Perceiving people as people: an overlooked role for the imagination

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Most everyone can agree that, at least sometimes, we use our imagination in acquiring knowledge of other people. Few would deny, for example, that I might come to know what my colleague was doing yesterday at 3:10pm by imagining her movements following the 3:00pm fire drill, or that I might come to know that my brother is worried by imagining his thoughts upon reading our mother's letter. There is considerable disagreement over *what* the relevant imagining involves (whether it requires imagery for example), over *how* it arrives at a conclusion (whether guided by theories or by mental simulations, for example), and about *when* it is trustworthy.[1] Regardless of the details, however, the usual story is a story in which our imagining provides us with indirect or inferential knowledge of other people's thoughts and actions.

The indirect character of the acquired knowledge is clearest in cases where the imagined thoughts or actions are explicitly derived from background beliefs about how people think and act in general or how a particular person tends to think and act. I believe that people normally leave a building when there is a fire drill, and they normally leave by the nearest door; I then imagine my colleague near the south door when the fire drill goes off at 3:00; and that leads me to imagine her outside of the south door at 3:10. Likewise, I believe that my brother is concerned about our mother's well-being and that he tends to expect the worst, so I imagine that he will be worried when he reads about her illness. In cases where I proceed by imagining myself in another person's situation, the indirectness of my knowledge arises at a different point – namely, when I make an inference from my own (imagined) response to that other person's (actual) response. I imagine myself in her office when the alarm sounds, I note where that imagining takes me, and I infer that my colleague's response to the alarm will be similar. Or I imagine

[1] See Maibom's article in this volume for a detailed argument against the trustworthiness of imagination in predicting the actions and reactions of both oneself and others. Empirical evidence indicates that much of our imagining is guided by what we consider to be a rational or moral response – not by past experience or detailed observations of people in specific situations. This allows, though, that imagination is a trustworthy source of knowledge when people are likely to be rational or moral; and it suggests that imagination can be improved insofar as it can draw on richer memories and observations.

myself reading my mother's letter, and I infer that my brother will respond in a similar way.

I want to suggest that imagining also plays a role in our more immediate knowledge of people's thoughts and actions – our ability to look at, or listen to, someone and perceive them as waiting, or as worried. This sort of knowledge has immediacy that is both phenomenally and epistemically distinctive, and imagining helps to account for both of these aspects. This claim will take some explaining – as it applies to perception in general, and as it applies to our knowledge of people in particular. The basic idea, though is this: when we perceive something, we experience it as objective – as something independent of any particular view we may have of it, and that experience depends on the simultaneous representation of different views of that thing. To the extent that those different views are coherent and are themselves grounded in past experience, they offer an immediate validation of our experience as veridical. When we perceive something as a door, for example, we imagine different views that together confirm its categorization as a door; and when we perceive a friend as worried, we imagine different views of that friend that together confirm her categorization as worried.[2]

The arguments of this paper, by highlighting the similarities between (relatively) uncontroversial cases of perceiving a door or perceiving a flame and (more) controversial cases of perceiving people's intentions and feelings, might help to vindicate the possibility of the latter.[3] My explicit aim is more limited, however. I want show how

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[2] I allow that my imagining may be itself the product of subpersonal inferences – subpersonal theories or subpersonal simulations, for example. Some philosophers, along with most psychologists, reject the view that perceptual knowledge is non-inferential knowledge. For an early defense of the view that perception is inferential, see Harman (1973). Burge (2010) describes "principles" that govern perception, but insists that these principles, unlike the principles that govern thought, are not themselves represented and are not accessible to consciousness. For a defense of the view that 'theory theories' are compatible with the claim that we have direct perceptual awareness of others' mental states, see Lavelle (2012). And for a recent defense of the view that perception is not incompatible with inference, see Chapter 10 of Cassam (2014). The important distinction, for my purposes, is not between perception and inference, but between the way things *appear* to be and the way I merely think them to be.

[3] It is, of course, possible to challenge the assumption that we can perceive the property of being a door, or the property of being a flame – particularly if such properties are thought to be relational or dispositional properties. Tye (1995) and Dretske (1995) restrict the contents of perception to "low-level" properties such as shape and color. Siewert (1998) and Siegel (2006, 2010) defend the more natural view that we can perceive "high-level" properties as well. For my purposes it is enough to establish certain

imagining enables our knowledge of others' mental states to share the phenomenological character and the epistemic standing of more ordinary cases of perception. For ease of presentation, I shall refer to cases in which someone appears to me to be worried as cases in which I perceive that person *as* worried – leaving open the possibility that, though my experience of her worry is phenomenologically and epistemically like perception, it fails to meet some other requirement of perception[4]; and leaving open the possibility that she is not in fact worried. Unlike the claim that I see a drawing as a duck, or I see a bush as a bear, the claim that I perceive my friend as waiting or as worried should not be taken to imply that she is not in fact waiting or worried.

Section I focuses on imagination's contributions to the *phenomenology* of perceiving something as a door, for example, and Section II details imagination's analogous contributions to the *phenomenology* of perceiving someone as worried, for example. Section III addresses the *epistemic* contributions of imagination in both the case of perceiving something as a door and the case of perceiving someone as worried.

I

The phenomenology of perceiving something as a door or perceiving something as dangerous is different from the phenomenology of merely thinking of the surface in front of me as a door or merely thinking of the moving light as a flame. In the latter case, it is perfectly reasonable to say "I think that is a door even though it doesn't look like a door, and I think the light is a flame even though it doesn't look like a flame." Likewise, the phenomenology of perceiving someone as waiting or as worried, is different from the phenomenology of merely thinking of her as waiting, or thinking of her as worried. I do not doubt that there is something it is like to merely think of something as a door – that mere thinking, if conscious, has a phenomenology[5]. Furthermore, I assume that there are

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similarities between how something comes to appear to us as a door and how someone comes to appear to us as worried.

[4] My own view is that the term 'perception' can be used in several different ways, but that the phenomenological and epistemological aspects of perception are the aspects that give perception its philosophical significance and (contra Burge (2010)) that a satisfactory account of perception should show how these two aspects are related. See Johnston (2011) for a fuller presentation of this position.

many cases in which the phenomenology of my experience falls somewhere between pure cases of perceiving as and pure cases of merely thinking as, or cases in which my experience is perception-like in some respects and merely thought-like in others. (An experience might be perception-like with regard to its reference and thought-like with regard to an attributed property, for example.[6]) I do, however, assume that there is a familiar and recognizable difference, across a wide variety of cases, between the phenomenology of perception and the phenomenology of thought. But what is that difference?

