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IMAGERY AND POSSIBILITY

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Abstract

We often ascribe possibility to the scenes that are displayed by mental or nonmental

sensory images. The paper presents a novel argument for thinking that we are prima

facie justified in ascribing metaphysical possibility to what is displayed by suitable

visual images, and it argues that many of our imagery-based ascriptions of metaphysical

possibility are therefore indeed prima facie justified. Some potential objections to the

arguments are discussed, and some potential extensions of them, to cover nonvisual

forms of imagery and nonmetaphysical forms of possibility, are endorsed.

1. Introduction

Mental visual imagery is a rich source of beliefs about possibility. I have yet to see a cabbage

that is the size of a car, for instance, but I believe that there could be a car-sized cabbage,

because I am able to visualise one.[1] And, while beliefs about possibility frequently play a

major role in relation to the abstruse concerns of Philosophy, those that are generated using

mental visual imagery are commonly relevant to pressing practical matters.

Imagine that you need to get a large potted plant into a room, by taking it up some

stairs and through an awkwardly sited doorway on the left. You might just carry the plant

upstairs and hope to figure out on the hoof how best to get it to its destination. But you might

tackle the problem in a more reflective way: you might visualise an appropriately shaped

plant's journey up some suitable stairs and towards a correspondingly situated doorway; and

you might base your eventual actions upon some images that concluded with the plant's entry into an appropriate room.

Suppose that you were to follow that second strategy. As Williamson has emphasised[2], you would naturally take the relevant mental visual images to inform you about what *would* happen if a plant were to follow the paths shown therein. But, in just going ahead and basing your actions upon some of the images, you would also be presuming that the paths traced by the plant within the images corresponded to paths that you *could* get a plant to take[3]; and you would be presuming that the scenarios that would prevail if those visualised paths were to be followed by a plant—in particular, the plant's eventual passage into the stairtop room—were thus also realisable through your efforts.

More generally, many of us base many of our beliefs about possibilities that we do not believe to be actualised ('unactualised possibilities', hereafter) upon our ability to produce mental visual images that display scenes of suitable kinds. And that attitude towards mental visual imagery is paralleled by a similar stance that we may take towards *nonmental* visual imagery, and indeed towards mental and nonmental *nonvisual* sensory imagery.

Just as mental visual imagery showing a car-sized cabbage might naturally lead me to accept that there could be a cabbage on a suitable scale, so a painting might carry me to the same belief. And one's efforts towards solving the plant-shifting puzzle described above might be guided not by mental visual imagery, but rather by one's viewing of a computer simulation of a plant's journey up some stairs and through a suitable doorway. Similarly, you might base your belief that there could be a certain sort of scene—a person speaking in an unusual manner while clapping, say—on some mental auditory imagery that you can produce, or in response to hearing a playback of a computer-generated audio file; and you might accept that your arm could move in a certain manner because you are able to entertain suitable mental proprioceptive imagery.

We have a tendency to presume, then, that those scenes that may be displayed by means of appropriate mental and nonmental sensory imagery are possible. And this tendency strongly informs our propensity to ascribe possibility to what we can imagine: the most compelling inferences 'from imaginability to possibility' are surely those in which what is imagined is most close to what is *imaged*.[4]

While those presumptions may not often relate explicitly to 'metaphysical possibility', their truth requires the metaphysical possibility of the relevant scenes: it is feasible for me to get a certain sort of potted plant through a doorway only if it is metaphysically possible for a potted plant of an appropriate type to make a suitable entry.[5] How defensible is our tendency to ascribe possibility—and discussion will focus solely upon metaphysical possibility until section 6 below—to what sensory images display?

One might try to answer that question by subsuming it under other, more general, questions that philosophers have already sought to address. Numerous philosophers have argued that appropriate forms of 'imaginability' and 'conceivability' are good guides to possibility, for instance.[6] One might seek to use those arguments to generate conclusions concerning sensory imagery, by connecting sensory images to our powers of imagining and conceiving.

But there is also some interest in considering, just on its own terms, the standing of sensory imagery within modal epistemology.[7] The presentation of impossibilities by means of visual imagery is much more striking than the presentation of impossibilities by means of sentences, for instance: contrast the interest of the 'impossible figures' owed to Escher and others with the relative banality of contradictory sentences like 'it is raining and it is not raining'. More especially, though, we will see shortly that there are reasons for trusting in the possibility of what is shown by appropriate sensory imagery, where those reasons clearly do not generalise straightforwardly beyond the imagistic case.

Here is the plan for what follows. Section 2 presents some crucial, but hopefully fairly uncontroversial, claims relating to vision; while this paper's arguments are not confined to visual imagery, the visual case will provide a useful springboard for the rest of the discussion. Those claims are employed in an argument formulated in section 3, for the conclusion that we are prima facie justified—justified, that is, in the absence of any available additional defeating considerations—in ascribing possibility to what is shown by means of suitable visual imagery.

The argument's most distinctive feature is its attempt to use our justified belief in the reliability of vision proper, under appropriate circumstances, to yield prima facie justified beliefs in the possibility of what suitable visual images display. The paper will thus suggest that the epistemic utility of mental visual imagery in relation to our knowledge of possibility is, in some ways, akin to the utility of mental visual imagery in relation to our knowledge of the past, through visually-based episodic memory, in that the reliability of genuine vision plays an important role in both cases.

Section 4 considers the scope of the previous conclusion, by investigating the extent to which 'suitability' in the relevant sense is likely to be accessible to us. It argues that many of the ascriptions of possibility that we base upon visual imagery are indeed prima facie justified. Section 5 discusses some potential objections that might be raised in response to the previous arguments. Section 6 considers whether the arguments in the preceding sections, which focused upon visual imagery and metaphysical possibility, can be generalised to cover imagery that is bound to other sensory modalities, and to cover nonmetaphysical modalities. Section 7 concludes, by considering the potential reach of imagistically-based ascriptions of possibility.

