared representational properties *other than* those which, in perception, account for a thing being represented *as present.*[6]

[6] There is also significant dispute over whether Perky's results have been duplicated, and hence over their ultimate legitimacy. Insofar as there is room for disagreement, it appears terminological in origin. Byrne and other philosophers use 'the Perky effect' to refer to the mistaking of percepts for mental images, while psychologists (Craver-Lemley & Reeves, 1992; Segal, 1971) generally use 'the Perky effect' to refer to the *interference* of visual imagery with concurrent visual perception tasks (such as when active image formation causes subjects not to

So, neither the Perky Effect nor the phenomenological and neurological similarities between imagination and perception weigh in favor of the as present view. Given that it also conflicts with any non-trivial account of the contents and correctness conditions of imaginings, it should be rejected.

A possible reply on behalf of the as present view, however, is that these criticisms mistake an account of the content of imaginings for an account of *both* their content and correctness conditions. Perhaps defenders of the as present view mean only to give an account of the content of imaginings, without any making any commitment concerning their mode or attitude. So, just as one can entertain a content such as 'it is raining' without believing it (and so without *misrepresenting* anything), perhaps one can be in a quasi-perceptual imagistic state with the content 'there is a blue polar bear' without having any belief-like commitment towards that content—and so without misrepresenting. In this case, we might wish to say that while the content of a sensory imagining is similar to that of a perceptual experience, the attitude, mode, or assertoric force of the content bearing state is quite different.

I will how consider now two proposals along those lines—what I will call the 'as possible' and 'fitless' views, respectively.

2.2. The As-Possible View

One way to avoid the problems of the as-present view is to hold that imaginings only represent various scenarios *as possible*, and not as present before one. If that is right, then the fact that imaginings do not lead us to believe in the presence of the things imagined is unproblematic. Yablo (1993) endorses a view of this kind, working from the slogan that conceiving (which, for present purposes, can be equated with imagining[7]) "involves the appearance of possibility" (1993, p. 5). He elaborates: "Just as to perceive that p is to be in a

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notice perceptible visual cues they would otherwise notice). The latter phenomenon is well established, and can be explained by the fact that imagery and visual perception draw upon common neural mechanisms. However there have been few if any duplications of the "Perky effect" as philosophers understand it. The closest are described by Segal (1971), who notes that she was forced to give subjects a placebo, which they were told would cause them to "relax", before *some* would claim that projected images were their own mental images.

[7] Yablo goes on to identify imagining as the relevant kind of conceiving that involve the appearance of possibility.

state that (i) is veridical only if p, and that (ii) moves you to believe that p, to find p conceivable [i.e. imaginable] is to be in a state which (i) is veridical only if possibly p, and (ii) moves you to believe that p is possible" (p. 7).

On Yablo's view, it is because our imaginings represent things as possible (and not necessarily as present, or actual) that they typically "move" us to believe that the scenarios they represent are metaphysically possible. And if imaginings merely represent objects or scenarios as possible, then—assuming such things generally *are* at least metaphysically possible—we are not in the awkward position of positing a useful cognitive faculty that continually issues in misrepresentations.

Yet Yablo's discussion leaves open crucial questions concerning the content and functional role of imaginings. Given his claim that imaginings are veridical only if what they represent is possible, one might think he holds that the contents themselves involve the notion of possibility—that, for example, imagining a dragon amounts to entering into a state with a content such as: "*It is possible that* there be a dragon of thus and such sort." Yet he stops short of any such claim. Rather, he emphasizes that "*the truth conditions of an intentional state cannot be read off its content alone*" (p. 6, emphasis in original). In his example, a denial that DeGaulle liked cheese is contrasted to a belief that DeGaulle liked cheese: same content, different truth conditions. His suggestion is that the notion of possibility may be implicated in the correctness conditions of an imagining, without being reflected in its content.

Thus, a natural way to take Yablo's proposal (though this requires extrapolation) is that imagining involves taking an assertoric *modal* attitude toward an imagistic content—an attitude that itself only implies the *possibility* of the represented content. To take this "modal attitude" toward the content would be for the state with that content to play a functional role in one's cognitive economy appropriate to the content's being possible (and not necessarily actual).