A standard reply is that perception presents an object or a property directly, without mediation, while thought presents it indirectly – through the mediation of language, for example. Insofar as our focus is the distinctive phenomenology of perception, it will be absence of *apparent* or *conscious* mediators that is relevant. (Unconscious mediators, though they may affect the phenomenology of an experience, will not be experienced as mediators.) There are different sorts of mediation, though, and it is not clear which of them is relevant to the phenomenology of perception. When I look at the scene before me, I might be aware of the causal mediation of my sunglasses without that awareness making the phenomenology of my experience any less perceptual; so the phenomenology of perception does not rule out awareness of causal intermediaries.[7] Does it rule out awareness of *mental* intermediaries, or *representational* intermediaries? If I am aware that my memories of a building, or a map of a building plays a mediating role in my current experience of that building, does that mean that my

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[5] This does not mean that the phenomenology of thinking is sensory in character. Siewert (2011) offers a useful history of how philosopher's notion of of phenomenology narrowed in the twentieth century, largely under the influence of Wittgenstein.

[6] Montague (2011) has a nice discussion of how even the phenomenology of particularity has a cognitive aspect; and Levine (2011) defends what he calls an "impure" version of cognitive phenomenology whereby phenomenology requires a sensory manifold but is not exhausted by that manifold.

[7] How to count/individuate causes is a complex issue – especially if one thinks that the determination of causes depends on the description of effect and/or the context of inquiry. I am not aware of any principled way of individuating causes that ensures an absence of causal intermediaries between an object and the perceptual experience of that object. Causes can be specified at many different levels of abstraction, of course, so it could be that at an appropriate level of abstractions there is a direct causal connection between one person's smile and another's knowledge of that smile. See Yablo (2003). If the relevant level of abstraction is dictated by the level of one's interest, however, it is hard to see how causal immediacy would explain (versus be explained by) the immediacy of perception.

experience lacks the phenomenology of perception? Given the pervasive influence of memories and maps – mediations of which we are often quite aware, this would be an extreme conclusion, implying that almost no experience has the phenomenology of perception. The phenomenology of thought, moreover, may not include any awareness of intermediaries: I can think of my colleague as older than me without any awareness of how I reached that conclusion and without ever putting my thought into words. So it can't be our unawareness of mental or representational intermediaries that distinguishes the phenomenology of perception from the phenomenology of thought.

It is common to suppose that the sort of immediacy that is distinctive to perceptual experiences is *justificatory* immediacy – but justificatory immediacy can be understood in several different ways. First, perceptual experiences might be thought to have justificatory immediacy insofar as they do not *need* any further justification in order to constitute knowledge. But the need for justification depends on context, not on the phenomenology of our experience; some perceptual experiences, in some contexts, will require further justification before they can provide us with knowledge while some non-perceptual beliefs, in some contexts, will provide knowledge without the need for any further justification. (Compare an amateur's claim to be seeing a swan overhead with an expert's claim that there are no swans in this region; the former needs further justification while the latter does not.)[8] Second, our perceptual experiences might have justificatory immediacy insofar as they are not *capable* of further justification – insofar as justification must come to an end in perception. This assumes a foundational view of justification, which is questionable. More importantly for our purposes, however, it fails to show how the justificatory standing of perception relates to the phenomenology of perception.[9]

[8] It is possible to adopt what I would call a "deflationary" view of perception whereby an experience qualifies as a perception whenever we require no further justification – whatever the phenomenology of that experience happens to be. I think there is something distinctive about the phenomenology of perception, however – something that helps to *explain* its special status vis-à-vis justification.

[9] Burge (2010) explicitly separates the phenomenology of conscious perception – which, on his view has to do with the phenomenology of sensations – from the justificatory standing of perception (which need not be conscious). I, like many of the philosophers cited below, reject this separation and attempt to explain the phenomenology of objectivity.

A third reading of the justificatory immediacy of perception offers to connect the distinctive epistemology of perception to its distinctive phenomenology by invoking the possibility of *self-justification*, or *self-evidence*. In the words of Eilan, perceptions have "objective import", which (in the tradition of Strawson) means that "experience *presents itself* as experience of a mind-independent reality" (italics added)[10]. On this view, the experience of perceiving a door is unlike the experience of merely thinking of the door insofar as the perceptions make the objectivity of the door self-evident, confirming the veracity of our experience from within. (This is not to say that the veracity of a perceptual experience can be *guaranteed* from within the experience itself – only that the phenomenology of a perceptual experience gives us *reason* to trust its accuracy.) How is it possible, though, for an experience to justify itself – for evidence of the veracity of an experience to be evident from within that very experience?

Alva Noë's account of experienced objectivity offers a revealing response to this challenge. He distinguishes two aspects or components of any perception, and argues that experiencing the dependence of one aspect on the other amounts to an experience of objectivity. According to Noë, the contents of perceptual experience must include both a factual dimension and a perspectival dimension, an aspect that indicates how things are and an aspect that indicates how things appear; and it is the interaction between these two aspects that is responsible for the distinctive phenomenology of perception.

> We experience not only how things are, but also how they look from here. We experience that the plate is round and that it looks elliptical from here. Its elliptical look from here is a genuine property of the plate—we see the shape and we see the perspectival shape from here—but it is also a relational property, one that depends on where 'here' is.
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> Perceptual content . . . is two-dimensional. It can vary along a factual dimension, in regard to how things are. And it can vary along a perspectival dimension, in regard to how things look from the vantage point of the perceiver. Visual experience always has both these dimensions of content.[11]

[10] Eilan (2011).

[11] Noë (2003), pp. 2–3. The importance of mastering multiple perspectives in order to fix the content of an experience is familiar from the work of Dretske (1981), Millikan (2000), Davidson (2001), and others. What is distinctive about Noë's analysis is his attempt to use the phenomenology of converging perspectives to explain the phenomenology of objective reference. Elsewhere, Noë (2002), p. 74, makes a similar distinction between the representational and sensory factors that make up the qualitative character of experience:

According to Noë, then, it is the two-sided character of perception, and the experienced dependence of one side on the other, that enables us to experience objectivity from within perception itself. We experience the objectivity of a perception by experiencing the dependence of perspectival content on factual content – a dependence that is revealed as we move through space and notice how the way things look depends both on how they are and on where we are. Indeed, we only become capable of distinguishing looks from facts insofar as we become capable of tracking such dependencies.