2. Vision, reliability, and reliability-conditions

In the right circumstances, our visual systems are reliable guides to the world. Use mental visual imagery to imagine a perfectly normal visual experience: one in which a nondescript table looks to be present. It is obviously possible for things to look that way to someone even though there is no table in the vicinity. But if things were to look that way to someone built like us, someone also placed in the same optically-relevant general conditions that you and I have hopefully been in over the last hour—normal ambient light, a drug-free brain, undamaged retinas, …—then the odds are that things really would be, around that person, as they looked to her to be.

Let's say that a group of conditions form some *visual reliability conditions* just in case the following holds: when the human visual system is employed by someone under those conditions, the ways that things look to the relevant viewer to be will tend to be ways that things really are around his perspective.[8] A group of conditions amounts to some 'visual reliability conditions', that is, just in case the conditions' joint satisfaction in some circumstances tends to ensure the accuracy of the visual appearances that are generated by the human visual system's operation under those circumstances. For the purposes of what follows, it is simply assumed that we are justified in holding there to be groups of visual reliability conditions.

What more can be said about the details of any groups of visual reliability conditions? A priori, not very much: the specifics of the conditions under which our visual systems are reliable depend upon the specifics of the latter, and Pure Reason can no more discern those than it can fathom the workings of the weather. A posteriori, though, there is rather a lot to say; the forces of optics, neurophysiology, and perceptual psychology are combining to construct increasingly detailed theoretical accounts both of the conditions under which our

visual systems work well, and of why our visual powers will tend to function reliably under those conditions.

Suppose that we are aware that a visual experience was produced by the human visual system when it was operating under some visual reliability conditions. Then we are prima facie justified in presuming that the visual appearances featuring in the relevant visual experience were accurate, because we know that visual appearances enjoyed under groups of visual reliability conditions tend to be accurate. To take an analogous case, we know that swans living in England tend to be white. Suppose that someone finds a swan in Pontefract. In the absence of any further relevant defeating considerations, we may reasonably expect the swan to have been white.

It is worth noting a potential complication at this point. Suppose that someone finds a swan in Pontefract. Now assume that the swan is black. Does an expectation that the swan is white then count as prima facie justified? Or suppose that we are aware that a visual experience was produced by the human visual system under some visual reliability conditions; but suppose, too, that the visual experience is an hallucination.[9] Does a presumption that the visual appearances involved in the relevant experience were accurate count as prima facie justified?

There are two ways that one might go when faced by those sorts of cases. The first strategy leans heavily upon the specifics of the notion of 'prima facie justification'. In particular, it relies upon the fact that to say that someone has prima facie justification for accepting some claim is not, in itself, to say that the person has any justification at all for accepting it: it is merely to say that the person is justified in accepting the claim so long as no defeating considerations are available.

So, suppose again that a certain visual experience occurs under some visual reliability conditions, where that visual experience is also assumed to be an hallucination. It may be

held that we are prima facie justified in taking the visual appearances involved in the relevant hallucinatory visual experience to be accurate—that is, we will be justified in regarding them as accurate, so long as no defeating considerations are available. But, of course, defeating considerations are available, as we have supposed the experience to be hallucinatory. Hence we are not out-and-out justified in regarding the hallucinatory experience's accompanying visual appearances as accurate.

One might hold, then, that we do indeed have prima facie justification in the sorts of cases being considered, but that they are ones in which our prima facie justification for appropriate claims is immediately blocked from converting to full justification. For considerations which straightaway defeat those claims are explicitly incorporated within the relevant examples.

Alternatively, one might claim that we do not have prima facie justification for accepting the relevant claims about swans and visual experiences, on the grounds that the previous cases explicitly feature elements that are flatly incompatible with those claims. Reconsider the hallucinatory visual experience that occurred under some visual reliability conditions. On this second view, we are not prima facie justified in accepting that the experience's accompanying visual appearances were accurate, because the visual experience has been characterised in a manner that rules out the accuracy of the visual appearances that it involves.

I must confess to being unsure as to which of these strategies is the best. I have therefore opted for the first one, to streamline in certain respects the presentation of the arguments given below.[10] But the differences between the two approaches are not critical to what follows. The ensuing arguments could be rewritten, in a more wordy form, if it were to be assumed that characterisations of visual experiences as illusory or hallucinatory have the power to block us from having prima facie justification that we would otherwise possess,

rather than instead serving to block the path from prima facie justification to full justification. (These issues will resurface in section 5 below, when I consider a potential objection to this paper's main arguments.[11])

To conclude this section, a final definition. Consider some visual image. Suppose that the image shows things as looking a certain way. The relevant way for things to look is *reliability-compatible* just in case, for some group of visual reliability conditions, the human visual system's operation under those conditions could yield a visual experience in which things look that way. Given that your current visual experiences are occurring under some visual reliability conditions, for instance, it follows that the way that things look to you right now is reliability-compatible.

The next section will use the main materials developed in this section to argue that we are prima facie justified in presuming that visual images that we appreciate to be suitable ones, in a sense to be explained below, portray possibilities.

3. Reliability-compatibility, visual imagery, and possibility

Produce a mental visual image of a pink horse. Your mental visual image shows a pink horse because it shows things as looking a certain way. More specifically, suppose that someone were to enjoy a visual experience in which things looked to the person the way that your mental visual image shows them as looking. Then the person would seem to see a pink horse. Similarly, your mental visual image show a pink horse with blue eyes only if it shows things as looking an appropriate way. It will do so only if, more fully, anyone to whom things looked the way that the image shows things as looking would thereby seem to see a pink horse with blue eyes.[12]

Consider some group of visual reliability conditions. Suppose that you are informed that someone is having a visual experience under those conditions. Then, as noted in the previous section, you are prima facie justified in presuming that the visual appearances involved in that experience are accurate. But now suppose, more specifically, that you are told that, under the given reliability conditions, someone is having a visual experience in which things look the way that your visual mental image of a pink horse shows them as looking. You are again prima facie justified in presuming that the visual appearances featuring in the relevant visual experience are accurate. But those visual appearances posit a pink horse. Hence you are prima facie justified in presuming that, within the circumstances of the given visual experience, there is a pink horse.

