



Knowledge of things

Matt Duncan¹

Received: 20 April 2018 / Accepted: 6 August 2018
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Abstract

As I walk into a restaurant to meet up with a friend, I look around and see all sorts of things in my immediate environment—tables, chairs, people, colors, shapes, etc. As a result, I *know* of these things. But what is the nature of this knowledge? Nowadays, the standard practice among philosophers is to treat all knowledge, aside maybe from “know-how”, as *propositional*. But in this paper I will argue that this is a mistake. I’ll argue that some knowledge is constituted, not by beliefs toward propositions, but by awareness of properties and objects. Seeing isn’t believing, but it is knowing. After further characterizing this type of knowledge, I will make the case for it. Then I will consider a variety of objections. Finally, I will indicate how our recognition of this knowledge may answer other questions, and solve other problems, in philosophy.

Keywords Knowledge · Knowledge of things · Acquaintance · Russell · Perception · Experience

Suppose I walk into a restaurant. I look around for a few moments, and then find you in the back, sitting at a table. I shuffle your way, weaving in-between tables and chairs, dodging a waiter who is scurrying by with a tray full of drinks and a face full of frenzy, and finally I get to where you are, say hello, and have a seat.

In this scenario, I see all sorts of things in my immediate environment, and, as a result, I *know* of them. I know of people, and tables, and chairs—of you sitting patiently in the back, of a waiter who is scrambling around in quiet desperation, of furniture blocking my path like icebergs that I must delicately circumnavigate, lest I crack my carefully lain keel of composure. More elementally, I know of colors, shapes, and spatial configurations—your avocado green shirt, a stain on the waiter’s cotton apron that looks a lot like Teddy Roosevelt, and the unevenness of my chair’s legs, which is causing it to tilt dangerously to one side.

I know of all these things around me. But what is the *nature* of this knowledge? These days it’s standard practice among philosophers to treat all knowledge (aside

✉ Matt Duncan
sduncan@ric.edu

¹ Rhode Island College, Providence, USA

perhaps from “know-how”) as *propositional*—that is, as constituted by beliefs toward propositions, where a proposition is the sort of thing that is true or false, expressed by declarative sentences (e.g., ‘Cows moo’, ‘Your shirt is green’), and embedded in ‘that’-clauses in attitude ascriptions (e.g., ‘I believe *that* cows moo’, ‘You desire *that* the waiter get a move on’).¹ Everyone can agree that I have some propositional knowledge in the above case—that I know *that* I’m in a restaurant or *that* you’re sitting in the back, for example. But what about my knowledge of the eight tables strewn about the room? Or the highly determinate shade of avocado green on your shirt? Or the very specific look on the waiter’s face? The current standard practice is to treat it *all* as propositional.

There is, however, another way to understand some of this knowledge. Bertrand Russell (1911, 1912) distinguishes between two kinds of knowledge: knowledge of *truths* and knowledge of *things*. Knowledge of truths is our familiar kind of propositional knowledge. Knowledge of things is different. It is constituted by our awareness of objects and properties around us (or in our minds). According to Russell, this awareness is, or at least can be, *knowledge*. But, crucially, it is *not* propositional—it does not have propositions as its contents.

The orthodox view—the standard practice among contemporary philosophers—leaves no room for Russell’s knowledge of things. I believe that this is a mistake. I believe it’s a mistake both because it belies the true nature of our knowledge—I believe that we do have some (non-propositional) knowledge of things—and because it has inhibited our ability to understand various other, related phenomena.

So in this paper I will argue that we have “knowledge of things”. After further characterizing this type of knowledge, I will make the case for it. Using visual perception as a paradigm case, I will appeal to an array of considerations to argue that some of our knowledge is non-propositional—it is constituted, not by beliefs toward propositions, but by awareness of properties and objects. Then I will consider some objections. Finally, I will indicate how our recognition of this knowledge may answer other questions, and solve other problems, in philosophy. The purpose of this paper as I see it is to lay out an extensive case for knowledge of things by identifying a broad range of reasons to accept it. Each of these reasons deserves further exploration. So this paper is but an opening salvo in the advancement of knowledge of things.

But now, before getting going, let me address one worry. You might worry that this is a trivial matter—that whether or not we call this or that “knowledge” is simply about how we use words, and so it isn’t that big of a deal. However, here I’m not so interested in how we use words. I’m interested in what a certain kind of knowledge *is*. And I’m particularly interested in certain *features*, or philosophical roles, commonly associated with knowledge—features having to do with justification, reasoning, evidence, and

¹ As Klein (1998) puts it, “One virtually universal presupposition [of contemporary epistemology] is that knowledge is true belief;” where belief is understood as an attitude toward a proposition (pp. 27–33). Whether or not most contemporary philosophers *explicitly believe* that all knowledge (save know-how) is propositional, this doctrine is consistently reflected in philosophical practice—propositional knowledge is all that’s talked about, for one thing—and it is presupposed in many debates—including debates that other kinds of knowledge would be highly relevant to, such as debates about the structure of knowledge, the nature of justification, the epistemic significance of experience, certainty, intuition, and self-knowledge. So, even setting aside who believes what, the idea that all knowledge (save know-how) is propositional is firmly embedded in contemporary philosophical tradition.

praise and blame. These features are important in all sorts of ways. And, in what follows, I will argue that they apply fully and equally to a domain other than that to which they are standardly applied. So, regardless of how we use words, much is at stake.

1 Knowledge of things

Russell (1911, 1912) is by no means the first philosopher to posit or defend knowledge of things. But he is clear and generally pretty careful. So I will begin my characterization of knowledge of things with his account.

Again, Russell distinguishes between knowledge of *truths* and knowledge of *things*. According to Russell (1912), ‘knowledge’ in the former sense is:

... applicable to the sort of knowledge which is opposed to error, the sense in which what we know is *true*, the sense which applies to our beliefs and convictions, i.e., to what are called *judgments*. In this sense of the word we know *that* something is the case (p. 69).

For Russell, knowledge of truths is propositional knowledge. And it is distinct from knowledge of *things*, which comes in two varieties: knowledge by *acquaintance* and knowledge by *description*. Russell (1911) describes acquaintance as follows:

I say that I am *acquainted* with an object when I have a direct cognitive relation to that object, i.e., when I am directly aware of the object itself (p. 108).

Russell (1911) then describes acquaintance as the direct “presentation” of objects and properties to one’s senses (p. 108) and says that, strictly speaking, we are only ever acquainted with sense data, our awareness of sense data, and a few other things. On Russell’s view, acquaintance is *direct awareness*. All other knowledge of things is thus *indirect*, and counts as knowledge by *description*. We know things by description when we know of them via a description such as “the waiter”, “the brown table in the corner”, or “*that* thing over there”. As Russell (1912, p. 73) points out, knowledge by description presupposes some knowledge of truths. For example, in order to know of the waiter as “the waiter”, I must know certain propositions about what waiters are. Nonetheless, Russell holds that knowledge by description, which again is a species of knowledge of things, is distinct from knowledge of truths. My knowledge of the waiter, for example, or the color of your shirt, or the eight tables in the room, is not the same as, nor is it reducible to, knowledge of propositions.