While I agree with the suggestion that we experience the objectivity of a state of affairs when we experience constancy across perspectival change, Noë's insistence that we experience appearances (e.g. the elliptical look of a plate) as well as facts (e.g. its roundness) creates more contents (and more puzzles) than are needed.[12] When we look at a plate from the side, we do not see an elliptical appearance in addition to the round shape of the plate; we either see the round plate or we mistake the round plate for something elliptical. Likewise, when we experience the shapes around us as if they were flattened onto a screen before our eyes, we do not simply attend to an already present aspect of

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"The qualitative character of experience, as we have seen, depends on two factors. First, it depends on the qualities that we experience (e.g. looks, sounds, etc). This is a representational feature. Second, it depends on the character of the activity in which the temporally extended activity may consist. So, for example the fact that we do not make eye movements when we explore the environment haptically makes a difference to what it is like to touch. These differences in the sensorimotor contingencies governing the different sensory modalities are differences in the qualitative character of experience that do not correspond, directly at least, to differences in what is perceived."

It is not clear (at least not to me) whether Noë intends the second, non-representational aspect of experience to count as part of its content—akin to the perspectival contents discussed above. The term "content" doesn't matter, perhaps, but the ability to recognize the dependence of subjective phenomenology on objective fact, through the dependence of one factor on another, does matter. See Siegel (2014) for a related discussion of why affordances need to be represented in order to be part of the content of visual experience.

[12] Noë's talk of two different "dimensions" of content is less problematic than his talk of two different types of experiential content—"looks" as well as facts, for example perspectival shape as well as objective shape. He is clearly aware of the dangers of invoking sense data as the true object of perception, but he is determined to include appearances, understood as relational properties (between the perceiver and the perceived) as part of the contents of perception.

I agree that experiencing alternative perspectives is necessary for experiencing something as objective, but I reject the view that every perspectival experience has, as part of its content, a perspectival property. Briscoe (2008) provides a nice elaboration of this criticism. Noë (2008) has replied to several other critics of his two-aspect view.

experience (as Noë suggests); rather, we shift from seeing three-dimensional objects to imagining their two-dimensional counterparts. While we do need to undergo changes in perspective in order to discover what remains invariant across changes in perspective, and while changes in perspective may involve changes in the content of experience (different sides of an object come into view, and different parts of its surroundings appear), this does not mean that the content of our perceptions can be divided between factual and perspectival components or dimensions. The phenomenology of objectivity depends on the convergence of information gained from different points of view, not the experienced dependence of some experiential contents on others. In short, I agree with Noë's reliance on the coordination of different perspectives to explain the experience of objectivity, but I disagree with his invocation of a special type of content, or a second aspect of content, that is perspectival.

The key to preserving the insights of Noë's account while avoiding its problems, I suggest, lies with the realization that different parts or different aspects of a single experience can reinforce each other, each part helping to justify our confidence in the veracity of the others. My current experience of my desk, for example, combines several visual components and several tactile components – each providing different perspectives on a single object at a single location, each helping to establish the reality of that object. If I only experienced pressure on my elbow, or if I only experienced a streaky brown patch in my left visual field, there would be nothing self-evident or self-justifying about the experience – nothing within the experience itself to show me I am experiencing something objective, that I am *perceiving* something as opposed to merely undergoing a particular sensation.[13] Contra Noë, I do not experience the dependence of perspectival contents on factual contents; rather, I experience the contents of my experience as factual in virtue of the way they are integrated with one another.

This is where imagination becomes relevant. While it is true that we can experience only a limited number of perspectives at a time, it is certainly possible

[13] For a fuller discussion of my understanding of perception as it relates to that of Noë and others, and as it relates to sensation, see Church (2013).

simultaneously to touch and to look, to touch from two different angles, or to look from the slightly different angles of two separate eyes. Furthermore, it is possible to imagine several different perspectives and modalities simultaneously[14]; these will include perspectives that we do not now occupy, and modalities that we do not now engage. The coordination of those additional perspectives and modalities in imagination can deepen our experience of objectivity, however. As I look at the tilted table from here, I can also imagine what it looks like from over there; and I can imagine what it would feel like to rest my hands on the table, or to stroke its surface; and so on. Insofar as such imaginings can be integrated into the phenomenology of my present experience, they will add to my experience of the table as something objective because they will add to my experience of the table as something independent of the particular perspective(s) I now occupy.[15]

There is not a sharp line here between what is experienced as objective and what is not experienced as objective. This is true for a number of reasons. First, the number of different perspectives or modalities that we can experience—whether actually or imaginatively—varies with the object and with the circumstances. There are many different perspectives on the shape of a lemon, but few perspectives on its taste. I can easily imagine alternate perspectives on the desk before me, but I struggle to imagine even one other perspective on the dark fleck that just crossed my visual field. As a result, we can experience the lemon's shape as more objective than the lemon's taste, and we can experience the desk as more objective than the fast-moving fleck. Second, our ability to integrate the different perspectives we remember or imagine at a given time also varies quite widely. If you show me photos of a bird that crossed my visual field—photos that enable me to imagine what it looks like from many different perspectives, this can enhance my experience of its objectivity only insofar as I am able to imagine how those

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[14] Noë (2006) claims that different perspectival contents occur at different times: "experience is a temporally extended phenomenon; it is an activity of skillful probing" (p. 430). But he also claims that "experiential presence is virtual all the way in . . . The rear side is present virtually, but the present side is present simpliciter" (p. 427) – a claim that seems to suggest that the rear side is present in imagination at the same time as the front side in present to one's senses.

[15] Siegel (2011) distinguishes three different ways that philosophers have attempted to explain the experience of objectivity in perception: ways that emphasize the experience of space, ways that emphasize the experience of alternate perspectives, and ways that emphasize the experience of tactile resistance. For reasons that I elaborate in Church (2013), I think the experience of space and the experience of perspective-independence are inseparable.

other perspectives fit together with my present perspective. The more integrated the presented alternatives, the more evident the objectivity. Third, there are differences in the extent to which we can entertain different perspectives simultaneously. Even if I understand how my current perspective on the bird is related to the perspectives of the photos you show me, it may be harder for me to conjure up those other images while observing the bird than it is for me to imagine other perspectives while observing my desk. Insofar as the phenomenology of perception is a phenomenology of evident objectivity, and insofar as the synthesizing of perspectives that supports a phenomenology of objectivity comes in degrees, the phenomenology of some experiences will be more perceptual than others. As long as our intuitions about clear versus unclear cases accord with the predictions of this analysis, the resultant fuzziness counts for rather than against the account offered here.