We can transfer that reasoning to the realm of the possible, by deploying the notion of reliability-compatibility that was introduced in the previous section. Suppose that you are justified in taking the way that your mental visual image of a pink horse shows things as looking—like *that*!—to be reliability-compatible. Suppose, that is, that you are justified in holding that some possible world contains a subject who is having a visual experience in which things look like *that*, where the relevant experience is occurring under some visual reliability conditions. Then you are prima facie justified in presuming that the visual appearances involved in the person's experience are accurate. But you are therefore prima facie justified in presuming that, within the possible world that forms the context of the person's visual experience, there is a pink horse. You are thus prima facie justified in concluding that pink horses are possible.

More generally, consider some mental or nonmental visual image, one that shows things as looking a certain way. Assume that we are justified in accepting that the way that the image shows things as looking is reliability-compatible. Assume, that is, that we are justified in accepting that there is a possible world in which things look like the relevant way to

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someone, where the person is situated in a context in which the human visual system tends to work well. Then we are prima facie justified in accepting that what the visual image displays, on account of its showing things as looking the relevant way, is possible. We are thus prima facie justified in assuming that 'suitable' visual images—ones whose contents feature ways for things to look that we are justified in taking to be reliability-compatible—portray possibilities.[13]

None of the previous considerations will matter much, though, if visual images featuring ways for things to look that are reliability-compatible are vanishingly rare, or if we are completely unable to tell apart those which do feature reliability-compatible ways for things to look from those which do not. The next section therefore considers reliability-compatibility, and our sensitivity to it, in more detail.

4. More on reliability-compatibility

Produce a perfectly unexceptionable mental visual image: visualise a chair made from light grey concrete, say. Your mental visual image shows things as looking a certain way. Is that way for things to look reliability-compatible? Is it possible, that is, for things to look that way to someone in the course of a visual experience—whether accurate or not—that is occurring under some group of conditions in which the human visual system will tend to work reliably?

It is hard, I think, to identify any ways for things to look that clearly aren't reliability-compatible. And there is an enormous array of ways for things to look that we know to be reliability-compatible, because things have looked those ways to us while our visual systems worked reliably. It is thus quite likely that you are inclined to accept that the previous way for things to look is reliability-compatible. A visual experience in which things looked that way to someone would, after all, be of a piece with any number of visual experiences that you

have actually had under some visual reliability conditions. What reasons could there be for claiming that *that* particular type of visual experiences is nonetheless at loggerheads with all the sets of visual reliability conditions?

Equally, though, a sceptic might wonder why anyone would hold that the human visual system, when operating under some visual reliability conditions, could yield a visual experience in which things look the way that your visual image showed things as looking. Shouldn't we reserve judgement on whether that way for things to look is reliability-compatible? In particular, while your visual image may have involved a perfectly 'normal' way for things to look, one might wonder why anyone would take that 'normality' to be indicative of the type's reliability-compatibility.

Your judgement that the relevant way for things to look is reliability-compatible reflects your assessment of what it would be like to have a visual sensation of the given sort: you hold that things could look that way for someone under the sort of conditions in which the human visual system generally works well. What kinds of factors might have generated that appraisal of the type's associated visual phenomenology? And is your response to it likely to be accurate?

That is an empirical question, but there are surely grounds for optimism. It hardly seems far-fetched to suppose that humankind might have developed, over the course of its history, a refined sensitivity to relationships that hold between aspects of visual phenomenology and those factors which tend to ensure the proper working of our sense of sight. In particular, consider a more easily-triggered form of sensitivity than a mere sensitivity to reliability-compatibility; namely, a sensitivity to whether, given that things look a certain way in the course of a visual experience, it is *likely* that the experience has occurred under some visual reliability conditions.

Let's say that anyone who has that last trait is 'visually discerning'. There is a lot to suggest that, with regards to our immediate and unreflective reactions to the ways that things to look us, we humans are visually discerning.

Consider some of the very many subjective cues that lead us automatically to treat our visual experiences with circumspection: the visual blurriness that is familiar to those of us who are myopic; the visual doublings that one can induce by getting very drunk; the visual dimness that is associated with low levels of ambient light; and the visual obscurity that arises from thick fog. When our visual experiences suffer from those features, we straightaway withhold from our eyes the trust that we ordinarily lend unthinkingly to them. For we implicitly—and rightly—assume that ways for things to look involving those phenomenological features are relatively unlikely to be realised in visual experiences occurring under conditions that ensure reliable vision.

Furthermore, visual discernment of that immediate and thoughtless type is just the sort of capacity that one would expect humans to have developed over time, as it has the potential to be a lifesaver. Visual experiences play a dominant role in guiding immediate human action. But it is also not uncommon for us to be placed in situations in which we cannot wholly trust our own eyes. We therefore need to have some way of speedily judging whether or not we should take our visual experiences at face value. And automatic visual discernment would obviously provide us with what we need. It would enable us to assess quickly, reliably, and 'from the inside', whether there are aspects of the ways that things actually look to us that should lead us to be wary of our current visual experiences.

Taking a relatively cheery view of the ways in which human mental capacities are likely to have been shaped by circumstance, then, it seems pretty plausible that we are, at the level of our immediate and unreflective reactions to the ways that things look to us, visually discerning. But now consider some way for things to look that is not reliability-compatible.