Yet, whether we view Yablo's idea as being that the content of imaginings involves the notion of possibility, or, rather, that the attitude brings the modal correctness condition with it, the account of imagination's correctness conditions remains too permissive, the vision of its cognitive role too coarse-grained. For, again, we know that imaginings guide practical

reasoning in lots of ordinary contexts, whether it is in spatial reasoning tasks[8], action-planning[9], the prediction of others' behavior (Currie, 1995; Goldman, 2006b), the training of motor routines (Feltz & Landers, 2007), or the development of novel technologies (Arp, 2008). To take a stock example, suppose that Joe imagines the new couch he ordered fitting through his front door. When it arrives, it does not fit. The couch will have to go back. Perhaps it is *metaphysically possible* that the couch would fit through the door. Still, it's going back to the store. The imagining was a failure. Our conception of its correctness conditions should reflect that fact.

Similar points apply to the many other action and inference-guiding imaginings of everyday life—from planning one's drive home to arranging flowers in a vase. What we want from the imagining is an actionable guide to what will be the case—or at least to what will *likely* be the case. We are not *usually* interested in the limits of the possible; so imaginings, as a class, should not be conceived of as veridical whenever their contents are possible. The most frequent (and, for our survival, most important) imaginings require a more precise conception of their correctness conditions.[10]

2.3 The Fitless View

Unfortunately, far from proposing more stringent standards on the accuracy conditions of imaginings, many who have treated the topic trend in the opposite direction, holding that imaginings have no genuine correctness conditions—and no "direction of fit"—at all (Lormand, 2007, fn. 15; Searle, 1983, pp. 13-14). The notion of a direction of fit is closely linked to that of correctness conditions; a state's having a mind-to-world direction of fit amounts to its being veridical (or "satisfied") whenever the content of the mental representation "fits" the way the world really is (beliefs and perceptual experiences are typical examples). And other states, like desires, are said to have a world-to-mind direction of fit, being satisfied when the state of the

[8] See, e.g., Cornoldi *et al.* (1996), De Vega *et al.* (1996), and Kosslyn et al. (2006).
[9] See, e.g., Addis *et al*. (2009) and Schacter *et al.* (2007).
[10] It should be noted that Yablo's (1993) project is only tangentially related to the present one. His aim there is to defend the idea that imagining provides evidence for judgments of metaphysical possibility; the (largely defensive) points he makes may suit that purpose well enough.

world comes to fit the content of the representation. How then are we to conceive of the direction of fit of imaginings? Searle seems to think that they may have none (*ibid.*). Colin McGinn, agrees, putting the point this way:

> Percepts supply (defeasible) reason to believe; they insist on their own veracity. But images do not invite belief in this way; they do not purport to tell us how the world is. They are neutral about reality.…Not only does the image not tell us about the external world in the way the percept does; it does not even try to: it is not in this line of business (2004, p. 21).

Both McGinn and Searle seem to think of imagining as akin to *merely* entertaining a content, without taking *any* attitude toward the content. On this view, my imagining of a tiger does not represent a tiger as present—it is not in that "line of business." Imagining a tiger is akin to merely entertaining the content "there is a tiger." The state lacks any direction of fit, and so is simply not assessable for accuracy or satisfaction. As Lormand puts it, such states can "mismatch the world without being in epistemic need of revision" (2006, fn. 15).

However, as already noted, in merely ascribing a content to a mental state, we do not yet know much about its role in cognition. A denial (or desire, or suspicion) that the Cubs won the World Series, and a belief that the Cubs won the World Series have clear—and very different—psychological implications. A case of *merely* entertaining the proposition that *the Cubs won the World Series* by itself has no clear functional role (which is not to say that it will have no causes or effects). The same goes for putative imaginings that, while contentful, remain "neutral" about reality. Thus, holding that imaginings completely lack correctness conditions, or are "neutral about reality," fails to connect the content and attitude of imaginings in any substantive way to the specific functional roles they play in cognition.