Imagining of alternate perspectives is certainly possible, but how often is it actually occurring as we perceive? If the phenomenology of perception is the phenomenology of evident objectivity, and if objectivity can only be evident from within an experience through the infusion of imagined alternatives, then we have reason to think that imagination must be operative when we perceive something as a door (or as anything else). But what empirical evidence do we have to support this claim?

The highest, and perhaps the least reliable, level of evidence is introspection. We are not normally aware of imagining alternative perspectives or alternative possibilities when we perceive something as a desk or we perceive someone as amused; our focus is on the object or person we are observing, not on the way we are processing information. But just a bit of introspection suggests that we are constantly imagining more than what is immediately present to our senses. One way to prompt an introspective awareness of such imagining in the midst of a perceptual experience is to ask an attentive observer: Are you imagining the door opening to the right? Are you imagining the backside as carved in the same pattern? Often, the observer will respond: “Actually, I was imagining the door as opening to the left”, or “I was imagining the back as less ornate – claims that count against the worry that the reported imagining is merely due to the power of

suggestion. (Our sense that we were imagining something prior to being asked may be mistaken, of course; but the burden of proof lies with those who doubt our introspective evidence, not those who accept it.[16])

Introspection also reveals that unavailable perspectives are more or less automatically imagined when certain parts of a scene are obscured from view, or when certain parts of a sequence of sounds is blocked from hearing. When a pillar blocks our view of center stage, for example, we use our imagination to fill the way an actor moves as she walks from left to right; and when a radio crackles as we listen to music, we use our imagination to fill in the missing notes.[17] Likewise, when we are shown (in a movie, for example) a person performing an impossible action, or following an impossible trajectory, we tend to use our imagination to 'correct' our vision; and when we are given a nonsensical series of notes, we tend to use our imagination to 'correct' our hearing. Frequently, we experience the missing positions as positions we have directly observed, and we experience the missing occurrences as occurrences that actually transpire, wholly unaware of the role of the imagination in giving us these experiences. The contributions of the imagination in such cases are quite familiar to actors and painters and musicians, and they are contributions that are quite easy for anyone to observe introspectively.

There is also considerable behavioral evidence, at the functional level, that supports the pervasive influence of imagining on perception. (For those who want to

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[16] Dennett (1991), takes the opposite approach, placing the burden of proof on those who think there is a difference between the realist versus constructivist interpretations of such reports, for he argues that there is nothing to decide between these two interpretations. The dispute then turns on whether the *prima facie* evidence of introspection can be explained away (and not merely discounted).

[17] Note the difference between these cases and the case of blind spots or visual and aural 'blinks', where it is more plausible to suppose that an absence of information is simply ignored rather than that the missing information is imaginatively filled in. (What is the difference between not noticing a gap in perception and filling the gap in with imagination? Noë (2004), pp. 47-67, summarizes Dennett's "perceptual presence" account and offers his "implicit understanding" alternative.)

There are also interesting differences between cases in which the gaps in a presented scene are filled in by relatively low-level representations generated by visual processing mechanisms and cases in which the gaps are filled in by higher-level processing based on long-term memories. Briscoe (forthcoming) clarifies some important differences between these two sorts of filling in. Both involve visual representations and both are involuntary, however; so, unless one insists that imagining must always be under our voluntary control, Briscoe's distinctions raises questions bout the extent of so-called "cognitive penetration", not the extend of imaginative filling in.

restrict the term "imagine" to conscious acts or conscious representations, functional evidence for image-like representations may seem irrelevant. I do not, however, want to restrict the term in this way, and neither do most psychologists[18]). The fact that we move so smoothly through intricate spaces suggests that those spaces are already imagined in advance of our movement – not just hypothesized, in thought, since the translation from thoughts into movement would lack both the speed and the spatial nuance that is required. Also, the ease with which we recognize previously seen objects, even when they are now viewed from alternative points of view, suggests that we already imagined (something close to) these other points of view when we first viewed those objects. (The alternative hypothesis – that we imagine different points of view only later, in an effort to match the objects before us with those seen previously – is not only implausible in most cases, given the speed of our recognition; it simply shifts the time of our imagining, without questioning the claim that most of the perceiving that we do – pretty much all perceiving that involves recognition – depends on actively imagining alternative points of view.) Thirdly, in the case of many causal sequences – a particular type of movement usually following a particular facial expression, a particular tone of voice usually preceding a particular type of laughter, and so on – it can be shown that (other things being equal) even babies lose interest in sequences they are familiar with. One plausible explanation seems to be that the aftermath of an event has already been played through in the imagination so its actual occurrence is no longer news. [19]

This hypothesis may also be supported by observations at the level of neurology. (While neural observations are probably more reliable than either introspective observations or behavioral observations, they are also the hardest to translate into talk of imagining, perceiving, or thinking.) The activation patterns specific to any one perceptual encounter are tiny compared with the activation patterns that are shared across multiple encounters with the same object and, more importantly, the activation patterns that are

[18] McGinn (2004) is one philosopher, following in the tradition of Wittgenstein, who wants to restrict the term in this way. For further discussion of the nature and possibility of unconscious imagining, see Church (2008). See also Church (2013), Chapter 2, for further discussion of active versus passive imagining.

[19] For evidence that even infants are often imagining possible outcomes, see Butterworth and Cochran (1980).

present when merely imagining that object. When I see a bird (or hear its song), for example, much of the resulting neural activity is more closely correlated with past experiences and with imagined experiences than with the present encounter. The sensory input of perception accounts for a minority of synaptic contacts in the cortex while the majority has been described as "re-entrant activity"—activity that was originally prompted by other perceptual input, and activity that is associated with memories and imaginings where the occasioning input is no longer present.[20] More recently, of course, there has been a flurry of interest in "predictive coding" – that is, higher-level representations or coding that predicts lower-level representations or coding in such a way that lower-level coding has no effect on higher-level coding unless and until it differs from what is predicted. Clark, who has been particularly influential in disseminating this research to philosophers, maintains that "it means that perceptions (at least, as it occurs in creatures like us) is co-emergent with (something quite like) imagination"[21] for there is a "fundamental linkage between 'passive perception' and active imagining, with each capacity being continuously bootstrapped by the other. Perceiving and imagining (if these models are on the right track) are simultaneous effects of a single underlying neural strategy."[22] Recent neurological evidence, then, only strengthens the claim that the imagination is active whenever there is perception.

II

Let us turn now to cases in which we perceive people as waiting or as worried, as arguing or as anxious, as sighing or as sad – cases in which we perceive people as doing certain things or as feeling certain things.