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As the relevant way for things to look is not reliability-compatible, its instantiation in some visual experience makes it unlikely that the experience has occurred under some group of visual reliability conditions. Our assumed visual discernment thus means that, other things being equal, we are likely immediately to be wary of that way for things to look; we will probably regard it as abnormal, on account of some at least its associated phenomenological features. Automatic visual discernment—a trait which we seem likely to possess—would therefore naturally bear with it a tendency swiftly to assess ways for things to look that are not reliability-compatible as being aberrant.[14]

In the light of all that, the conclusion drawn in the previous section puts us in a good position with regards to visual imagery and possibility. Suppose that you encounter a visual image, where you regard the way that the image shows things as looking as entirely unexceptionable: you are doubtless able immediately yourself to conjure very many mental visual images that fit the bill, and you have doubtless recently seen very many nonmental visual images that do so too. You may reasonably infer that the relevant way for things to look is reliability-compatible. But, as we have already seen, you are consequently prima facie justified in concluding that what the visual image displays, on account of showing things as looking the relevant way, is possible. The previous section's arguments, combined with the considerations in this one, thus allow us to conclude with prima facie justification, of very many visual images, that what they show is possible.

5. Four worries

a) Sections 3 and 4 developed a 'reliability-based' argument for the conclusion that, so long as no defeating considerations are available, we may often fairly trust our tendency to ascribe possibility to the scenes that are displayed by visual images. One feature of that argument

which might cause concern is the following: the path it traces to ascriptions of possibility requires us to start from justified beliefs in the reliability-compatibility of ways for things to look; but a way for things to look is reliability-compatible just in case it is *possible* for a suitable visual sensation to occur under some group of conditions in which vision tends to work well. Is there something problematic about that aspect of the argument?

There certainly would be, if accepting the reliability-compatibility of a given way for things to look were tantamount to accepting the potential accuracy of the visual appearances involved in that way for things to look. For the argument would then simply be circular. But reliability-compatibility is not nearly that strong.

In asking after the reliability-compatibility of a given way for things to look, we are not asking after the possible accuracy of any visual appearances associated with that way for things to look. For the question is merely whether a visual experience of a certain sort could occur under some set of visual reliability conditions. But the fact that a visual experience occurs under some visual reliability conditions does not guarantee the accuracy of any visual appearances that the experience involves: visual reliability conditions do not ensure accuracy, they just tend to yield it. There is therefore sufficient distance between the explanation's starting-points and its conclusion to ensure the account is not circular.

We have seen, too, that the limited form of modal sensitivity that would be involved in our being able to arrive at justified assessments of reliability-compatibility is epistemically respectable. For the assumption that we have it is not just *ad hoc*: the sensitivity would naturally have developed as an offshoot of another practically advantageous capacity, namely automatic visual discernment as identified in the previous section. The earlier account of how we might arrive at prima facie justified ascriptions of possibility to appropriately image-able scenes is therefore not merely noncircular in an uninteresting formal sense: rather, it promises to bring a range of troublesome beliefs into the fold alongside the many other aspects of our

worldly knowledge that derive, at least in part, from the development of, and our reflections upon, our sensory powers.

b) The previous sections have spoken of visual images that show items like 'cabbages', 'pink horses', and 'doorways'. Yet one might reasonably wonder whether those characterisations of the images are really true to their contents. It might be suggested, for instance, that such conceptual descriptions of what the images show do not reflect the properly nonconceptual nature of their contents, just as our casual talk of visual experiences in which we see 'cabbages' and the like maybe does not truly reflect the nonconceptual nature of the contents of visual appearances. If that is right, though, we will not be able immediately to infer the possibility of, say, pink horses from the unexceptionable nature of any pictures 'of pink horses' that we might encounter.

Those points are well-taken. The kinds of items that are shown by a visual image depend upon the contents of the visual appearances that are associated with the ways that the image shows things as looking: a given visual image shows an item of a certain kind only if it shows things as looking some way, where part of what it is for things to look that way to someone is for the subject to seem to see an item of the relevant sort. The kinds of things that can genuinely be shown by visual images—rather than represented in some more broad sense, by virtue of exploiting allegorical associations and the like—are thus constrained by the types of items that may feature in the contents of visual appearances.[15]

Restrictions on the proper contents of visual appearances may thus mean that visual images 'of pink horses' cannot straightaway provide prima facie justification for the conclusion that there could be pink horses, because the images do not genuinely show pink horses as such. But the significance of the suggested link between visual imagery and possibility ought not therefore summarily to be dismissed.

For one thing, there is enough obscurity in the question how we might justify many of our most elementary beliefs about unactualised possibilities that the identification of a significant role for visual imagery is worthwhile; it is not being argued here, too, that imagery is the sole source of justified modal beliefs. And, for another, while visual imagery may not provide an immediate source of prima facie justification for ascriptions of possibility to pink horses and the like, it might nonetheless have a crucial justificatory role to play in relation to those beliefs.

We are past masters at moving justifiably from visual appearances that we presume to be accurate to conceptually formulated conclusions whose truth would follow from the accuracy of those appearances. Prima facie justification for ascribing possibility to the scenes displayed within suitable visual images therefore looks set to provide the basis for further additional justified ascriptions of possibility, ones which draw upon our awareness of links obtaining between the contents of visual appearances and contents that feature concepts.