Why, then, have philosophers found this view attractive? Part of the answer may be that there are indeed some sensory imaginings that are, as it were, neutral about reality, just there are cases where a person entertains a proposition while remaining neutral about its truth. Of course, the fact that we sometimes entertain a proposition in this neutral mode lends no credence to the idea that *all* propositional thought is neutral about reality. Why, in the case of sensory imagination, would the neutrality of some imaginings be taken as evidence for the

neutrality of them all? Here I can only speculate. Part of the answer may lie in imaginations' close intuitive tie to the fantastical. We do not believe our fantasies to be the case, so there will naturally be a reluctance to view fantastical imaginings as representing their contents as actualized. If we take fantastical imaginings as the rule for all imaginings, we may then wish to call them "fitless". Yet, given that fantasies are usually directed at things we desire or want to be the case, the link between imagination and fantasy warrants conceiving of such imaginings as having "world to mind" satisfaction conditions, akin to those of desire, and *not* as having none at all. This is not to say that there are no imaginings that are "fitless" in nature—only that there is nothing in the nature of (paradigmatic) fantastical imaginings that warrants concluding that imaginings, as a class, lack satisfaction conditions.

The view that imaginings do lack any such satisfaction conditions may also be motivated by an assumption that mental imagery-involving states should, like the perceptual experiences they resemble, be treated *as a class* when considering their correctness and/or satisfaction conditions. So, if one thinks that all perceptual experiences represent their contents as present, it will be natural to assume that all imagery-involving states represent their contents as present…or as possible…or "neutrally."

Whatever the reasoning behind the fitless and as present views, my strategy in the next section will be to hold that, just as propositions can be entertained under a variety of attitudes, which give rise to distinct veridicality and satisfaction conditions, so too can imaginings. We need not view all imaginings as a class when conceiving of their content, attitude, and satisfaction conditions.

3. The Imaginative Attitudes

This section lays out an approach to thinking about imaginative attitudes, focusing on one attitude in particular—the attitude of judgment-imagining. I will, for the most part, wait until Section Four to address likely objections.

3.1 Judgment Imaginings

Belief is an assertoric attitude with a mind-to-world direction of fit. To symbolize a particular belief, we can use BEL to represent the attitude and include within parentheses the content of the belief. So, the belief that it is raining can be symbolized as: BEL (it is raining). We understand the BEL part of that symbolization to the extent that we understand the functional (and inferential) role of beliefs in general. Judgments, as I will understand them, are occurrent mental acts where a person comes to have a particular belief. Using JUD to stand for the attitude of judgment, we can express the judgment that it is raining as: JUD (it is raining).

Let us use JIG to stand for an imaginative attitude akin to judgment—what I will call judgment imaginings. In calling the attitude a "judgment imagining", I am not suggesting that it is a kind of non-serious or pretend form of judgment. So judgment imaginings, as I will understand them, are not akin to "belief-like imaginings" as some use that term (see, e.g., Currie & Ravenscroft (2002), Doggett & Egan (2007), and Schellenberg (2013)). Rather, the idea will be that JIGS simply *are* judgments that involve mental images as proper parts; they can be thought of as a subset of all judgments.

We can symbolize judgment imaginings by using JIG with a content following it in parentheses. As JIGs are a form of sensory imagination, at least some of their constituents will be sensory images. So, the content of a JIG must somehow account for the place of the image. I will propose that imagining constitutively involves two components of content, one of which pertains to the visual (or other sensory) image itself, the other of which lies outside of it and is transferred from one's intentions.[11] Considered together, these components constitute a single judgment-imagining.[12] That is, I think it is an error to conceive of sensory imagination as *merely* involving sequences of images. The argument for this alternative is the explanatory

[11] Such intentions may be understood as usually being intentions-in-action (as opposed to "prospective intentions," which are linked to planning) (Cf. Searle, 1983, Ch. 3). These intentions can, for present purposes, be equated with action-guiding desires, and need not occur consciously. Most intentions in action—such as the intention to open one cabinet rather than another on the way to getting a glass of water—do not occur consciously.

[12] Compare Fodor's (1975, p. 190) notion of entertaining an image *under a description*, according to which images "convey *some* information discursively and *some* information pictorially." "It is in part the description," he notes "that determines what…an image is an image *of*." The present proposal is that the relevant "description" should be considered a proper part of an imagining.

work it can do, combined with its relatively low theoretical cost (the latter being the topic of Section Four).

I will use CAPS to distinguish the specific portion of an imagining contributed by a sensory image. However, the fact that psychological contents are here described in natural language should not be taken to suggest that their format is itself language-like. Also, it should not be assumed that, for every word included in CAPS, the relevant image represents that very property. So, the image whose content is described as A BIG BROWN HORSE may not itself represent the property of being a horse. The words in CAPS are simply meant to point the reader toward a general idea of the kinds of (perhaps only low-level, superficial) properties the image represents.