Just as many different aspects of a desk can be registered simultaneously, many different features of a person can be registered simultaneously, and though no one these features alone enables us to perceive what the person is doing or feeling, the combination

[20] This is the terminology of Llinas and Ribary (1994), for example.

[21] Clark (2015), p. 26. Clark views predictive coding as as explanatory of such phenomena as priming and confirmation bias that are operative at higher levels as well as lower levels of perception.

[22] ibid p. 39

enables us to perceive them as waiting, as angry, as anxious, and so on. We notice a foot twitching, narrowed eyes, the upward tilt of a head, a tightness in the voice, a shaking hand; and these observations combine to produce our perception of the person as anxious – not through any (conscious) inference but through the creation of a self-supporting gestalt. We do not reflect on these components in order to guess their significance or their source; rather, we experience them as parts of a unified whole, the objectivity of which is evident precisely through the way it its parts reinforce the unity of the whole. For perceiving the person as anxious person also means that the twitching foot appears as an expression of restlessness, the narrowed eyes as an expressions of guardedness, tightness in the voice as an expression of emotional tension. The validation of our experience of that person as anxious it is embedded within the perceptual experience itself.[23]

Sometimes, though, we do not need to observe multiple aspects of a person's behavior in order to perceive them as waiting or as worried. A single gesture can cause us to perceive someone as angry, or as about to leave. A child gives a sidelong glance and we immediately perceive her as up to some mischief. We hear a catch in our friend's voice and immediately perceive her as sad. These cases are analogous to cases in which we observe part a familiar surface and immediately perceive it as a desk, or as a painting, or as a book. The phenomenology is not that of simply thinking of the object as a desk, or simply thinking of the voice as sad; rather, we perceive the object as a desk and we perceive the voice as sad. But if, as I've been suggesting, the phenomenology of perception depends on mutually-supporting aspects appearing within a single experience, then our exposure to a single gesture or a single sound must be supplemented by various sorts of imagining in order to generate the phenomenology of perceiving as. This can happen in at least three distinct ways:

One way relies on the reactivation of memories. As I observe a child's sidelong look, I can recreate, in my imagination, things I have observed in the past – the tentative movements that preceded this look, the cookies in the next room, various actions that

[23] Note how this view of internal justification avoids Burge's (2010) complaint about the hyper-intellectualism of accounts that require a perceiver to *think* about what justifies a perceptual belief.

have accompanied similar looks in others, a mother's parting words, and so on. Kant calls this "reproductive imagining", but it is now more common to call it "iconic" or "episodic" memory.[24] It can be quite deliberate – as when we try to recall just what the child was doing a moment ago; or it can arise automatically – as when this child's look prompts the memory of another child in a similar situation. The important thing here is that the memory is recreated in imagination, not merely recounted in thought, and not necessarily via thought. Perceptual experiences from my past are reactivated, or reconstructed, and those imaginings affect the way the child now appears to me.

Another example. Consider how, at a social gathering, I might come to perceive my neighbor as amused. Listening to the host's long-winded story, I look at my neighbor to check his reaction and I see that his eyes are bright and a corner of his mouth is twitching. Taken by themselves these facial features could be expressions of any number of states of mind – repressed impatience, bodily pain, growing disdain, happy memories, and so on.[25] But because my current experience is also infused with memory images of my neighbor laughing (rather than complaining) about similar stories, of the eager expression on his face a few minutes ago, and of his expressions of affection for this storyteller, I will perceive his reaction as amusement. Again, these recollections not only guide my thinking – and, indeed, nay not prompt any thought at all,, they affect the way my neighbor appears to me. The recalled laughter, and the recalled affection, make his eyes appear as not only bright but twinkling, the corner of his mouth not only twitching but curling upwards.

A second way that imagining can contribute to the phenomenology of perceiving as is by filling in unseen parts of a scene. Only one side of the child's face might be visible, but normally I will use my imagination to fill out her expression; her hands might be out of sight, but I will imagine them clasped behind her back; I can't see around the corner but I can imagine the door she is headed for. When they become part of the

[24] Wollheim (1984) offers an analysis of iconic memory that focuses on the different perspectives one can have within a memory. Crowther (2013) defines episodic memory as a memory trace that "is activated through an imaginative realization of the past experience." (p. 110)

[25] Even if distinct emotions are reliably correlated with distinct facial configurations, we are not reliable at recognizing these correlations.

phenomenology of my current experience, these imaginings will fill in any number of details simultaneously, not as a series of separate events. This sort of imagination is what Kant calls "productive" imagination; it doesn't simply recreate scenes that have been witnessed before, it fills in gaps in the information we receive so as to produce a more complete picture of the world. And when that picture is suitably filled out, we might be able to perceive the child as up to some mischief, and we might be able to perceive our neighbor as amused.

There are at least three possible sources of the imagining that fills out a scene. One possible source is conditioning that we have undergone over a lifetime – conditioning that establishes associations between various sorts of experiences such that the activation of one sort tends to result, pretty much automatically, in the activation of another sort. We see someone reaching for a door and we automatically imagine her adjusting her hand position, or we see someone suddenly breaking into a smile and we automatically imagine his laughter. If similar associations can be established through the evolutionary development of a species' brain (rather than the conditioned development of an individual brain), that is a second possible source of the imagining that fills out a scene. It could be that our brains are structured in such a way that the experience of certain tones of voice, for example, triggers images of certain sorts of movement. Third, and most powerful perhaps, is the possibility of cognitive penetration, whereby thinking of something as a particular sort of thing – i.e. conceptualizing it in a particular way – changes the very look of the thing. There are good reasons for thinking that conceptualizing an object or a scene in one way rather than another affects the way the scene looks to us, not only through changes in attention, but through changes in the appearance of the properties we are attending to. Macpherson describes experiments that show how even something a simple as the color of a piece of paper changes its appearance in response to our different conceptualizations of the paper's shape. we conceptualize the shape of the cut-out in different ways.[26] And, she argues, it is plausible

[26] MacPherson (2012). I find the shape and color experiments more convincing than the 'black' versus 'white' face experiments insofar as they do a better job of eliminating the shift-of-attention alternative explanation. But see Stokes (forthcoming) for a helpful overview of the ongoing disputes about these and other purported proofs of cognitive penetration.

to suppose that thought effects such transformations in visual content through the intermediary of imagining (and dreaming, and hallucinating) – states of mind that are clearly capable of altering the character of our visual experience. In the terms of our discussion, this means that thinking of a person as angry can cause us to imagine angry faces and those imaginings can alter the way the face in front of us appears; and thinking of a child as mischievous can cause us to imagine mischievous movements and mischievous expressions that are not actually in view, and that can cause us to perceive the child as (still more) mischievous. Such filling-in by the imagination can be misleading, of course, but there should be little doubt that it can alter the phenomenology of my experience – transforming the mere thought of a child as mischievous into a perception of her as mischievous.