Yet it really is *knowledge*, according to Russell. My awareness of objects, shapes, colors, etc., is *itself* genuine knowledge. This puts Russell’s view at odds with the standard practice in contemporary philosophy whereby all knowledge (save perhaps know-how) is treated as knowledge of *truths*—that is, of true *propositions*.² Even con-

² One more potential caveat to my claim about what’s standard practice in philosophy (besides the “know-how” caveat) has to do with recent discussions of *understanding*. Some argue that (i) understanding is a kind of knowledge (see, e.g., Grimm 2006; Salmon 1989). And some argue that (ii) understanding is (at least partly) non-propositional (see, e.g., Zagzebski 2001). If one accepts *both* (i) and (ii), and also holds that understanding isn’t just a combination of propositional knowledge and know-how, then one will be committed to there being another kind of knowledge that is non-propositional. With that said, few

temporary philosophers who align quite closely with Russell's epistemology part ways with him on this point. For example, acquaintance theorists about self-knowledge, who agree with Russell that our privileged access to our mental states derives in part from our acquaintance with them, are very careful to assert that acquaintance, by itself, does not constitute knowledge. They say that we must also form beliefs (with propositional contents) about objects of acquaintance in order to know anything about them (see, e.g., Gertler 2011, p. 92; Chalmers 2003). A few philosophers, such as Conee (1994), McGinn (2008), and Tye (2009), do endorse knowledge of things (in the service of other ends), but they don't developed their accounts in much detail, so they leave themselves open to some fairly straightforward objections (see Crane 2012). Thus, it's fair to say that Russell's view that our awareness of properties or objects is *itself* a kind of knowledge is not only striking, but also, by today's standards, highly unorthodox.³

But philosophy has no pontiff, and defying its orthodoxy is no sin. So maybe you kind of like what Russell is preaching. I do! Unfortunately, Russell gives us too little to go on. His characterization (and defense) of knowledge of things is underdeveloped, and some of the particulars of his view—e.g., sense data—are as likely to draw smirks as sympathy from contemporary philosophers. So here is where I leave off with Russell. In what follows, I'll give what *I* think is the most attractive account of knowledge of things. I'll start by saying what constitutes knowledge of things and giving paradigm instances of it. Then I'll further elaborate on the features of this type of knowledge by comparing and contrasting it to knowledge of truths. Finally, I'll offer some remarks on how these two kinds of knowledge are related to each other. In giving this account, I do not mean to suggest that every detail of it is essential to what knowledge of things is—that each point must be accepted in order to accept knowledge of things. This account is an initial attempt to put new flesh on old bones. I take the essential core of knowledge of things to be that it is constituted, not by beliefs toward propositions, but by awareness of properties and/or objects. Beyond this, and concerning my account below, I welcome reformulations, alternative approaches, and disagreement.

But here's my take. Knowledge of things is constituted by *de re* awareness (or consciousness) of properties and objects. Some paradigm cases come from *perception*. When I see the waiter in front of me, I know of him. When I see eight tables, 12 chairs,

Footnote 2 continued

philosophers explicitly endorse either (i) or (ii), and I know of almost no one who explicitly endorses *both* (i) and (ii) (Grimm (2014) may be an exception; though see Pritchard (2014) for a forceful criticism of precisely this part of Grimm's account). Indeed, defenders of (i) typically reject (ii), and vice versa, often precisely because they take on board the orthodox assumption that knowledge is constituted by beliefs toward propositions (see, e.g., Grimm, 2006, §7; Zagzebski 2001, pp. 243–244). So, in the end, this caveat doesn't really threaten my claim that it's standard practice in philosophy to treat all knowledge (save know-how) as propositional.

³ There are a couple of other philosophers who defend something that is at least similar to knowledge of things. For example, Stump (2010) talks about "Franciscan knowledge", which is very much like knowledge of things. Fiocco (2017) defends a Brentano-inspired account of something like knowledge of things. Benton (2017) talks about interpersonal knowledge, which is non-propositional and may be a species of knowledge of things. It may be that there are other philosophers out there who just haven't thought about this issue, or are just focused on other things having to do with propositional knowledge, or for whatever other reason are not *opposed* to knowledge of things (maybe they even like the idea). If so, then my claims about the philosophical orthodoxy can be understood as being about the way the literature and culture within philosophy have gone over the last few decades.

the color of your shirt, etc., I know of these things (even though, as I'll explain, I may not know *that* there are eight tables or 12 chairs there). The same goes for other sense modalities. I can be aware (or conscious) of and, thus, know of all sorts of properties and objects in my environment by smelling, hearing, tasting, or touching them. I can also know of the position of my body via proprioception.

Another paradigm case of knowledge of things is *self-knowledge*—i.e., knowledge of one's own mental states—which is achieved via introspection. I can know of the sharp pain in my knee, the tickle on my elbow, my anger at the cable company for raising rates, and the thoughts about Russell that are running through my head.

So cases of perception and introspection are paradigm examples of knowledge of things. There are less obvious cases that share some but not all of the features of the perceptual and introspective knowledge described above. Memory is an example. I remember properties and objects. But the way they are “presented” to me is different from perception or introspection. For this reason, I'll stick with paradigm cases. My goal here is not to neatly demarcate the domain of knowledge of things. It's just to argue that that domain isn't empty.

Further details about knowledge of things can be seen most starkly when put in contrast with propositional knowledge (or knowledge of truths). I take propositional knowledge to be constituted by a subject's bearing a certain relation—namely, the *belief* relation—to a proposition. Knowledge of things differs in both *relation* and *content*. First the relation. When a subject knows of things, the relation she bears to a content is the *aware of* (or conscious of) relation. I think that this relation is *primitive*—it admits of no informative (i.e., non-circular) definition or analysis. However, those who prefer a reductive account of the aware of relation may take a different tack. For example, some say that the aware/conscious of relation is reducible to a *tracking* relation, where consciousness of property/object *x* is reducible to one's being in a state that is poised for cognitive access and that causally-covaries with the instantiation of *x* (see, e.g., Dretske 1995; Tye 1995). So, although I think that the aware of relation is primitive, reductionists still have room on board.

So knowledge of truths is constituted by *belief*; knowledge of things is constituted by *awareness*. I assume that awareness is not just a kind of belief.⁴ But paradigm cases of awareness do have some commonalities with belief. For example, both belief and awareness are “reality-sensitive” (cf. Gendler 2008). In “good” cases, they track the way things *actually are* (vs. the way we'd like them to be, for example). Belief aspires to *truly* represent the way the world is. Similarly, awareness aspires to *veridically* represent the way the world is.⁵ For this reason, belief and awareness are also similar in that they are typically formed/caused by attending to the very thing that they represent.

⁴ This is the standard view these days. Most philosophers agree that awareness states are not *themselves* beliefs—they rather *cause* beliefs about them or about the external world (see Byrne (2016) for an overview). But there are a couple of notable exceptions. Gluer (2009) argues that experiences are beliefs, and Byrne (2016) argues that experiences are partly constituted by beliefs. These accounts are motivated by a desire to capture the epistemic significance of experience. But, as I'll discuss later, there's no need to posit beliefs here if I'm right about knowledge of things.

⁵ Here I am talking about awareness in a way that is most fitting for a representationalist (or intentionalist) view of awareness, which is the most popular view of perceptual experience these days. I will continue to do so. However, the main elements of my account can be reformulated so as to suit other views of perceptual experience, such as naïve realism or the sense-datum theory.

If one wants to form a belief as to whether there is an open table at the restaurant, one attends to and thinks about the tables at the restaurant. Similarly, if one wants to become aware of something—a cup on a table, for example, or a person on the other end of a phone—then one simply attends to that thing.

So belief and awareness are similar. But they aren't the same. So knowledge of things, which is constituted by awareness, and knowledge of truths, which is constituted by belief, differ with respect to their constituent relation.

They also differ with respect to *content*. The contents (or objects) of knowledge of truths are propositions. What propositions are, precisely, is very controversial. But I at least take them to be abstract bearers of truth and falsity that are expressed (potentially in various ways in various languages) by declarative sentences and marked out by 'that'-clauses in attitude ascriptions. These are not the kinds of things we are aware of in perception and introspection. I've never *seen* a proposition.⁶ The contents of knowledge of things are rather properties and objects—colors, shapes, smells, tastes, textures, people, furniture, etc.⁷ These are concrete and particular (at least in that what we are aware of are property *instances*). They are not bearers of truth and falsity—a color, for example, cannot be true or false. And they are not expressed by declarative sentences. Indeed, many of the properties and objects of which we are aware, such as those that we perceive, cannot be expressed at all. We can of course name, describe, and refer to them, but we can't *express* them. They're not that kind of thing. So what we believe and what we are aware of differ in various important respects. Thus, knowledge of truths and knowledge of things differ with respect to content.