Like visual perceptual states, visual images have a (sometimes) rich and fine-grained content that can be difficult, if not impossible, to capture in the words of a natural language. This is part of the reason I do not pretend to do so with the words in CAPS. Thus I will include an ellipsis as part of the description of such contents to indicate that the words in CAPS offer only a hint of the total content. The ellipsis is also meant to convey that the actual imagistic content may at times include within it what we would intuitively count as a "sequence" of images (and not simply a single static image). Finally, and importantly, I will suggest that the contents of images should be thought of as akin to indefinite descriptions (i.e. descriptions beginning with 'a' or 'an', or 'some'). Among other things, this allows for an account of how one and the same image (in the sense of an image type) can be used to imagine many different objects and scenarios.

To put this into practice, we can go back to the example of Joe imagining the couch he ordered fitting through his doorway. He might have an imagining we can express as:

(1) JIG (When the couch arrives, it will be: A TAN COUCH-SHAPED OBJECT FITTING THROUGH A RECTANGULAR DOORWAY…).

While the image itself only represents (in a fine-grained way) a tan, couch-shaped object fitting through a doorway, the imagining as a whole represents the specific couch he bought as fitting through his doorway. This is thanks to the (non-CAPS) portion of content copied from his

intentions.[13] In this case, Joe is trying to predict how the couch will look as it comes to his door, in order to determine whether it will fit through. The attitude he takes toward the overall content is that of judging it to be the case. So the mental episode as a whole is veridical if the couch will indeed fit, and non-veridical if it will not.

To try another example, suppose that Avery has only seen misleading pictures of the Arc de Triomphe—pictures which make it look silver in color. Setting out on his first trip to Paris, he might engage in the following imagining:

(2) JIG (The Arc de Triomphe is: A BIG SILVER ARCH…).

In such a case we can say that Avery has *misimagined* the Arc de Triomphe, just as one might *misperceive* the Arc de Triomphe if somehow, through a trick of light, one saw it as silver. Taking his first stroll down the Champs Elysées, he comes upon the arch itself and thinks: "It's not at all as I imagined it." Intuitively, he did indeed imagine the arch before; he just got it wrong. He imagined *as silver* something that is not in fact silver. That is why it is a *mis*imagining. He was trying to get it right and failed.

But note that a successful imagining closely related to (2) is also possible—one that involves the same type of mental image. It is possible to successfully imagine the Arc de Triomphe *as silver*, even if one knows it is not. For a clear role of many imaginings is to represent not how things are or were, but how things could be, or could have been. Such counterfactual imaginings are closely associated with the creative "freedom" of imagination. Knowing full well what the Arc de Triomphe looks like, Ella might imagine the arch *as silver*, just because she is interested in what it would look like painted silver. For Ella, the experience could be symbolized as:

(3) JIG (The Arc de Triomphe painted silver would be: A BIG SILVER ARCH…)

Here the imagining still has correctness conditions, but of a different (modal) kind. The content pertains to how the Arc de Triomphe *would look* under certain conditions. And if the arch

[13] McGinn suggests a similar approach: "the imaginer starts with the object and then constructs an image of it" (2004, p. 31). The particular *object* of the imagining is determined by intentions: "I know that my image is of my mother because I *intended* it to be; I don't have to consult the appearance of the person in the image and then infer that I must have formed an image of my mother" (p. 31).

would not have those characteristics when coated in silver, then it is another misimagining. But it is one with a modal character.

Note that, for a JIG to be veridical, it is not necessary for the image to represent the object exactly as it looks (or would look), with all the same detail as a comparable perceptual experience. Just as sentences (e.g., "The brown dog jumped") can be true while leaving out many details (What shade of brown? How high?), so too can an imagining be veridical without going into all the details that a perceptual experience might. To assume otherwise is to mistake the cognitive role of imaginings for that of perceptual experience.

Imaginings with modal character can also be aimed at the past. The person who imagines what it would have been like if Mitt Romney had won the 2012 U.S. Presidential election may have an imagining with the content:

(4) JIG (Mitt Romney giving a victory speech on election night would have been: A SMILING WELL-GROOMED MAN…).