A third kind of imagining that can contribute to the phenomenology of perceiving as is what I will call "predictive imagining". (This may or may not be realized by what is called “predictive coding”, which I touch on below.) Predictive imagining does more than fill in the gaps – the other side of a face, the unseen hands, the unheard laugh. It makes projections about events that are not (or not yet) observable by anyone, and events that may not ever occur – what a child would do if challenged, how a neighbor would respond to my laughter, and so on. Naturally, as long as we are trying to get things right, what we imagine as happening will be guided by what we have observed in the past – observations concerning the person in question and observations concerning others in similar situations. But our imagining can also be guided by our desires, by our aesthetic preferences, and by other things that we are thinking about. Whatever the source of such imaginings, our imagining of a person’s future responses (including responses to situations that she will ever encounter) will effect the way we experience that person’s current actions and expressions. If we imagine that a child will be chastened by a particular challenge, we are likely to perceive her present look as having a different meaning than if we imagine that she will welcome the challenge; and this effect holds whether or not the challenge actually occurs. Likewise, if we imagine someone softening in response to a kind word, the tension in his face will appear to have a more fragile quality than if we imagine him irritated by attempts at kindness – whether or not any

kindness is forthcoming. Working in the other direction, also, when we perceive someone as vulnerable rather than irritated, that perception is likely to be infused by various images of his actions and expressions in situations that are merely possible, not (yet) actual.[27]

Before considering the epistemic impact of these various kinds of imagining, which is the topic of Section III, it is useful to distinguish the "infusion" effect I have been describing from an "overlay" effect that imagination can have on perceiving as. In order for our imagining to alter the ways things appear to us, and to become part of a single perceptual experience, that imagining needs to be appropriately combined with the information we are receiving through our senses; to use Kantian terms, there needs to be a "synthesis of the imagination". I cannot offer a full account of such synthesis here, Kantian or otherwise, but it is important to recognize the difference between imagining that we experience as an 'add on' versus imagining that infuses our experience of something such that is alters the way something looks to us, or what we perceive it *as*.[28]

Suppose that every time a particular student is criticized he becomes angry. Being a regular witness to this pattern I might start to imagine his anger whenever criticism is imminent – before any criticism is actually lodged, and before he is actually angry. This could be regarded as a kind of foresight that is both accurate and helpful: I can "see" what is coming, I can plan accordingly. This is an example of what I have called "predictive imagining", but it doesn't always enter into my current perception of that student so it

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[27] In a related vein, Sean Kelly (2003, 2005) has emphasized the role of *expectations* in our perceptual experiences. When we experience objects in space, we expect to be able to move around them in various ways and to make contact with them in various ways; likewise, when we experience people as having certain intentions or feelings we expect them to do some things rather than others, and those expectations are part of the phenomenology of our knowledge. According to Kelly, these expectations are not expectations that are explicitly entertained so much as they are *felt*; following Merleau-Ponty, he speaks of a "tension in the experience that feels as though it is about to resolve itself." Felt expectations or anticipations seem to depend, however, on representing (in imagination or otherwise) what is to come – representations that may be either vague or vivid, visual or tactile, full of detail or rather sparse. So the feeling of expectation is not an alternative to imagining so much as its correlate.

Siegel (2014) describes the difference between representational and non-representational understandings of Gibsonian affordances, arguing that a representational understanding is needed in order for affordances to inform the content of our perceptions.

[28] Strawson (1974) used the "infusion" metaphor, acknowledging how difficult it is to unpack the metaphor in any precise way.

doesn't always enable me to perceive him as being in a particular mental state. Sometimes it is merely an image that *accompanies* my perception of the student before me. Unless the imagined future affects the way he looks to me now – emphasizing the tension in his jaw, for example, or making his movements appear aggressive – it will not be a case of perceiving the student as angry. Rather than making his anger appear self-evident from within the perception itself, my imagining stands alongside my perception and may even distract me from it. Likewise, my exposure to a student's behavior may prompt recollective imagining of a similar student's behavior; but that recollective imagining may or may not affect the way this student appears to me. I might 'see' the two students side-by-side, in my 'mind's eye' rather than seeing the one student *in* the other – with their juxtaposition actually changing the way that each appears to me (each appearing more like the other than they did before). When imagination contributes to the phenomenology of perception, the relation between what is present and what is imagined will be one of reciprocal reinforcement – one in which the imagining is supported by the evidence at hand *and* the evidence at hand is supported by the imagining.

III

One could agree that imagining counterfactual possibilities contributes to the *phenomenology* of perceiving people as doing certain things or feeling certain things – without, however, supposing that the relevant imagining makes an *epistemic* contribution to our knowledge of others' states of mind.[29]

One would have to be a skeptic about knowledge itself to doubt the epistemic contributions of accurate memories of a person's past, of reasonable posits about aspects of a person that we don't actually observe, and of justified predictions about what a person will become (or could have become). And one would have to be a skeptic about

[29] Likewise, one could believe that cognition "penetrates" the contents of visual experience without adding to – and perhaps detracting from – its epistemic value. Shea (2015) writes: "An appropriate account of the epistemic profile of a sensory process – its sensitivity, specificity, and positive and negative predictive value – will be heavily dependent upon the extent to which there are top-down as well as bottom-up influences on that process." (p. 76); and he goes on to explain why top-down influences are not necessarily epistemically pernicious.

imagining itself to doubt that our imagining can sometimes recreate a memory, fill in a scene correctly, or represent the future accurately. Such skepticism is difficult, perhaps impossible. It is easy, however, to wonder how imagining as such *adds* to our knowledge. Isn't imagining, insofar as it is accurate, an *expression* of rather than a *source* of knowledge? (This is one of the charges that is sometimes made against simulationist theories: isn't our ability to simulate another's mental state – at best – the result rather than the source of our knowledge?) When we imagine things to be one way rather than another, instead of validating our beliefs, doesn't this imagining itself need to be validated?