Visual images might provide us with prima facie justification for the conclusion that certain visual appearances could be accurate, for instance, where we hold justifiably that, if the relevant appearances were to be accurate, there would be pink horses. Under those circumstances, we would be prima facie justified in concluding that pink horses are possible: for 'possibly, P' combines with 'if P were the case then Q', to yield 'possibly Q'. Our ability to connect visual appearances to concepts, using counterfactuals and other tools of reasoning, should thus stand us in good stead here, just as it does in the course of ordinary life.

c) It is not hard to find examples of visual images that show impossible scenes: just consider 'impossible figures' of the kinds produced by Escher, Penrose, and others. How are such cases to be squared with the arguments presented earlier?[16]

Note, first, that the reliability-based argument purported to establish only that we are prima facie justified in ascribing possibility to the scenes that are displayed by suitable visual images. But prima facie justification converts to straightforward justification only when defeating considerations are not available. And defeating considerations are flagrantly present in the kind of cases just cited. For our knowledge of the nature of space tells us straightaway that the scenarios shown by the relevant visual images cannot be realised. The reliability-based argument is thus not in danger of entailing, absurdly, that we are out-and-out justified in ascribing possibility to the evidently impossible scenes shown in impossible figures, even if it turns out that the ways that the relevant images show things as looking are reliability-compatible.

Indeed, it is perhaps more likely that our responses to ways that visual images show things as looking will tend to make us look askance upon images of situations that are in fact possible, than that they will incline us to give the nod to images that display impossible situations. For we all have, by now, enough practical experience of the world that we sometimes unhesitatingly regard as decidedly odd ways for things to look that involve situations that just strike us as highly unlikely; thus consider, for instance, the 'weirdness' of many surrealist paintings. But those speedy judgments of oddness might sometimes be hard to tell apart from any that flow from a power of automatic visual discernment, as considered earlier. We might then mistakenly withhold ascriptions of possibility to depicted scenes that are possible, merely because they are ones that we are highly unlikely ever to encounter.

d) It was argued in section 3 that, when we are justified in ascribing reliability-compatibility to the way that some visual image shows things as looking, we are prima facie justified in accepting that what the relevant image displays is possible. Yet the notion of reliability-compatibility is, in certain respects, very weak: a way for things to look is reliability-

compatible just in case visual experiences in which things look that way can occur under visual reliability conditions, regardless of whether the relevant possible visual experiences are genuine seeings, hallucinations, or illusions. And the relative weakness of reliability-compatibility may appear to generate some difficulties for the previous arguments.[17]

Produce a visual mental image of a chair. Suppose that you were to have a visual experience in which things looked to you the way that your visual mental image shows them as looking, under some group of visual reliability conditions. Finally, though, imagine that you come to learn that your visual experience was misleading, even though it occurred under some visual reliability conditions. You are nonetheless able justifiably to conclude that the way that your visual mental image showed things as looking was reliability-compatible. According to the arguments developed previously, you are then able to conclude, with prima facie justification, that there could be a chair of the sort displayed by your visual mental image.

Isn't this rather odd? How could your knowledge that you actually had a *misleading* visual experience, one in which you merely seemed to see a certain kind of chair, provide you with any sort of justification for believing that a chair of that type is *possible*? The fact that the visual experience occurred under conditions in which vision tends to work reliably is surely completely irrelevant, given that you know that the relevant visual experience was in fact inaccurate! Yet your knowledge that you had an inaccurate visual experience under some group of visual reliability conditions is evidently sufficient to justify the claim that the way that things then looked for you is reliability-compatible.

This issue is a modalised version of a point that arose in section 2 above. Recall that it was claimed there that, if we are justified in holding that a visual experience occurred under some visual reliability conditions, we are prima facie justified in concluding that the visual appearances involved in the relevant experience were accurate. This implies that, if we are

justified in claiming that, say, a visual hallucination occurred under some visual reliability conditions, we are prima facie justified in concluding that the experience's accompanying visual appearances were accurate—which they certainly weren't. What to do? I plumped for the option of accepting the claim of prima facie justification, while holding that, in the relevant cases, the prima facie justification does not convert to justification *simpliciter*, because defeating factors are woven into the very fabric of the cases being considered.

An analogous move is available at this point. Suppose that we are justified in thinking that someone could have a hallucination in which things look a certain way, under some visual reliability conditions. We are immediately justified in holding the relevant way for things to look to be reliability-compatible. This provides us with prima facie justification for holding that someone could have a visual experience in which things look the relevant way, and which features accurate visual appearances; we will be justified in making that claim, that is, so long as no defeating considerations are available.

But, in this case, defeating considerations are obviously present. The potential experiences have been explicitly characterised as hallucinatory, after all, and hence as involving inaccurate visual appearances. Their explicit characterisation as inaccurate immediately stops our prima facie justification for believing in the accuracy of the possible visual appearances from converting into justification proper, because we have decisive reasons for regarding them as inaccurate. And our lack of justification for regarding the possible visual appearances as accurate in turn prevents us from being justified in ascribing possibility to the type of scene that the appearances posit.[18]

Quite apart from the specific issue just discussed, the weakness of the notion of reliability-compatibility might make one wonder about the breadth of its extension. In particular, one might wonder whether there are any examples of ways for things to look that are *not* reliability-compatible.

I must confess that I do not know the answer to that question. Yet if it were to transpire that every way for things to look is reliability-compatible, would that be a problem? Given the soundness of the previous reliability-based argument, it would follow that any visual image may provide us with a prima facie justified ascription of possibility, just so long as we could be justified in regarding the way that the image shows things as looking as reliability-compatible. But I would be happy enough to accept that conclusion, bearing in mind the earlier points about the ways in which our prima facie justifications for ascriptions of possibility—to impossible figures, for example—may sometimes be defeated.

The sheer weakness of the notion of reliability-compatibility therefore does not, in itself, seem to present insurmountable difficulties. It may mean, however, that the road from prima facie ascriptions of possibility to fully justified ones, on the basis of visual imagery, will not always be passable.

6. Beyond vision, and beyond metaphysical modality

The previous five sections of this paper focused exclusively upon relationships between visual images and ascriptions of metaphysical possibility. But the arguments that were provided generalise to cover other forms of sensory imagery, and to cover nonmetaphysical varieties of possibility.[19] I'll start by considering nonvisual imagery.