Of course, (3) and (4) add more structure to certain acts of imagining than one might have expected, pre-theoretically. But then, there must be some cognitive difference between the person (Avery) who imagines the Arc de Triomphe as silver with the idea that it *is* that way, and the person (Ella) who imagines it counterfactually as being that way. And there must be some difference between the person who, thinking Romney won, imagines Romney giving a victory speech and someone who imagines such a speech while knowing that it never in fact occurred. The above is a proposal for capturing these differences that respects the different roles each imagining plays in guiding the behavior of the imaginer. By adding in the structure here (as opposed to merely within their background beliefs), we are able to avoid the perplexities of the as present and fitless views, while saying something more accurate about the contents and correctness conditions of imaginings than the as possible view.

3.2 Episodic Memory Imaginings

I have focused so far on just one imaginative attitude—the attitude of judgment-imagining. Only some imaginings are JIGs. Other imaginings may involve taking another attitude toward a partly imagistic content, or no attitude at all. An example of a related but

distinct attitude is the attitude of episodic memory imaginings, or EMIs. Suppose that Neil visited the Arc de Triomphe during his first trip to Paris. On the plane ride home he imagines the arch as it looked to him along the Champs Elysées. This is a case of imagining that is also a case of episodic memory (as the notion is understood in psychology). The imagining can be symbolized as:

(5) EMI (The Arc de Triomphe was: A LARGE WHITE ARCH…)

The past tense 'was' captures the fact that the imagining is a memory. The imagining is veridical even if the Arc de Triomphe was painted red today and *no longer is* a big white arch (or even if it no longer exists). What the imagining represents is that the arch *was* thus and such a way. If it was, the past-tensed imagining is veridical.

However, the arch's having been that way is not yet enough to make it the case that Neil is *remembering* the Arch. Remembering, in the sense of episodic memory, has its own success logic, requiring one to have had the right kind of past perceptual encounter with the object in question. For we can distinguish two questions: 1) is the content of the imagining satisfied? Here the answer is yes, because the arch was in fact the way his image represents it. The second question is: 2) is this past-tensed imagining also a case of episodically remembering the object in question? Here an additional requirement concerning past perceptual contact of the right kind must be met: he must have seen it looking that way in the past. This is what differentiates (5) from a JIG with the same content; the latter's veridicality does not require past perceptual contact of the same kind with the Arc de Triomphe. Since Neil did in fact see the arch looking that way, this is a successful case of episodically remembering the Arc de Triomphe. But someone else could have had an imagining with the very same content, and which played much the same cognitive role, yet where it failed *qua* episodic memory.

For instance, consider Bob, who was drugged and taken to the Paris Pavilion at Disney's EPCOT Center, where there is a convincing replica of the Arc de Triomphe. Believing himself to have been to Paris, Bob may later reflect on the day and have the imagining:

(6) EMI (The Arc de Triomphe was: A LARGE WHITE ARCH…)

While (6) has the same content as (5)—and would have been veridical if it were a JIG—it fails as an episodic memory because Bob has not had the right sort of causal contact with the Arc de

Triomphe to qualify it as an episodic memory of the Arc de Triomphe. Unlike a JIG with the same content, it will lead to false inferences about his own past whereabouts, as this is part of the functional role of episodic memories.

3.3 Taking Stock

Introducing imaginative attitudes allows for an account of how imaginings can have correctness conditions linked to their actual roles in cognition. I gave two examples of imaginative attitudes—JIGs and EMIs—though we can allow for many others, including conative attitudes with a world-to-mind direction of fit. Equally important to positing imaginative attitudes, however, is the idea that imaginings have complex contents, only part of which are accounted for by the contribution of one or more mental images. Before turning to some challenges to that idea, we can take stock of what these two proposals together allow us to explain:

1) As already emphasized, we can see how imaginings have non-trivial correctness conditions, with clear links between those conditions and their functional and inferential role. This allows, in turn, for an appropriate connection between content and correctness conditions, on the one hand, and the conditions under which the state leads to successful (or unsuccessful) action and inference, on the other. This is needed if there are to be publicly available grounds (other than verbal self-reports) for ascribing imaginings with particular contents.
2) We have an account of how a single image type can be used in imaginings of different particulars and scenarios (as many have previously claimed possible (Martin, 2002; Noordhof, 2002; Peacocke, 1985)).
3) Relatedly, we have an explanation of how an imagining can be of our about things other than the causal source of the images involved (a capacity assumed by any theory which grants we can imagine things never perceived).
4) We have an account of how an imagining can be about the past, present, or future (as is supported by recent empirical work suggesting a single core neural network underlying

both episodic memory and "imagining the future" (Schacter & Addis, 2007; D.L. Schacter, D.R. Addis, & R.L. Buckner, 2007).