It might be tempting to distinguish what I would call reproductive imagining, or iconic memory, from other sorts of imagining on the grounds that it retains and reproduces the content of actual experience rather than adding to actual experience through projective filling-in of what has not been experienced. Reproductive imagining or iconic remembering, unlike productive imagining, might seem like a reliable source of knowledge insofar as it merely serves to retain knowledge of what was actually perceived. There are two problems with this suggestion, however. First, it is well documented that our memories, iconic or otherwise, already include a lot of filling-in of details that weren't actually visible; and these details are often adjusted to better fit with what comes later – remembering a person's manner as rude in order to better square it with her later behavior, for example. Second, as I have tried to show above, even our initial perceptions tend to be infused with imaginative filling-in and imaginative prediction.

Alternatively, it might be tempting to distinguish between imagining, whether reproductive or productive, that occurs automatically and outside of one's control versus imagining that is intentional and under one's control. Our automatic imagining, one might suppose, has been selected for its contribution to knowledge so, other things being equal, we are entitled to trust automatic imagining but not deliberative or intentional imagining. Putting aside questions about evolution's interest in tracking truth,[30] the relevance of this

[30] See Stich (1990) for an extended critique of the assumption that evolution favors true beliefs.

distinction seems to disappear once we recognize the extent to which automatic imagining can be brought under our control, and the extent to which imagining that is initially deliberate can become automatic. On the one hand, various kinds of therapy (EMDR treatment for trauma, for example) enable people to intentionally redirect imagining that is otherwise automatic.[31] On the other hand, when directed imagining becomes sufficiently repetitive it usually becomes automatic. A year of choosing to imagine the worst that might happen to one's child, for example, will usually result in worst-outcome imagining that is largely out of one's control.

Even if we could identify the type or types of imagining that are most likely to be veridical (Descartes' criterion of "clear and distinct" was meant to do this), this would not establish imagination as a *source* of knowledge. For certain sorts of imagining could be good *indications* of knowledge without being *contributions* to knowledge. Wittgenstein, for example, resists the idea that the entertaining a particular image (an episodic event) could give us knowledge of what a word means or what a person feels since these are dispositional rather than episodic properties of language and of a person, respectively. The meaning of a word, he argues, is not given by the evocation of an associated image but by the ability to make proper use of the word; knowing the meaning of a word depends on knowing how to use it, not on having an appropriate image. His arguments center on (1) the fact that associated images are both optional and variable -- thus not necessary for knowledge, and (2) the fact that images admit of many different interpretations, implying nothing on their own -- thus not sufficient for knowledge. Applied to the case of knowing the mental states of persons, the Wittgensteinian claims become (1) that we can know a person's mental states without imagining anything about them, and that the images we do have are highly variable, and (2) that when we do imagine the past or future behavior of a person it is not the image but our interpretation of the image that makes an epistemic contribution to our knowledge of that person.

[31] EMDR therapy (Eye Movement Desensitivation and Reprocessing) involves guided attempts to relive a past experience in such a way that the focus of one's attention is redirected and the emotional associations one has with the memory change as a result.

While there is truth in both of these claims, they do not imply that the imagining we have been describing makes no epistemic contribution to our knowledge of other people. Regarding (1): it might indeed be possible to know a person's mental state – by knowing what she is likely to do under various conditions – without actually imagining any of those actions or conditions. For the knowledge might be merely dispositional (I could call up the information if asked but it never really comes to mind), or the knowledge might be purely propositional (I can give accurate descriptions of a person's past or future but I can't really imagine it). This would show that imagining is not necessary for knowledge – for not all knowledge is perceptual knowledge – but it wouldn't show that imagining is an epistemic 'dangler', adding nothing to what is already known. Regarding (2): we can agree that images of a person need to be interpreted in order to give us knowledge of that person's mental states. A raised eyebrow or the tilt of a shoulder, a loud outburst or a quiet exit, can indicate different things about different people in different situations. Our experience of images is seldom neutral with respect to alternative interpretations, however; different perspectives and different propensities are part of the very look, and the very feel, of what we experience. We see a downturned mouth as disapproving rather than sad, we see a stick figure as moving in one direction rather than another, and we hear a tapping finger as impatient rather than meditative. So we can accept that an accurate picture of a person in a particular setting does not suffice for knowledge of that person's state of mind, but we need not accept that the presence of such images – especially in consort with one another – makes no epistemic contribution whatsoever.

Responding to arguments *against* an epistemic contribution for imagining doesn't establish, let alone explain, what its epistemic contribution actually *is*. How can the infusion of imagining into our perception of a person give us knowledge that we didn't already have?

There are, I think, three distinct ways our knowledge of other people benefits from infusions of the imagination. First, by imagining the past and future surround of an event, and by imagining various aspects of a scene that remain hidden from view, we are

able to check the consistency of our convictions about that scene and event. It is much easier to hold onto conflicting beliefs if we do not try to picture them all holding at once. When we activate several different memories and several different expectations all at once, it is hard to sustain inconsistencies in our view of that person. Recalling experiences of your past kindness, imagining acts of generosity that I haven't actually observed, and anticipating what you would do in response to another person's pain – all actively imagined, and all integrated into my current perception of your current abruptness, I am less likely to view your current behavior as dismissive or rude, more likely to view it as preoccupied and protective. The inconsistency between past kindness, unobserved generosity, and anticipated concern, on the one hand, and present rudeness on the other hand, becomes more evident, and more uncomfortable, when the inconsistent pieces are imagined all at once. Or, to take another example: if I vividly recall a child's fear of failure, I imagine her meticulous practicing when alone, and I envision her likely response to praise, I am less likely to take her apparent confidence at face value. I create a multi-faceted image of the child that is at odds with her apparent confidence. The imagined aspects of the child's behavior could be thought about rather than imagined, of course; or they could be imagined in a slow sequence rather than more or less simultaneously. But entertaining several things at once is a particularly effective way to check for inconsistency as it prevents one from ignoring the implications of a judgment simply because it is not present to mind. Furthermore, imagining several aspects of a person simultaneously tends to be easier than thinking about several aspects of a person simultaneously insofar as images occupy space rather than time; multidimensional space accommodates many different images while single dimensional time normally restricts us to one thought at a time.[32]

This advantage can be recognized more easily perhaps, in the case of imagining different perspectives on an arrangement of objects in space. It is harder to believe that John's house is closer to the river than Maria's house *and* that Maria's house is closer to

[32] Matters are a bit more complicated than this, of course, since we can't attend to all aspects of a picture at once and since we can have the experience of two different thoughts running in tandem. The contrast still holds, however, insofar as it is easier to illustrate many different aspects of a thing all at once than to describe many different aspects of a thing all at once.

the river than Pilar's house *and* that Pilar's house is closer to the river than John's house if we imagine them all simultaneously. (Even if the relative distances are inferred from the imagined scene, rather than directly seen in it, imagining makes it easier to discover inconsistencies in our beliefs.[33]) Similarly, it is harder to believe that John can see Maria at her window but Maria can't see John at his window if we don't actually imagine both looking out of their windows simultaneously. People vary in their ability to recognize inconsistencies in their imagining; and people vary in their ability to recognize inconsistencies in their thoughts. Still, since perceptual inconsistencies are usually harder to ignore than cognitive inconsistencies, and since imagination simulates perception, imagination can draw our attention to inconsistencies that might otherwise be overlooked. I am not claiming that thoughts have contents entirely independently of their associated perceptions -- only that thoughts can sometimes be had in the absence of such perceptions and that simulating those perceptions can help to ensure their consistency.