Hence, they differ with respect to both *relation* and *content*. And there's more. For there's more to knowledge than one's bearing a relation to a content—further conditions must also be satisfied. For example, one cannot (propositionally) know something that is *false*—to know that P, P must be *true*. Also, to know that P, one's belief must be *justified*. These are necessary conditions on knowledge of truths (though not necessarily an analysis of it). And, as before, knowledge of things is partly different, partly similar on these fronts.

Start with truth. Awareness states, such as perceptual and introspective states, are not true or false. My awareness of the color of your shirt, for example, is neither true nor false. But awareness states are *veridical* or *non-veridical*. One's perceptual or introspective representation of property Q is veridical if and only if Q is instantiated as it's represented; one's perceptual or introspective representation of an object O is veridical if and only if O exists and is present as it's represented. Otherwise it's non-veridical.

Some say that awareness is *factive*—that being aware of Q entails that Q is instantiated or exists as represented. If that's right, then 'awareness' has veridicality already

⁶ Maybe you disagree because you think that the contents of perception are (or include) Russellian propositions that have the objects and properties I see as constituents. If that's your view, then just note that what I'm talking about as the contents of knowledge of things are the individual objects and properties of which I am aware—what would be the *constituent parts* of Russellian propositions. So, even if you think that perception is propositional, there's still room for knowledge of things.

⁷ Here I take no stand on what the *immediate* objects of awareness are in, for example, perception. Direct realists think that the immediate objects of perception are objects and properties in one's environment. But an alternative view is that properties instantiated in our experiences are the immediate objects of awareness.

built in. So then we need to find a way to capture the fact that, just as beliefs may be true or false, so too mental representations that constitute awareness of properties and objects may be veridical or non-veridical. To do this, we just need to pick a term to refer to these mental representations. I'll use 'awareness state', because representational *states* are what constitute awareness of things, and they are what may be veridical or non-veridical. Just note that I'm using this term to refer to a class of states that includes non-veridical states, such as hallucinations and illusions. However one uses one's words, it's clear that there is a parallel between the way beliefs can be true or false and the way we can get things right or wrong in perception and introspection. And just as truth is necessary for knowledge of truths, so too veridicality is necessary for knowledge of things.

It's also natural to think that, in order to count as knowledge, a state of awareness must have a rational or otherwise normative status parallel to that of justification for beliefs. The idea would be that, in normal cases, my visual experiences are in some sense rational or justified as representations of things around me. However, if instead I am hallucinating or in a hall of mirrors, for example, my visual representations of things in my environment are less justified or rational. Perhaps more controversially, if my perceptual experiences are being influenced in an epistemically untoward way—by unjustified background beliefs, for example—then those experiences may be less rational than they otherwise would be (cf. Siegel 2017).

There are various potential ways to further spell this idea out. But two recent developments in epistemology strike me as especially promising avenues for understanding the normative status of awareness. The first is Siegel's (2017) "epistemic charge," which is conceived of as a kind of rational status attributable to perceptual experiences. The second is the notion of epistemic risk or luck (see Pritchard 2016). While epistemic risk/luck has not yet been extended to states of awareness, it may be a natural way to understand the normative status of such states. My perceptual experiences in a hall of mirrors, even if occasionally veridical, are nonetheless epistemically risky/lucky—they could have easily been non-veridical, given the situation. Thus, they do not have the normative status required for knowledge of things.

All of this is controversial, and is bound to remain so, if for no other reason than every account of epistemic normativity is controversial. But the point here is just that it's natural to expect knowledge of things to have a normative status parallel to that of justification for knowledge of truths. I'll call this normative status "well-foundedness" (with a theoretically non-committal sense in mind). I'll return to this issue later. But for now just note that I do not mean to imply commitment to any specific account of epistemic normativity.

So knowledge of truths and knowledge of things are parallel with respect to truth/veridicality and justification. Yet they are distinct. On my account, whereas knowledge of truths is (of necessity) justified true belief, knowledge of things is (of necessity) well founded veridical awareness. This is not meant to be a *definition* or *analysis* of either kind of knowledge.⁸ It's just a characterization of each kind of knowledge, and of how they differ.

⁸ Hence, I take my account of knowledge of truths to be consistent with a "knowledge first" approach to epistemology (see, e.g., Williamson 2000). In fact, even my account of knowledge of *things* is consistent with the general spirit of that approach (even though as a matter of fact most knowledge-firsters endorse

Another way to appreciate the differences between knowledge of truths and knowledge of things is to look at some of the ways in which they do or do not depend on each other. For instance, some knowledge of things presupposes knowledge of truths. To return to an earlier example, to know of a waiter as “the waiter” (what Russell calls “knowledge by description”), I must possess the concept, *waiter*, which requires knowing some things about *what a waiter is*, which in turn requires knowing some general propositions about waiters, such as that waiters serve food in restaurants, that waiters often carry things on trays, and so on.⁹ Thus, my knowledge of a waiter as a waiter presupposes some general knowledge of truths about waiters.

Nonetheless, my knowledge of a *particular* waiter as a waiter is distinct from knowledge of truths, and it does not require gaining any new knowledge of truths, or forming any new beliefs, about the particulars of my environment. When I walk into a restaurant, and see a waiter rushing by me in a panic, I don’t need to form new beliefs about *that* waiter in order to simply know of him as a waiter. It is a necessary condition on my possession of the concept, *waiter*, that I must be able to identify clear instances of waiters. So, just by possessing that concept, I am able to identify the waiter as a waiter, and so I am able to know of him as a waiter without forming any new beliefs about the particulars of my environment. Thus, although some knowledge of things does presuppose knowledge of truths, it is not *itself* knowledge of truths—it is distinct from it.

Furthermore, not all knowledge of things presupposes or requires knowledge of truths. Much of our knowledge of things at a given time is in fact *mixed*—some of it requires knowledge of truths, some of it does not. Take my knowledge of the color of your shirt, for example. I know of your shirt *as green*. This knowledge requires that I possess the concept, *green*, and thus it presupposes some background knowledge of truths about what green is. However, I may also know of the *very specific* shade of green on your shirt, for which I have no concept. Previously I described it as avocado green, but that description doesn’t fully capture or name the very specific shade of green on your shirt. Yet I may still know of that very specific shade of green. Even though I have no ordinary language concept for it, and even though I cannot fully describe the color in words, I may nonetheless grasp the color in a way that is sufficient for knowledge of it.

So in some cases of perception or introspection—in fact, in *most* such cases—we have some knowledge of things that presupposes knowledge of truths, and some that does not. My knowledge of a very specific color is one example where knowledge of things does not presuppose (or even involve) knowledge of truths. There are many

Footnote 8 continued

the orthodox view that all knowledge is propositional). For it is consistent with my account that knowledge of things is a fundamental, unanalyzable mental state.

⁹ There is an ongoing discussion about the extent to which perception *itself* is conceptual or contains representations of properties like *waiter*, *chair*, or *oak tree* (see, e.g., Siegel 2010; Block 1990). My claims about seeing the waiter as a waiter, as well as the rest of my account of knowledge of things, does not rely on taking any side on this debate. If it turns out that my visual awareness of the waiter as a waiter is partly cognitive, and so isn’t purely perceptual, then that’s fine. That just means that some paradigm cases of knowledge of things aren’t purely perceptual.

There are all sorts of other controversies about the contents of perception—e.g., about which properties they represent, about their structure, about their relation to phenomenal character, etc.—that I also won’t wade into here.

other examples that further illustrate the ways in which some—indeed, a lot—of our knowledge of things does not depend on knowledge of truths. For instance, right now I'm looking at a set of bookcases in my office. They are full of books. I see these books of various specific shapes, sizes, and colors, at various angles and in various relations to each other. What I see is highly determinate and fine-grained. I really do see *those* books in all their complex and multifarious glory. I know of them. To be more specific, suppose that, in some precise region in the center of my visual field, there are 48 books. I see, and thus know of, those 48 books. But of course I don't know *that* there are 48 books there. I have no clue how many there are.¹⁰ Furthermore, I don't know *that* the bright red book is 17 books to the left of that dull grey, tattered book whose title is difficult to make out. I don't know *that* or anything similar. In this way, as in other ways, the array of very fine-grained, highly determinate properties, objects, and relations *of* which I know vastly outstrips *that* which I know about my immediate environment.