Suppose that we possess some sensory faculty that is, like vision, associated with one or more groups of reliability-conditions. And consider some sensory image whose content is bound to the relevant sensory modality, in that the image's content involves a certain way for things to stand for a sensing subject in the course of a sensory experience of the relevant kind; an image that shows things as sounding a certain way, for instance. The earlier arguments relating specifically to vision generalise straightforwardly, to license the following

conclusion: if we are justified in taking the given way for things to stand sensorily to be reliability-compatible, we are prima facie justified in ascribing possibility to whatever the relevant sensory image displays.

As long as various initial conditions are satisfied, then, we have a route to prima facie justified ascriptions of possibility on the basis of nonvisual sensory images. It seems plausible, though, that the relevant initial conditions are sometimes satisfied. Our auditory powers are reliable under the sorts of circumstances in which we generally find ourselves, for instance, and the same holds true for our proprioceptive sense of the ways in which our bodies are currently disposed. Hearing and proprioception are thus associated with reliability-conditions. If we are justified in ascribing reliability-compatibility to the way that things are shown as sounding by some auditory mental image, or to the way that things are shown as feeling by some proprioceptive mental image, we are therefore prima facie justified in ascribing possibility to what the relevant sensory image displays.

But a good case can be made for thinking that, when we regard a way for things to sound, or to feel proprioceptively, as being phenomenologically unexceptionable, we may justifiably take that type of sensations to be reliability-compatible. For the sorts of practical pressures that were present in the visual case, and which made it seem likely that we will be visually discerning and thus good detectors of visual reliability-compatibility, are also present for audition and proprioception. We not infrequently find ourselves in situations in which we cannot trust our powers of hearing in the normal manner, for instance; and it would evidently be hugely advantageous to us to have developed ways of detecting that we are in those sorts of circumstances, on the basis of phenomenological features of hearing.

The prospects for running reliability-based arguments on nonvisual forms of sensory imagery thus seem to be good. The precise nature of any justified ascriptions of possibility that result from those arguments will depend, of course, upon the nature of the contents that

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belong to appropriate forms of sensory experience. And just what are the contents of, say, auditory appearances? Are we merely presented with the apparent presence of *sounds*, for example, or with the apparent presence of externally located *sources of sound*? That is a question for philosophers of perception[20], but its proper answer will have immediate implications for the nature of the beliefs about unactualised possibilities that we may derive directly from auditory imagery.

What about the other way of extending the reliability-based strategy, to non-metaphysical forms of possibility? Can the reliability-based argument be extended to cover physical possibility, for instance?

As defined previously, a way for things to look or sound or otherwise stand sensorily is 'reliability-compatible' *tout court* just in case the following holds: it is possible—that is, metaphysically possible—for a sensory experience of the appropriate sort to occur under some group of reliability conditions for the relevant sensory modality. In line with that definition, however, we may introduce a variety of distinct but related notions, ones featuring stronger nonmetaphysical forms of possibility. We may say, for instance, that a way for things to look is *physically reliability-compatible* just in case it is *physically* possible for things to look that way to someone under some group of visual reliability conditions.

Suppose that we are justified in ascribing physical reliability-compatibility to some way that a visual image shows things as looking. Then the main argument in section 3 may be routinely rewritten, to yield the conclusion that we are prima facie justified in ascribing physical possibility to whatever the image displays by virtue of showing things as looking the relevant way. Given all that, will we be able to adapt the previous reliability-based argument, to justify ascriptions of physical possibility on the basis of sensory images?

Take some way for things to look that is not physically reliability-compatible. Things will look that way to someone under some visual reliability conditions only if some physical

impossibilities are realised. Given that things look that way to someone in the course of a visual experience, it is therefore unlikely that the experience is occurring under some group of visual reliability conditions. For it is unlikely that any physical impossibilities obtain. Our assumed power of visual discernment then means that we will probably regard the given way for things to look as being aberrant, on account of some of its associated phenomenological features.

Hence if you regard some way that a visual image shows as looking as being phenomenologically unexceptionable, you may reasonably infer that it is physically reliability-compatible. But you are then prima facie justified in ascribing physical possibility to what the visual image displays, on account of its showing things as looking the relevant way. Analogous lines of argument may be run in relation to ascriptions of physical possibility to the items displayed by nonvisual sensory images, given that it is plausible that analogues of visual discernment apply in those cases too.

While the foregoing argument promises to supply very many prima facie justified ascriptions of physical possibility to the scenes displayed by sensory images, the precise range of nonmetaphysical alethic forms of possibility to which relatives of that reasoning can be applied is not completely clear.[21] But, even with that *caveat*, uses of reliability-based arguments promise to provide a helpful perspective on many of our modal beliefs.

Consider, for example, your beliefs about the positions that your body could— physically, and metaphysically—adopt. Use proprioceptive imagery to imagine holding your right arm in front of you, at about shoulder height, while holding your left arm in a rather contorted position behind your back. You are, I take it, justified in accepting that your arms could be arranged in the way that you have imagined.

But to put that justification down to some of the potential sources of modal knowledge that philosophers have cited—to rational intuition, say, or to knowledge of your own

essence[22]—seems a little overblown. If this belief is to be justified by anything, its justification should surely rest squarely upon what led you straight to it; that is, upon the sensory imagery that made the belief utterly compelling. The reliability-based arguments provided earlier have the virtue of harmonising well with that thought.

7. Conclusion

This paper began by noting the ease with which we ascribe possibility to the scenes that are shown by many mental and nonmental sensory images. Section 2 introduced various ideas linked to the reliability of vision, including the notions of 'visual reliability conditions' and 'reliability-compatibility'. Section 3 argued that we are prima facie justified in ascribing possibility to what visual images show on account of the involvement of what we justifiably acknowledge to be reliability-compatible ways for things to look.