Of course, these explanations work in part by pushing some of the burden of explanation onto non-imagistic, discursive thought (however that is to be understood). Specifically, the involvement of non-imagistic contents is important to explaining the ability of imaginings to be about different particulars, to represent counterfactual scenarios, and to be about the past, present, or future. Typically, the question of how discursive thought is able to play these representational roles is assumed less pressing than for purely imagistic thought (though I do not pretend to offer any answers here). Yet, even if that assumption is wrong, the point remains that we need not double our work by trying to answer these questions about representation in new ways for imagistic states. Instead we may appeal to hybrid contents of the kind described. In so doing, we are able to arrive at a workable, naturalistic account of imagination's correctness conditions—one appropriately linked to its successes and failures in guiding action and inference.

4. Amount Due

As just noted, an important piece of the present proposal is that the constituents of discursive (and presumably amodal) thought can combine with mental images to form imaginings with complex contents and correctness conditions of various kinds. The orthodox view in contemporary philosophy of mind is that mental images have an iconic or analog representational format (Fodor, 2003, Ch. 2), whereas discursive thought (often equated with conceptual thought) has a language-like format, such that the meaning of a complex discursive representation is a function of the meaning of its discrete, semantically significant parts (and the rules for combining them). And it is generally assumed that these two formats of representation are like oil and water—they don't mix.

The main reason for holding that the two formats cannot combine to form a single mental state traces to the issue of logical form. One of the great dreams of cognitive science has been that transitions in rational thought may be modeled on the rules for manipulating the

variables and connectives of formal logic. We know that the truth-preserving inferences of formal logic can be captured by a set of rules for manipulating symbols based purely on their intrinsic physical properties—their "shape", as it is sometimes put. In that way, relations of semantic entailment among symbols can be mirrored by relations of causal entailment among those same symbols, based on their intrinsic physical features. This is, in essence, how computers work. The hope (the dream) is that human thought processes might also, in effect, be viewable from two perspectives simultaneously: as unfolding according to physical laws governing the physical realizers of symbols in the brain—where this "unfolding" at the same time mirrors the rational relations of semantic entailment we take our thoughts to follow at the personal level. A crucial part of this picture is that thoughts have discrete meaningful *parts*, akin to the parts of a logical expression, such that the meaning of a thought is a function of the meaning of its parts. Without this assumption—or, if you like, *hypothesis*—there is no clear analogy to be drawn between the operations of a computer and human cognition.

Introducing mental imagery into this picture is usually thought to create problems. For it is often (though not universally (Pylyshyn, 2002)) held that mental images lack the language-like compositional structure necessary for the desired analogy of thought to formal logic. Mental images are usually thought to be "iconic" representations, which, while having content, lack discrete, semantically significant parts. In Fodor's (2003, p. 34-7) term, iconic representations lack "canonical" decompositions, in the sense that there is no one way of breaking them into minimally meaningful parts of the sort that can be recombined in the manner of logical expressions. Any way of dividing up an image up will result in parts that refer, and thus that have content. If that is right[14], it becomes unclear how a cognitive system could use this type of representation in processes that are to mirror those of formal logic, unfolding according a fixed set of rules for treating connectives and variables.

There are plenty of debatable assumptions involved in setting up this problem, some of which I will note below. But first it should be observed that the potential problem here is not

[14] Giving an airtight account of the iconic/discursive distinction is no mean feat. Fodor's attempt is as good as any I know. Suffice it to say that if the iconic/discursive distinction cannot be drawn in a non-question-begging way, so much the better for the proposal that iconic and discursive representations combine in the manner proposed.

special to the present account. *Any* theory that grants a role for imagistic thought in practical reasoning must confront the issue of how imagistic thought—if it does indeed occur in a non-discursive, iconic format—inferentially interacts with discursive thought. Little is gained on that front by holding that the two kinds of representation never combine into a single representation with correctness conditions. That is, to the extent that mental images influence our reasoning—which I take to be beyond dispute[15]—then, provided they occur in an iconic format, we have already moved beyond what any simple comparison of human inference to the manipulations of formal logic could explain. On the other hand, if it turns out that mental images have a discursive format after all—as Zenon Pylylshyn has long argued is consistent with existing empirical results—then the present account does not face any special barrier here after all. Either way, the proposal that some human thought involves language-like representations combined with iconic representations faces no challenges not also faced by *any* attempt to find a place in practical reasoning for mental imagery.