This naturally raises the question: Do I know of *every* property of which I am aware (in good conditions)—every property in my visual field, for example—or must I attend to a property, or notice it in some other way, in order to know of it? I'm inclined to say that we don't know of everything of which we are aware—that some minimal level of attention, or some substantive grasp of the thing in question, is required to make awareness well founded (cf. Siegel and Silins 2014). But I also think it's crucial to appreciate that acquiring knowledge of things doesn't generally require great mental effort. We regularly know of all sorts of things that we don't carefully attend to. Take the restaurant case. I know of the waiter in front of me, of you in the back, of the tables and chairs that I'm seamlessly skirting, and yet it's not as if I'm carefully attending to, or earnestly focusing on, these things. So, although knowledge of things does require *some* attention, it doesn't require a great deal of it.

So how much is enough? I don't know. But this issue isn't peculiar to knowledge of things. It's equally unclear which precise set of *propositions* one knows at any given time. Plus, as I've said, my aim here isn't to clearly demarcate the domain of knowledge of things. It's just to argue that that domain isn't empty. So I'm sticking with paradigm cases, such as what I see right in front of me. And, as illustrated above, some of this knowledge is highly determinate, very fine-grained, and does not depend on knowledge of truths.

Knowledge of things is also *prior to* knowledge of truths in several respects. For example, in perceptual and introspective cases, knowledge of things typically *precedes* knowledge of truths. Before I know any truths about the waiter in front of me, I know *of* him. Before I know that he is in a hurry, that he is male, or that he will be with me

¹⁰ Notice that this is consistent with the idea that we can perceive the cardinality of smaller numbers of objects such that we know via perception how many there are in a given grouping. For example, although I do not know that there are 48 books in front of me just by looking at them (nor do I know of them *as 48 books* in the sense of knowledge by description), it may be that I know of two pens on my desk *as two pens* just by looking at them (much like I know of the waiter *as a waiter*), and it may even be that my visual experience of those two pens automatically generates the belief in me (which may amount to knowledge) that there are two pens there. Still, on my account, these are distinct kinds of knowledge, and it's at least possible to have knowledge *of* two pens without knowing *that* there are two of them (if, for example, one lacked the concept *two*). My main reason for using an example with a larger number of objects—i.e., 48 books—is to illustrate how knowledge of things not only can but indeed *does* outstrip knowledge of truths.

shortly, I see him, and thus know of him. Also, many of the truths that I subsequently learn about the waiter derive from my knowledge of him. My knowledge that he is stressed derives, at least in part, from my prior knowledge of the frenzied look on his face. My knowledge that someone has spilled tomato soup on him derives, at least in part, from my prior knowledge of the Roosevelt-esque stain on his apron. In this way, knowledge of truths often derives from, and thus *depends on*, knowledge of things.¹¹ These points deserve further attention. But already it's easy to see that our perceptual and introspective knowledge is ordered in various ways, and that knowledge of things comes in early and often.

So I've now given my account of knowledge of things. I've said what constitutes it (awareness of properties and objects), I've given paradigm examples of it (perception and introspection), and I've compared and contrasted it with knowledge of truths. There's plenty of room for further work (and disagreement) here. Again, I do not take my account to be the final word on knowledge of things. Nor do I claim that every detail of the above account is sacrosanct. The core, essential feature of knowledge of things is that it is knowledge constituted, not by beliefs toward propositions, but by awareness of properties and/or objects. I've attempted to put some flesh on these bones so as to give a better understanding of what I'm talking about and to give a sense of how an account of knowledge of things might be developed. Further work is needed.

But I'll stop here. I trust you've seen enough to grasp what knowledge of things is, or at least is supposed to be. So now I'll turn to my argument for it.

2 In defense of knowledge of things

Recall our restaurant scene. I go in, look around, and see you. Then I wend my way to you, registering my surroundings along the way—the waiter, the tables, your shirt, that teetering chair just begging to annoy me.

Everyone will agree that, in this case, as in many others like it, I know some things about my surroundings. But the standard practice in philosophy is to treat all of this knowledge (save know-how) as propositional. My claim, in contrast, is that some of it is non-propositional and, indeed, is knowledge of things.

And here is where I make my case. My argument will come in two steps. First, I'll argue that, in the restaurant scenario, my apprehension of the particular objects and highly determinate, very fine-grained properties around me really is *knowledge*. Then I'll argue that at least some of this knowledge is non-propositional and really is *of things*. Consequently, I'll conclude that, orthodoxy be damned, some knowledge is of things.

¹¹ There are other ways in which knowledge of things is arguably prior to knowledge of truths—for example, it is prior *developmentally* and *phylogenetically*. Infants and young children know of objects and properties around them before they know any propositions about them. And (arguably, at least) some non-human animals know of details of their environments, although they (again, arguably) don't have any propositional knowledge of them (see, e.g., Camp 2009).

2.1 Step one: it's knowledge

I see the waiter in front of me with that look on his face. I see a handful of the tables and chairs in the room, as well as their spatial configuration. I see you, the very specific color of your shirt, and so much more. At various times, I see these things. I am aware of them. But the question is: Why think that I *know* of them? I couldn't tell you how many chairs are around me. I couldn't describe the specific color on your shirt. And I couldn't say what *exactly* it is about the waiter's facial expression that gives me the unmistakable impression that he's frustrated. So why should we accept that I have knowledge of these things?

The kind of knowledge I'm talking about here is knowledge of particular objects and highly determinate, fine-grained properties in my vicinity. I've chosen these examples, not because I think they are the only things we can or do know of, but rather, because they strike me as particularly good examples of knowledge of things *as opposed* to knowledge of truths. However, since this section is not concerned with whether this knowledge is propositional (that's the next section) and rather is only concerned with whether I do indeed have *knowledge* concerning the relevant objects and properties, I'll refer to this knowledge neutrally as "knowledge about" such-and-such. So then the question for this section is: Why think that I know about the particular objects and fine-grained properties around me in the restaurant? Why not, as an alternative, grant that I am aware of these objects and properties, but then deny that I *know* about them?

There are a bunch of reasons. The first is that, well, it just seems obvious that I know about them. I won't belabor this point, since it's question-begging. But: Of course I know about these things! I'm not sure whether to call this an intuition, a self-evident truth, or what. But some stories just have that unmistakable ring of truth. And my hope is that, as I've told the restaurant story, or any other of the cases rendered here, that that peal of veracity sounds forth, and it's evident to you that the knowledge in question is had.

Or consider a new case. Find a picture near you—whether it's a photograph, painting, or whatever. Look at it. Attend to its features. You of course know some very general truths about the picture—that Uncle Jerry is wearing a Hawaiian shirt, for example, or that there are trees in the background. But isn't it also obvious that you have a substantive epistemic grasp of the very fine-grained contours, the very specific colors, and highly determinate shapes in the picture? Isn't it obvious that you *know* about these things?¹²

¹² This point about the obviousness of your knowledge is related to, and reinforced by, another point—namely, that in *ordinary language* we readily attribute knowledge to people in these kinds of cases. If, when I walked into the restaurant, the hostess said, "Watch out, there's a waiter in front of you," I might respond, "Don't worry, I know." If you said, "Did you notice the waiter? He looks stressed," I might say something like, "Yeah, I know, right? I wonder why." If my mom were there to nag me by saying, "Honey, look out for that chair there, and that one, and that one ...," I'd say, "Yeah, mom, I know, I know, I know." And if I *did* happen to bump into a chair, I might explain that I didn't see it there, and so didn't know it was there, implying that if only I *had* seen it, I'd have known it was there and thus would've avoided it. So the way we ordinarily speak suggests that we know about the objects and properties of which we are aware.