Section 4 further examined reliability-compatibility. It argued that we probably tend fairly unhesitatingly to regard as abnormal ways for things to look that are not reliability-compatible. That conclusion was combined with the one reached in section 3, to supply the conclusion that many of the ascriptions of possibility that we base upon visual imagery are prima facie justified. Section 5 considered some questions that might be raised about the paper's earlier arguments, while section 6 moved them beyond the visual case, and beyond metaphysical possibility.

I wish to conclude by briefly indicating some additional lines of enquiry. Very many ascriptions of possibility can be based upon what is shown in sensory imagery. But it must be acknowledged, again, that the scenes that we may justifiably take to be possible simply on the basis of sensory images will be limited in major respects.

The sorts of items and properties that are shown by sensory images are limited to the sorts of items and properties that can feature in the contents of sensory appearances, and there are lots of things that we cannot even seem to sense. While the arguments in this paper might help to justify many fairly homely ascriptions of possibility, they may accordingly seem unlikely to bolster the kinds of relatively abstract modal beliefs that have often been of concern to philosophers: they may seem unlikely to help us with the question whether there could be zombies, for instance, or whether there could be transparent iron.[23]

This does not, in itself, weigh very much against the considerations provided earlier. The field of modal epistemology is hardly in a sufficiently advanced state that it can afford to turn up its nose at decent sources of beliefs about unactualised possibilities. But, anyway, while the range of ascriptions of possibility that can directly be based upon sensory imagery certainly does have limitations, a generalisation of some considerations presented in section 5 suggests that the arguments presented earlier may have wider relevance than one might initially expect.

Consider a visual image that shows things as looking some way, where you justifiably take that way for things to look—like *that*, let's say—to be reliability-compatible. According to what has gone before, you are prima facie justified in concluding that things could indeed be like *that*. But suppose that you are also justified in holding that, if things were to be like *that*, P would be the case. Then your prima facie justification for thinking that things could be like *that* means that you are also prima facie justified in holding P to be possible: for, as noted earlier, 'possibly, P' combines with 'if P were the case then Q', to yield 'possibly Q'.

Prima facie justified beliefs in imagistically-presented possibilities may thus be combined with justified counterfactual beliefs of appropriate kinds, to generate further prima facie justified beliefs concerning possibility; and an analogous process can continue from there. But there is no apparent limit to the level of conceptual sophistication that may be

exhibited by the beliefs formed in the course of that process. Just as we are able to form enormously sophisticated justified beliefs about the actual world using our awareness of the counterfactual consequences of sensorily registerable matters, why should we not also form enormously sophisticated justified beliefs about the nature of merely possible worlds using the same resources?

That all hints at a kind of Empiricism which has not been prominent within recent modal epistemology[24], and whose neglect may be owed to the way in which sensory imagery has lately been sidelined in favour of less restrictive but more elusive phenomena like 'conceiving', 'imagining', and 'intuiting'. It suggests the availability of a complex superstructure of justified beliefs about possibility, one that rests heavily upon sensory images and whose construction mirrors the complex superstructure of justified beliefs about actuality that rests heavily upon sensory experiences. While it would be naïve to hold that the contents of our beliefs about possibility can always faithfully be captured using sensory imagery, one might therefore reasonably wonder how many of our justified ascriptions of possibility are wholly independent of sensory stuff.[25]

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[1] One might of course wonder whether a description of a mental visual image as 'showing a car-sized cabbage' doesn't reach somewhat beyond what the image literally displays: are the items shown in visual mental images 'of cabbages' ever actually characterised by the images themselves *as cabbages* as opposed to, say, non-cabbages that look just like cabbages? I will continue to write as though mental and nonmental visual images can present items like cabbages as such, for convenience's sake, although that assumption is not really needed for what follows: see section 5 below for discussion.

[2] See, for instance, Williamson (2007), chapter 5.

[3] The possibility claim expressed in the text has been phrased in a *de dicto* manner, rather than in terms of what is possible for a particular plant; the bearing of the arguments which follow upon *de re* possibilities is not settled in this paper, for reasons discussed in fn. 15 below. (Roca-Royes (2011) emphasises the significance of the distinction between *de re* and *de dicto* possibilities in relation to ideas about modal epistemology that call upon considerably richer notions of 'conceivability' than the one employed below.)

[4] See Gregory (2010) for more on this theme.

[5] See Strohminger (2015) for more discussion of these matters, within the context of an argument for the conclusion that visual perception itself can lead us to knowledge of unactualised possibilities.

[6] See, for example, Chalmers (2002), Gregory (2004), and Yablo (1993).

[7] Balcerak-Jackson (2016) offers a theoretically fruitful reconstruction of the notions of imagining, supposing, and conceiving, and of the relations between them (p. 43). Her account of imaginings, in particular, treats them as attempting to capture 'the phenomenal character and the phenomenal representational content of corresponding experiences' (p. 50), and hence as involving imagery, as it is being understood here. She outlines an argument (p. 51) for thinking that, on this conception of the imagination, our ability to imagine scenes which look a certain way will provide us with prima facie justification for holding that there could indeed be scenes which look the relevant way; the argument turns on the principle that, if things could look a given way, then things could look that way in the course of a veridical experience (see also Balcerak-Jackson (2018)). Balcerak-Jackson's ideas have particularly close points of contact with those being developed in this paper: in what follows, I basically use assumptions concerning the reliability of vision proper to provide reasons in support of a relative of the principle that is crucial to her arguments, with the aim of establishing a closely related conclusion, although one that directly speaks of imagery rather than of the imagination.

[8] See Alston (1986), p. 2 for a related account of the reliability of our sensory powers as a 'belief-producing mechanism'.

[9] Given the way in which the notion of a group visual reliability conditions was explained above, this is a perfectly coherent body of assumptions; it merely involves supposing that someone has an hallucination under some conditions that, generally speaking, ensure accurate vision. The fact that a certain visual experience is hallucinatory nonetheless does tell us that, at a more refined level of description, the relevant experience occurs under a group of conditions which ensure *unreliable* vision. And, to foreshadow the discussion to follow, that additional consideration then serves either to prevent our prima facie justification for concluding that the experience is accurate from converting into full justification, or to block us from having that prima facie justification in the first place.