Moreover, the dream of assimilating human inference to the easily codified rules of formal logic is far from universally held. Many psychologists now see human inference as governed by a motley assortment of "quick and dirty" heuristics that bear no obvious relation to the inference rules of formal logic (Evans, 2006; Girgerenzer, Todd, & Group, 1999; Nisbett & Wilson, 1977; Tversky & Thaler, 1990). And, in many cases, the kinds of mental states involved in high-level reasoning—such as conditional reasoning, or planning for the future—are explicitly held to be imagistic or "analogue" in nature (Johnson-Laird, 1996; D. L. Schacter et al., 2007). Supposing these research programs are on the right track, the present conception of imagination introduces no new theoretical barriers to the idea that imagistic thought must be fully integrated with our higher cognitive faculties. In short, the further our conception of human reasoning diverges from the clean operations of formal logic, the less problematic it is to introduce cognitive formats that lack a quasi-logical syntactical structure.

Finally, while the idea of an imaginative attitude is new, the idea that imagination involves both iconic and discursive elements working in tandem is not. Precedents can arguably

[15] For explicit empirical support, see Rubin & Greenberg (1998) and Greenberg *et al.*'s (2005) accounts of the cognitive deficits had by individuals incapable of generating visual imagery.

be found in Fodor's (1975, p. 190) notion of entertaining images "under a description," Tye's (1991, Ch. 5) interpreted symbol-filled arrays, Kung's (2010) images with "assigned" contents, Reisberg's (1996) images set in "reference frames," and Johnson-Laird's (1996) "mental models." To be sure, much work needs to be done in explaining how different cognitive formats—if they are indeed different—manage to combine and inferentially interact in fruitful and generally truth-preserving ways. The point is simply that, as theorists tackle that question, a promising approach will be to view both iconic and discursive states as contributing to the contents of our sensory imaginings—contents toward which one may take a variety of attitudes. Such an approach brings no special burdens with it, and offers real leverage on a number of important questions.

5. Conclusion

Appreciating imagination's capacity to either succeed or fail in guiding human inference and action is a necessary part of achieving an accurate picture of imagination's place within the larger causal structure of the mind. I have argued that positing imaginative attitudes offers an elegant means for explaining how imaginings can have non-trivial correctness conditions. This discussion focused on just one such attitude—the attitude of judgment-imaginings. But we can allow for many others, including conative imaginings, where mental images form proper parts of some desires.[16] I have proposed that such imaginings be viewed as having hybrid contents, containing both discursive and imagistic representations. The theoretical cost of this approach, compared to its benefits, is modest.

All of these ideas cut against two trends that have shaped most theorizing about sensory imagination. First, there has been a tendency to seek a uniform approach to understanding the content and correctness conditions of sensory imaginings. The reasons for this are unclear, though it may be due to a tacit assumption that if perceptual experiences (as a class) have the same kinds of correctness conditions, so too must all sensory imaginings. Yet the similarities of mental imagery to perceptual experience in no way require a blanket

[16] Such a view is not to be confused with the view that there are "desire-like" imaginings or "i-desires" (Doggett & Egan, 2007). Rather, the idea would be that there are genuine desires that have mental images as constituents.

approach to the correctness conditions of imaginings. Some imaginings may have correctness conditions akin to beliefs with similar contents, other may not; it depends on the *attitude* one takes toward the image-involving state.

At the same time, there has been a reluctance to develop, in any explicit detail, views on which imagistic and discursive representations combine into single states where the correctness conditions of the state is a function of both elements. While the cognitive-scientific dream of reducing semantics to syntax generates some of that reluctance, the emerging consensus in psychology and philosophy is that the human mind does not work in ways that are consistent with the dream the reluctant seek to preserve. Both empirical psychology and the philosophy of mind are moving toward a greater appreciation of imagery's role in practical reasoning—one that requires the full inferential integration of imagistic states with those traditionally assumed to have language-like compositional structure. Thus the time is ripe for imaginative attitudes, hybrid contents, and the questions they bring with them.[17]

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