You might point out that a lot this talk is being carried out with declarative sentences, which express *propositions*. But even if I have some propositional knowledge in the above case, which I don't deny, the point here is that it's also appropriate, in terms of ordinary language usage, for me to say that I have

A second reason to think that knowledge is had in the restaurant case is that it explains my behavior. Take my journey from the front of the restaurant to your spot in the back. I start by walking in your direction, then I adjust my gait by moving my left leg three inches inward to avoid a chair; then, after two more steps, I turn 12 degrees to my left and walk around a table; then I stop as the waiter darts in front of me, and start again once he's passed; three more steps forward, one sidle to my right to avoid another chair, a 28 degree pivot back to my left, five steps, and finally, I'm there. Why did I do these things? Why these *specific* movements? Why did I move my leg three inches rather than one? Why did I pivot 28 degrees rather than 41? The answer is obvious: I wanted to get to you, but I knew stuff was in my way, and that it was arranged in a somewhat complicated way, so I charted a rather precise course to satisfy my desire to get to you free of bruises and embarrassment. This answer presupposes that I *knew* about all that stuff in my way, and about their specific locations. So it seems that, in order to explain my very intricate navigational behavior, we have to admit that I knew quite a lot about the details of immediate environment.

One might reply that we needn't posit *knowledge* to explain my behavior. We just need *awareness*. By analogy, if I desire a frozen lemonade, it's enough to say that I *believe* (rather than know) that the frozen lemonade truck is across the street to explain why I headed over there. I would've done the same thing even if it turned out that, unbeknownst to me, the truck wasn't there, and so I didn't really *know* it was there. Similarly, one might say that my *awareness* of the ostensible objects around me—or, to be more precise, my awareness *state* representing those objects—is enough to explain my behavior. We needn't also say that I *knew* about these things.

I have two responses. First, just note that the restaurant case is not analogous to cases of mere belief, like that of the frozen lemonade truck. Unlike the truck, the tables, chairs, and people really are there, I see them, the lighting is good, I am under no illusions, etc. So the restaurant case is unlike the truck case, epistemically. Second, while my awareness state alone may explain some aspects of my behavior, it doesn't explain *everything* in need of explanation here. For example, it doesn't explain why I *succeeded* in avoiding the tables and chairs around me, or why in general we are pretty good at navigating our environments. Suppose I was wearing distorting glasses. Then I'd be in an awareness state that represents various properties and objects around me; but if I tried to move around, I'd bump into things left and right—the awareness state *itself* wouldn't make for a successful journey. Or if I took a hallucinogenic drug, I might just stay put, because I don't think my visual experiences can be taken at face

Footnote 12 continued

knowledge about the kinds of objects and properties that I say feature in knowledge of things. As I've said, these items of awareness aren't the kinds of things that we can express, and it's often difficult, even impossible, to exhaustively describe them. So my linguistic resources are limited in terms of saying exactly *what* I know in these cases. Nonetheless, the point is, it is appropriate to say "I know" in cases where I intend to refer to specific items of my awareness. And although it's difficult to describe these things, we can (and do) give each other clues as to what we're talking about. And often it's clear we're saying we know something highly specific. When you mention the waiter's stress, it's clear that you are pointing out specific of his properties—his facial expression, for example—that we can see. Or when my mom nags me about the chairs, my response signals that I know about the furniture around me *in general*, as if to say, "There's no need to tell me, mom, I know it's all there!" In each case, it's clear that what I'm saying I know about is some specific property or object of which I'm aware. Thus, our ordinary language usage supports the claim that we know about these items of awareness.

value. So it seems that, in order to explain my *successful* navigation behavior, we must say more than that I was aware of the things around me. It seems we must admit that I *knew* about the specifics of my environment in order to explain my well-chosen movements around the restaurant.

A third reason, or set of reasons, to think that knowledge is had in the restaurant case is the presence of certain features associated with knowledge—the *hallmarks*, or key philosophical roles, of knowledge. These have to do with grasping reality, evidence, justification, reasoning, and praise and blame.¹³ These hallmarks of knowledge come into play in all the right ways—in all the ways associated with knowledge—in the restaurant case. This provides another reason to accept that the relevant knowledge is there.

Start from the top. One hallmark of knowledge, and one reason it's important, is that it puts us in (epistemic) contact with reality—with *the way things are*. For all sorts of reasons, we want to grasp, understand, and learn about the world around us, as it really is in itself. Knowledge allows us to do this. And this clearly applies to the restaurant case. My visual perception puts me in contact with various particular objects and highly determinate properties around me, which are ways things are. I grasp these aspects of reality. Thus, we have reason to believe that I know about these properties and objects around me in the restaurant.

Another hallmark of knowledge has to do with *evidence*. Some (e.g., Williamson 2000) say that one's evidence *just is* what one knows. But we needn't go that far to appreciate that there is an important connection between knowledge and evidence, such that our evidence is by-and-large—with few, if any, exceptions—constituted by what we know. This is relevant for our purposes because what we perceive and introspect is evidence *par excellence*. I say your shirt is green. What's my evidence? It's what I perceive—that color I see. Or suppose the cook is burning my scallops. I say, "Something smells funny," and later, "Something tastes funny." My evidence for these rueful observations is a specific, distinctive smell and a specific, distinctive taste. So the specifics of what I perceive and introspect can, and do, serve as evidence. And so since one's evidence is largely, if not completely, made up of what one knows, we have yet another reason to accept that I know about some of the specific properties and objects around me.

Now *justification*. Justification is necessary for knowledge. It's also a hallmark of knowledge—it plays a central role in our theorizing about epistemology. And even those who are skeptical of my claim that some knowledge is constituted by awareness of objects and properties, and so who are on pins and needles for the next section, should agree that justification is had in the restaurant case. It's *no accident* that I see the world as it is when I look around the room. There's *good reason* for me to take what I see at face value. After all, my vision is good, the lighting is normal, and I am under

¹³ 'Hallmark' is a wooly term. I can't think of a more precise (and yet accurate) single term or description that captures the relation between knowledge and all of the features just mentioned. That's probably because each feature's relation to knowledge is different (e.g., justification is *necessary for* knowledge, evidence is (largely, if not completely) *constituted by* knowledge, knowledge is *used in* reasoning, etc.). So what I'll do is use 'hallmark' when grouping these features together—as a way to indicate that they are all distinctive signs or marks of knowledge, and thus evidence of its presence—but then I'll characterize and discuss the precise relation between each feature and knowledge on a case-by-case basis as I go along.

no illusions.¹⁴ If I end up being right that some of this knowledge is non-propositional, and instead is constituted by awareness of properties and objects, then we'll have to admit, perhaps with some surprise, that some states other than beliefs bear justification (or are "well-founded," which recall is my neutral term for the parallel to justification for awareness states). But, again, those who remain unconvinced on that front should still agree that *some* state of mine representing the objects and properties around me is justified (or well founded). And, since this is not just a precondition for knowledge, but also a hallmark of it, the fact that it applies to my grasp of the properties and objects around me gives us reason to believe that I know about these things.

Another hallmark of knowledge has to do with *reasoning*. We reason with what we know. I know that George Washington was the first U.S. president, and I know that John Adams succeeded him, so I (knowingly) conclude that John Adams was the second U.S. president. On the other hand, although I know that Grant was the eighteenth president, I'm not sure who was next (I think it was Hayes, but I'm not sure), so I can't conclude who was the nineteenth president. This sort of reasoning with what we know is ubiquitous. And one of the many places it shows up is in our reasoning about our perceptible environments. I see the specific look on the waiter's face, and so I (knowingly) conclude that he's unhappy. I notice a funny taste, and I've tasted burnt food before, so I connect the dots and (knowingly) conclude that my scallops are overdone. Or suppose that, while I'm at my kid's tee-ball practice, I glimpse an errant baseball homing in on me and then feel a sharp pain in my left shin. I know what's happened. I'm no Sherlock, but *this* case I've cracked. We reason like this—with the specific properties and objects of which we are aware—all the time. Thus, since this role in reasoning is a hallmark of knowledge, we have yet another reason to accept that I know about some of the specific, ostensible properties and objects around me.