[10] The option chosen does have theoretical advantages, in addition to the more pragmatic ones just mentioned. For it removes the need to appeal to what will inevitably be rather fine distinctions between certain sorts of cases. In particular, it allows us to do without the division between, first, instances in which prima facie justification is present although it does not convert to full justification because of 'additional' defeating factors, and, second, instances in which prima facie justification is not even in the offing, because the defeating factors are part of the very matter of the cases involved.

[11] Very many thanks to an anonymous referee for the current journal, whose sharp comments made me aware of the issues considered in the previous paragraphs, and of the related concerns addressed below, in section 5.

[12] The reasoning in the text involves the low-key deployment of some semantic principles that apply to a wide class of 'distinctively sensory representations'; Gregory (2013) situates the principles within the relevant broader framework.

[13] It is worth noting that the above line of reasoning does not tacitly employ an 'externalist' identification of reliability with prima facie justification: rather, it infers a conclusion concerning prima facie justification from various suppositions about other claims that we are justified in accepting, where one of those prior claims relates to reliability-compatibility and another relates to the reliability of vision.

[14] "Why did the previous discussion focus on automatic 'visual discernment', rather than upon the mere tendency immediately to regard *reliability-incompatible* ways for things to look as being abnormal?" It is fairly easy to identify familiar phenomenological features of vision that quickly indicate to us the probable breakdown of the conditions needed to ensure its reliability, whereas it is harder to point to familiar phenomenological features of vision that are simply incompatible with its operation under such conditions. Automatic visual discernment thus seems more likely to be a capacity that we would have had the opportunity actually to develop. Similarly, it seems much more likely that we might have come to be automatically visually discerning than that we might have developed the capacity simply to spot those ways for things to look that do not correspond to possibilities. Given that vision generally operates reliably, for instance, we will not commonly enjoy visual experiences in which the ways that things actually look to us correspond to impossibilities; so our development of the ability quickly to spot ways for things to look that do not correspond to possibilities would not have greatly enhanced the practical utility of our visual powers.

[15] This point bears significantly upon the question whether the current arguments will be able to justify *de re* ascriptions of possibility. Suppose that the contents of visual appearances are incapable of being *de re*. Then, given the link between the potential contents of visual appearances and the contents of visual images noted in the text, visual images will likewise be incapable of showing scenes that relate to specific items. By contrast, if the contents of visual appearances can be *de re*, there are no evident reasons for denying that the scenes shown by visual images may be equally *de re* in nature. But if visual images can show scenes that feature particular objects, the arguments in the text promise to provide us with prima facie justified *de re* ascriptions of possibility. The answer to the question whether this paper's arguments will be able directly to justify *de re* ascriptions of possibility thus depends upon the answer to a prior question about the potential contents of visual appearances; and I shall take no stand upon that tricky question here.

[16] Tidman (1994), p. 300 cites Escher-type pictures; see also Sorensen (2002).

[17] I here owe many thanks to the anonymous referee mentioned previously, for pointing out the issues that I am about to discuss.

[18] Section 2 briefly outlined an alternative approach to the analogous nonmodal cases just mentioned, according to which our normal possession of prima facie justification is blocked by the characterisation of suitable visual experiences as featuring inaccurate visual appearances. A similar alternative approach is available in the current modal context. Suppose, then, that that someone's belief in the reliability-compatibility of a given way for things to look is based simply upon a belief in the possibility of an appropriate hallucination that occurs under some visual reliability-conditions. It might be claimed that the characterisation of the relevant visual experience as hallucinatory prevents us from having prima facie justification for presuming that any potential visual experiences in which things look the relevant way, and which occur under some visual reliability conditions, would feature accurate visual appearances. I am comfortable with either way of proceeding, although I think that the approach developed in the text does have some theoretical advantages.

[19] Many thanks to Margot Strohminger, who encouraged me to explore potential extensions of the earlier arguments.

[20] These issues are discussed by some of the authors in Nudds and O'Callaghan (2013), for instance.

[21] Consider some variety of alethic possibility, Φ-possibility, and its associated notion of Φ-reliability-compatibility. Assume that we are 'discerning' with regards to the deliverances of a certain sensory modality in the way that we are, it has been suggested, visually discerning. Then the forms of argument rehearsed previously in relation to metaphysical possibility and physical possibility will be adaptable, to supply prima facie justified ascriptions of Φ-possibility on the basis of sensory imagery involving that sensory modality, if our assumed discernment interacts with Φ-reliability-compatibility in the right way. More specifically, they will be adaptable if the following holds: the fact that a given type of experiences is not Φ-reliability-compatible means that, given

that someone is having an experience of the relevant type, it is unlikely that the person's experience is occurring under some set of reliability-conditions for the given sensory modality. I do not know just which sorts of possibility meet that last condition (although I may be missing something obvious), but it seems clearly to be met by some particularly important varieties, like the logical, metaphysical, and physical kinds.

[22] See, for example, Bealer (2002) for intuition as a supposed source of beliefs about unactualised possibility; see Hale (2013) and Lowe (2012) for knowledge of essences.

[23] See van Inwagen (1998) for sceptical discussion of whether we can know that there could be transparent iron.

[24] But see Hart (2003) for an exploration of the sort of view sketched in the text, on which 'sensuous imagination is as basic to knowledge of possibility as perception is to knowledge of actuality' (p. 137). More recently, Balcerak-Jackson, in her (2016) and (2018), has advocated a principle which connects ascriptions of possibility to the sensory imagery featuring in imaginative episodes, and which does so in a way that fits very nicely with the ideas being developed in this paper; see fn. 7 above for more discussion.