A second way in which imagining can contribute to our knowledge also derives from the way that imagining spatializes our knowledge. As we have said, fitting everything into a common space requires a kind of coordinating that is absent from a mere list of properties. This also prompts a kind of filling-in that can lead to new discoveries. When my mother calls to describe a package she has just received, I might imagine the parcel in her hand, imagine her standing by the door, imagine the telephone in her hand, imagine her bathrobe and slippered feet, and so on. As the picture gets filled in, I might realize that she can't read the label because the light is not good there, that she can't open the package because her hands are full, and so on. Or watching a neighbor's uneven gait and imagining the route he will follow, I might discover that he is likely to fall, or that he won't see the cat crossing his yard.

How do these examples carry over to the case of mental states or personality traits that are not spatial in the same way? If I imagine my mother's pleasure in her package

[33] Owens (1996) describes cases where recollection of a past event must be supplemented by inference in order to produce further knowledge. This may cast doubt on the perceptual character of some of the knowledge we acquire through memory, but it doesn't count against the epistemic value of recollective images.

and I simultaneously imagine her apprehension about her eyesight and her fears about her physical instability, I am more likely to realize that she is feeling teary or that she is thinking ahead to when she will next see me.[34] No one of these pieces by themselves leads to those conclusions, and merely recounting them in sequence as opposed to synthesizing them into a single perception of her person is unlikely to prompt that conclusion.

Both of the epistemic contributions I have described – the added check on consistency, and the added impetus to discoveries – are contributions that were emphasized by Descartes in his discussions of how visualizing, or "intuiting" is preferable to deducing or enumerating.[35] By compressing sequential deliberations into a single intuitive insight – through temporal compression in the case of deduction, and thorough exemplification in the case of induction – Descartes maintains that we circumvent certain limitations on the amount of information at our disposal: limitations due to failures of memory in the one case, and limitations due to the finite character of our life in the other. Circumventing these limitations enables us to better recognize inconsistencies – the first advantage cited above. More important to Descartes, however, is the capacity of such compressions to engender new discoveries.[36] When we imagine various items within a single space, we easily discover a variety of previously unspecified relations between those items and their parts. So insofar as mathematical proofs can be presented spatially (a discovery that is itself largely due to Descartes, who demonstrated the inter-translatability of algebra and geometry) they will be presented in a manner that is bound to display more relationships than were specified in the originating description.

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[34] Maibom, in this volume, notes how often our imagination misleads us precisely because we fail to imagine enough details of a person's situation.

[35] Although he touches on this topic in his *Meditations*, it is his *Rules for the Direction of the Mind* (1681/1952) that addresses these points more fully. Descartes' term "intuitus" is usually translated as "seeing" or, as a noun, "a look, a view." In Rule IX, especially, he likens the intuitus of the mind to the intuitus of the eyes, noting how a single act of apprehension or attention can be directed to simple objects or to many objects simultaneously.

[36] The example he gives (in Rule XI of his *Rules for the Direction of the Mind*) concerns a series of magnitudes –A, B, C, D, E – arranged in continued proportion such that the proportions of A to B is the same as B to C, and so on. The ease with which one can generate a further addition to the series – an addition whereby the proportion of F to E is the same as E to D – is unaffected by whether one considers each relation simultaneously or in sequence. But if we are asked to determine the mean between A and E, it is immensely easier if we can consider the whole sequence at once, for then it is immediately evident that C must be the mean between A and E.

A third advantage of simultaneous imagining concerns the intimate connection between imagination and action. Presenting information in a perceptual manner allows knowledge to be translated more directly into action. Imagining someone's aggression, or someone's pain, insofar as it enables one to perceive her as aggressive or as in pain, is more likely to trigger a response than merely thinking that she is aggressive or in pain.[37] Apart from the practical advantages (and sometimes disadvantages) of a more sure translation of knowledge into action, there is an epistemic advantage to acting on one's judgments insofar as actions prompt reactions that offer useful feedback on one's judgments. The more readily I respond to what I perceive as your amusement, or your anger, the more easily I will be able to check the accuracy of my judgment. If I imagine that you are about to laugh, and respond with a complicitous smile, I will quickly discover whether my imagining, and the perception that was colored by that imagining, was accurate or not. If you were angry rather than amused, my complicitous smile is likely to backfire. While thoughts about someone's state of mind can also lead to action, those actions will be more delayed so less likely to provide reliable feedback on the accuracy of the thought.

Having described three distinct epistemic advantages that imagining brings to our knowledge of people's mental states, it is worth noting the corresponding risks of such imagining. Corresponding to the advantages of highlighting inconsistencies in one's beliefs, there is the risk of seeing consistency where none exists. Juxtaposing a remembered past on an observed present, or an observed present on an imagined future, can encourage us to regard people as more consistent and more unchanging than they actually are. Corresponding to the advantage of discovering new facts as we automatically fill in the 'blank spaces' in our perceptions, there is the risk of presenting likely hypotheses as perceived facts and becoming less rather than more able to discover something new. If I fill in the gaps between a person's observed behavior with more of the same, not only do I overlook possibly important distinctions between a person's

[37] See Van Leeuwen (2011). Exceptions to this pattern include cases where empathetic imagining of another's pain makes us want to avoid further exposure to that pain. See Maibom (2009).

public and private self; but by creating experiences in which we perceive people as being in one mental state rather than another, we generate a false confidence in what we believe. Finally, corresponding to the advantage of acting quickly to receive immediate feedback on the accuracy of our judgments, there is the risk of acting too precipitously, before all the evidence is in, thereby precluding the evolution of a person's inclinations that allows an initial recoil to mature into indignation, into fascination, or into wry amusement for example. Our immediate move to action may help confirm or disconfirm our beliefs concerning a short-term mental state while preventing us from recognizing its place within a longer-term state of mind.

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