Yet another hallmark of knowledge has to do with *praise* and *blame*. One way knowledge is relevant to praise and blame is that it often bears on whether an *action* is praiseworthy/blameworthy. Suppose you're a vegetarian, and I tell you (falsely) that there is no meat in the dumplings you've just ordered. If I *know* that's false, then I've done something wrong—something worthy of blame. If, however, I don't know it's false—if I told you the dumplings are meatless because the menu is mislabeled—then I deserve less blame (maybe none). Something similar goes for *praise*. If I get you a gift that you happen to like, great! If I get you a gift that I *know* you'll like, even better—I am more deserving of praise. Hence, what we know is relevant to what actions we should be blamed/praised for. But now notice that this applies to perceptual cases as well. Suppose that, while in the restaurant, I bump into the waiter, sending the contents of his tray tumbling to the ground. If I *saw* him in my way, and yet didn't change course, then I'm to blame (at least partially). But if I didn't see him, it may just be an honest mistake. Or suppose a thief just stole someone's wallet and is trying to run past me, but I get in her way, thus halting the crime. If I didn't see her steal the wallet, and just happened to be in her way, then lucky for the wallet's owner. But if I saw her take the wallet, then my obstruction is more deserving of praise. Thus, it

¹⁴ Here I'm ignoring external world skepticism. Indeed, I'll ignore skepticism throughout this paper. If external world skepticism is true, then knowledge of things may be limited to introspective knowledge. But here I am taking for granted that we know about the external world (and thus of course that this knowledge is justified).

seems that the specifics of what I see are relevant to praise and blame in just the way that knowledge is.

Another way knowledge is relevant to praise and blame is that sometimes having knowledge is *itself* praiseworthy, and sometimes lacking it is *itself* blameworthy. Learning more about your spouse is praiseworthy; failing to educate yourself on the basics of climate change is blameworthy. And, again, this applies to details that we perceive and introspect. Discerning the facial expressions of a friend who needs comfort is praiseworthy; failing to pay attention to the specifics of your surroundings while driving a car is blameworthy.

A related point concerns *expertise*. Experts often deserve praise, even esteem. And sometimes part of what's estimable is an expert's *knowledge*. A Plato scholar, a scientist who grasps the finer points of molecular biology, a doctor who knows precisely when to apply a hot compress—these experts are to be praised and esteemed, at least in part because of what they *know*. But now notice that sometimes expertise is partially grounded in one's grasp of particular objects and very fine-grained properties that one perceives. Consider a sommelier—a wine expert. The best sommeliers are able to reliably identify the varietal (grape), vintage (year), and even the vineyard of a wine after having tasted it only once. Part of sommeliers' expertise—part of what they are to be praised and esteemed for—has to do with their grasp of very subtle, fine-grained properties in the wines they taste. These properties don't just show up unappreciated in sommeliers' experience. Sommeliers *grasp* these properties, and in ways that most of us do not. Or consider a handwriting expert or a body language expert. Their expertise involves recognizing minute variations in line or manner. Or take a chess expert. Chess experts are better than non-experts at remembering the spatial layout of pieces on a board (as long as the layout makes sense, chess-wise. See de Groot 1978; Chase and Simon 1973). So one thing chess experts excel at is grasping and retaining very specific information about certain objects (chess pieces) and properties (relations between the pieces) that they perceive.

Or consider Stephen Wiltshire—an artist who very accurately draws cityscapes in minute detail after only having seen them briefly (see <http://www.stephenwiltshire.co.uk/>). Part of what makes Wiltshire so remarkable is his immediate grasp and retention of very fine-grained details of what he sees. This is part of his expertise. It's part of what makes him worthy of praise and esteem. And this suggests that he, as well as experts of other sorts, *knows* about certain particular objects and very fine-grained properties that he perceives.

So cases of perception and introspection, where one is aware of particular objects and fine-grained properties, bear the hallmarks of knowledge having to do with reality-grasping, justification, evidence, reasoning, and praise and blame. These are *key* philosophical roles for knowledge—some of what makes it (and the study of it) so important. Thus, that these roles are played by our perceptual and introspective grasp of particular objects and fine-grained properties is a great reason to think that we know about these things.

So, for this and the other reasons discussed in this section, I conclude that we know about the particular objects and fine-grained properties that we are aware of in perception and introspection. This is knowledge, and we've got it. Now the next step

in my argument is to show that this knowledge is non-propositional and, indeed, of things.

2.2 Step 2: It's of things

Maybe you agree that I know about the particular objects and fine-grained properties around me in the restaurant. But maybe you doubt it's knowledge *of things*—maybe you still think it's propositional.¹⁵ So, whereas my previous task was to show that it's knowledge, my present task is to show that it's of things.

As before, there are a bunch of reasons to think that this is so. The first reason is based on *introspection*. When I walk into the restaurant, and take in my surroundings in all its vibrant detail, and when I navigate the labyrinth of tables, chairs, and people of which I am aware, it does not seem, introspectively, like I'm constantly forming beliefs with propositional contents—certainly not at the rate necessary to capture all of my knowledge about what's around me.¹⁶ Sure, I may form the belief that the waiter is stressed or that there are many chairs in the restaurant. But as I slalom between objects to get to your table, for example, it just doesn't seem (introspectively) like I'm forming beliefs whose propositional contents capture every detail that I'm taking in around me. It doesn't seem like I'm forming the belief that a chair is three inches to the right of my right leg, or that a clear path is 28 degrees to my left, or even that there is a chair right *there* ... and a table *there* ... etc. It seems like I just *see* these things and thereby know of them.

And furthermore, although I may form some beliefs about things in the restaurant, such as the belief that there are *many* chairs in it, it doesn't seem (introspectively) like I'm forming beliefs that capture the fine-grained detail of which I am aware—beliefs such as that there are 12 chairs between us or that your shirt is green₅₁. But these are precisely the objects and fine-grained properties that feature in some of my knowledge about my surroundings. Thus, the fact that it does not seem, introspectively, like I'm forming beliefs corresponding to this knowledge is a reason to believe that at least some of it is non-propositional.¹⁷

A second (related) reason to think that at least some of this knowledge is non-propositional is that, introspection aside, it's implausible that we believe propositions that fully encode the fine-grainedness and richness of detail of this knowledge. Take the case where I look at my bookshelves. I see 48 books. Forget how it seems to

¹⁵ Again, I assume that propositions are (at least) abstract bearers of truth and falsity that are expressed (potentially in various ways in various languages) by declarative sentences and marked off by 'that'-clauses in attitude ascriptions (see Sect. 1).

¹⁶ The first three reasons I'll give are directed just at the orthodox view that all knowledge (save know-how) is constituted by *beliefs* with propositional contents. They aren't directed at a different possible view—namely, that my knowledge of the restaurant is constituted by *awareness states* with (Russellian) propositional contents. I'm not sure anyone holds this view (if they did, they'd have their own burden of defense against the orthodox view), and I suspect that arguments parallel to these first three reasons could be crafted against it. Also, all the other reasons I'll give in this section count against it.

¹⁷ One might suggest that the relevant beliefs aren't introspectible. But clearly whatever constitutes my *knowledge* of my ostensible environment is introspectible, since I can (and *would*, if asked) immediately report that I have this knowledge—that I know about the specific look on the waiter's face or the layout of furniture in the room (see fn. 12). So if beliefs constitute this knowledge, they should be introspectible.

me introspectively. There's just no way that I form the belief that there are 48 books there.¹⁸ At best, I could ballpark it. And yet I really do *see* 48 books. Or take my perception of faces in the restaurant. I see the waiter's face and infer that he's stressed. But there's just no way that I infer this on the basis of my knowledge of propositions about the contours of his face—I don't believe that the waiter has 16 wrinkles in the corner of his left eye and 14 in his right, that the corner of his mouth is tilted down at a 36 degree angle, etc., and then infer that anyone who has these features is stressed. No, I just see these highly specific contours of his face and infer that he's stressed. Likewise, when I see you in the back of the restaurant and immediately recognize you, I don't form beliefs about the subtleties of your appearance, recall some propositions about how you look, and then infer that it's you. No, I just see you and immediately recognize you.

So the propositions we believe do not represent all of the objects and fine-grained properties that I see. This is further reinforced, and at least partially explained, by the fact that, while visual perception represents objects and properties in an *analog* format, propositions (on most views) have a *digital* format. Digital representations represent discrete states of affairs in ways that abstract out fine-grained detail. The proposition that your shirt is green represents your shirt as being green, but it doesn't tell us anything about what specific color it is. Analog representations, on the other hand, represent continuous spatial arrays and carry information specifying fine-grained property values, such as color values (Camp 2007, p. 156).¹⁹ So, given that propositions are digital, it's no surprise that they are ill suited to represent the array of objects and fine-grained properties that feature in some of my knowledge about things in the restaurant.

One might respond that it's at least possible for propositions to represent some of the specifics of what I see—that there are 48 books on the bookshelf, for example. But I have two responses. First, while it's true that beliefs/propositions can represent specifics like these, it doesn't follow that we *actually* believe such propositions when we see things. When I see the 48 books, I don't believe that there are 48 books in front of me on that bookshelf. That's simply not a way I represent the books. Second, even

¹⁸ As I mentioned earlier (fn. 10), it may very well be that I would form the relevant belief if the number of objects was smaller (say, 2 or 3). But the point here—which is familiar from discussions of the problem of the speckled hen, among others—is just that, in some cases involving larger numbers of objects (e.g., 48 books), it's implausible to attribute the relevant beliefs (or, indeed, propositional knowledge) to the subject. I take it that this speaks to a more general, albeit contingent psychological fact about us—namely, that a more-or-less immediate perceptual route to knowledge *that* there are *n* number of objects in some location is only available to us when *n* is a relatively small number.

¹⁹ Dretske (1981) nicely illustrates the point that I am making here by giving an analogous cases of representing something with a declarative sentence vs. representing it with a picture:

If I simply *tell* you, “The cup has coffee in it,” this ... carries the information that the cup has coffee in it in digital form. No more specific information is supplied about the cup (or the coffee) than that there is some coffee in the cup. You are not told *how much* coffee there is in the cup, how large the cup is, *how dark* the coffee is ... If, on the other hand, I photograph the scene and show you the picture, the information that the cup has coffee in it is conveyed in analog form. The picture tells you that there is some coffee in the cup by telling you, roughly, how much coffee is in the cup, the shape, the size, and the color of the cup, and so on (p. 137).

if propositions can represent some specifics, they inevitably leave some out. Sure, the proposition that there are 48 books on the bookshelf tells me that there are 48 books there. But it also leaves out a ton of detail that I visually perceive about the specific spatial array of the books, their coloring, shape, size, orientation, etc.

One might appeal to *demonstratives* for help here. The idea would be that my knowledge in the restaurant is propositional, but is constituted by beliefs with demonstrative contents, such as: *this* chair is *here* (as if pointing), *that* table is *there*, *this* furniture is arranged *thus*, your shirt is *that* specific color, *these* scallops taste like *this*, and so on. These propositions refer to particular objects and fine-grained properties. So maybe they can help.

The problem is, this account of my knowledge in the restaurant both asks too much of me and gives me too little credit. It asks too much of me because, in order for it to account for all of my knowledge of the rich panoply of objects and properties around me, I'd have to be constantly demonstrating a vast array of properties and objects, and then plugging that content into a huge—truly enormous—number of propositions that I then believe. That's implausible. Demonstrations are acts that typically require a deliberate intention to refer to something. But as I chart a course through the things around me in the restaurant—the tables, chairs, people, etc.—there's just no way I'm doing all that demonstrating. I'm just walking around seeing things. I'm not intending to refer to anything. And, what's more, I'm not plugging all those demonstratives into the countless many propositions that would be needed to capture all of my knowledge of the properties and objects around me. So the demonstrative account of my knowledge in the restaurant is too demanding—it asks too much of me in terms of securing my knowledge.

It also gives me too little credit. For although demonstrations typically require a deliberate intention to refer to something, they do not, in general, require a substantive epistemic grasp of the thing in question. I can say “that table in the back,” and succeed in referring to the table without seeing it. Or I can successfully demonstrate “this time right now” or “here” without having any substantive epistemic grasp of the time or place. My knowledge in the restaurant, in contrast, involves a substantive epistemic grasp of the properties and objects of which I'm aware. So just saying that I have demonstrative knowledge of my surroundings gives me too little credit in terms of what I'm achieving, epistemically.²⁰ So the demonstrative account, like other propositional accounts, fails to acknowledge all of my rich, fine-grained knowledge in the restaurant. This is another reason to think that some of that knowledge is non-propositional.²¹

²⁰ One might say that since in cases of the sort I've described I actually *see* what I'm demonstrating, I naturally have a substantive epistemic grasp of what I'm demonstrating. But then it looks like *perception* is what's doing all the epistemic work—like the demonstrative account is merely borrowing a prior substantive grasp afforded by perception. After all, the only difference between substantive perceptual demonstratives and the “blind” demonstratives I mentioned is that I *perceive* what I'm demonstrating in the former. So the point is, again, that the demonstrative account *itself* fails to capture the rich, fine-grained nature of my knowledge in the restaurant.

²¹ These arguments having to do with fineness of grain and demonstratives may seem similar to those offered in favor of the view that some mental content is non-conceptual [see, e.g., Evans (1982), McDowell (1994), Peacocke (1992), and Heck (2000) for discussion]. However, they are in fact distinct (and independent). Conceptualists can embrace knowledge of things, and indeed, they can embrace my argument against the demonstrative account described above—perhaps by saying that, although experience is thoroughly

A third reason to believe that some of it is non-propositional is that I cannot fully express it with declarative sentences. When I see the waiter's face, the color of your shirt, etc., I cannot fully express what I know. Or when I bite into a scallop, I might *describe* the taste as a tad fishy, and also mild and buttery with an unfortunate "toasty" aftertaste. But that's about it. There's no way I can fully express what I taste. ("You'll have to try it for yourself!") But if my knowledge about these things is propositional, then I should be able to fully express what I know about them. For propositions—the ones we know, at least—are expressible by declarative sentences.²² Thus, our inability to fully express the particular objects and fine-grained properties that we know about is another reason to think that at least some of this knowledge is non-propositional.

One might respond that although, yes, propositions *tend to be*, or are *in principle* expressible by declarative sentences, we shouldn't expect that I, a mere human, can put all such propositions into words. For I have limited cognitive and linguistic capacities, and natural languages are limited in their expressive power. Thus, one might admit that some of what I know is inexpressible, but insist that this isn't because what I know is non-propositional; rather, it's because of my expressive limitations and the limitations of the language I speak.

The first thing I want to point out about this response is that it requires adopting an awkward pair of positions. One has to say both that (a) I can cognize, think about, believe, and indeed, do all that it takes to *know* some proposition—a genuine cognitive achievement—but also that (b) I lack the cognitive and linguistic capacities to express that proposition. That's surprising. If propositions are in principle expressible by declarative sentences, and I can grasp a proposition to an extent sufficient to know it, then you'd expect that, at least in some of the cases I described above, I would be able to fully describe what I know. But I can't. Much of what I know is forever beyond my (or anyone's) powers of expression. Thus, the above response requires inhabiting an awkward middle ground with respect to what I can and can't do.²³

And the real problem runs even deeper. For the point isn't just that I'm not up to the task of saying what I know; it's that some of what I know can't be said—it's inexpressible *in principle*. Take my knowledge about the taste of scallops. It's not

Footnote 21 continued

conceptual, there's just no way we are constantly plugging all those concepts into a vast array of propositions that we then believe. On the other hand, non-conceptualists aren't automatically committed to knowledge of things. It's at least consistent with their view to reject it. So the debate over non-conceptual mental content really is distinct from the present arguments. Furthermore, the arguments to follow—particularly those concerning ordinary language and the hallmarks of knowledge—do not rely on the above arguments against the demonstrative account.

²² You might think that some propositions are inexpressible in principle—e.g., semantic paradoxes, or certain mathematical propositions that are beyond our ken. But these propositions, which are different in various ways from the kind of everyday perceptual propositions that are relevant here, are typically (if not always) unknowable. Presumably, in general, if a proposition is knowable—or, indeed, *known*—then it can be expressed. And I know about the color of your shirt or the taste of scallops (Sect. 2.1). So if this perceptual knowledge is propositional, then it should be expressible. Thanks to Lorraine Keller for bringing this issue to my attention.

²³ You might think my view is susceptible to the same awkwardness since, on my view, a lot of knowledge of things is inexpressible. But, unlike with propositional knowledge, this is precisely what you'd expect. Objects and properties are, in general, not the kinds of things you can express. Propositions are. So we shouldn't expect to be able to express knowledge of things, but we should expect to be able to express propositional knowledge.

just that I'm inarticulate, or limited in some other way; it's that this knowledge can't be fully put in words. *Any* ordinary language description will come up short—it will always leave something out. So since (knowable) propositions are, at least in principle, expressible by declarative sentences, the fact that some of what I know is not thus expressible is a reason to think that it's non-propositional.²⁴

A fourth reason to accept that this knowledge is non-propositional is that ordinary language usage suggests it. A recent paper by Benton (2017) is instructive on this point. In this paper, Benton argues that various languages contain a sense of 'know' that refers to non-propositional knowledge (see also Tye 2009; McGinn 2008). Benton starts by pointing out that, in English, this difference is captured by the distinction between phrases like 'S knows that ϕ ' and 'S knows NP' where 'NP' is a noun phrase (p. 2). He then argues that the way 'know' is used in these cases fails various tests for semantic sameness. This suggests that, in English, the propositional sense of 'know' ('know *that* P') is used differently, and indeed, does not mean the same thing as, the non-propositional sense of 'know' ('know Q' or 'know of Q').

Other natural languages go even further to codify this difference. Some have a distinct term for non-propositional knowledge. In Spanish it's 'conocer' (as opposed to 'saber' for propositional knowledge), in German it's 'kennen' (vs. 'wissen'), in French it's 'connaître' (vs. 'savoir'), in Hebrew it's 'makir' (vs. 'yada'), and in Chinese it's 'renshi' (vs. 'zhidao') (cf., Benton 2017; Tye 2009). So various natural languages use distinct terms to distinguish between propositional and non-propositional knowledge. And so, again, ordinary language usage supports the claim that some of our knowledge is non-propositional.

With that said, I don't want to rely too heavily on this point. I suspect the ordinary language case for knowledge of things is murkier than some suggest. This is partly because it's not clear how neatly our ordinary, non-propositional uses of 'know' (or 'aware' or 'acquainted') map onto what I and others call 'knowledge of things' (cf., Crane 2012). I also hesitate here simply because ordinary language is messy and an imperfect guide to what there is. So although ordinary language usage does provide some support for the claim that some of our knowledge is non-propositional, it is not my primary support for this claim.

²⁴ Some philosophers (e.g., Conee 1994; Tye 2009) appeal to these sorts of considerations to defuse Jackson's (1982) Knowledge Argument against physicalism. They argue that what Mary gains upon leaving her black and white room is knowledge *of* redness, which can't be communicated to Mary in her room. They then argue that this accounts for the fact that Mary learns something upon leaving her room, but does so in a way that is consistent with physicalism. For what it's worth, I like Conee (1994) and Tye's (2009) assessment of what Mary learns in this case, but I think there remains the important question of whether we should expect that, given physicalism, Mary would be able to gain all physical knowledge third-personally, and indeed, propositionally.

What I am more interested in, and what I consider weightier in this context, are the hallmarks—or key philosophical roles—of knowledge that I discussed in the previous section. As it turns out, these hallmarks apply equally to awareness (or awareness states) of properties and objects, and in a way that is clearly independent of their application to knowledge of truths. I think this is the case for *all* of the hallmarks mentioned earlier. But it is especially clear in a few particular cases. So I'll focus on those cases.

Take *reality-grasping*. One hallmark of knowledge, and one reason it's important, is that it puts us in cognitive contact with reality—with *the way things are*. This role of knowledge is often construed in terms of *truth*—as a matter of true beliefs putting us in contact with the way things are. But this is too narrow a construal. It leaves out other ways of grasping reality. Awareness states are a perfect example. They are not true/false; they are veridical/non-veridical. And yet veridical awareness states put us in contact with the way things are. My perceptual awareness in the restaurant, for example, puts me in contact with the various objects and properties around me, which are ways things are. I may go on to form beliefs about those objects and properties. But I don't need to do this in order to be in contact with reality and, indeed, to grasp the way things really are around me. Thus, my awareness states allow me to grasp reality in a way that is independent of the way I grasp reality by believing truths about it. Awareness states *themselves* thus bear this hallmark of knowledge.

Now consider *evidence*. Some say our evidence *just is* what we know. At the very least there's an important connection between the two. And awareness states constitute some of our evidence. How do I know your shirt is green? I see it. That's my evidence. And that evidence is not a belief, such as the belief *that* I see your shirt (which wouldn't be evidence for its being green), or *that* your shirt is avocado green (what's the evidence for *that* belief?), or *that* your shirt is *thus* (this is either trivial and uninformative, or it is substantive but borrows its content from what I see). Rather, my evidence is constituted by my perceptual awareness of the color of your shirt. It's simple: I see it. Evidence gained. So the fact that my awareness of objects and properties *itself* counts as evidence, and thus bears this hallmark of knowledge, is a reason to think that some of my knowledge in the restaurant is constituted by my non-propositional awareness of things.

Now *justification* (or well-foundedness). Justification is a necessary condition on knowledge of truths, and it's a notion that is central to epistemology. Beliefs are bearers of justification. And I contend that some awareness states also have a normative status parallel to (if not exactly the same as) justification for beliefs (cf. Siegel 2017). I'm calling this status "well-foundedness." This is meant to be a neutral term that refers to the positive normative status of awareness states without presupposing any specific account of that normativity. Whatever exactly that status turns out to be, we can see that some awareness states have it. Many normal perceptual experiences are well founded—they can (rationally) be taken at face value. That is, they can be taken to represent the way things are. Hallucinations, on the other hand, typically aren't well

founded. Thus, like justification for beliefs, some but not all awareness states are well founded.²⁵

You might think that awareness states aren't the sort of states that can be more or less well founded. Perhaps this is because you think that, unlike beliefs, awareness states are formed *passively*—we just “take in” what’s around us—and because, unlike beliefs, what we are aware of is not entirely up to us or rationally adjustable.

But there are several false assumptions here. As Siegel (2017) points out, many of our beliefs are also formed passively (e.g., my belief that I'm now typing), and some of our beliefs are not under our control or rationally adjustable (e.g., delusions). What's more, how we perceive the world often *is* rationally adjustable and, in many respects, under our control. We can choose what to look at or attend to, adjust background assumptions that affect how we perceive things, disavow experiences (e.g., illusions), and shape our perceptual experiences through learning and habituation, for example (Siegel 2017, §3.1). Thus, beliefs and awareness states are more similar than you might've thought along this normative dimension.²⁶

Still, you might think it sounds funny to say that awareness states *themselves* are/are not well founded. You might think that, even if it's not beliefs, it must be some *attitude* toward the contents of awareness states that have this status. Perhaps something like *acceptance* is a good candidate (cf., Fiocco 2017; Kriegel 2018).

My worry, however, is that, in many cases, the well-foundedness of awareness states comes in prior to adopting any attitude toward them. When I feel a sharp pain in my knee, I just know of the pain. I don't *accept* it first. And as my pain lingers, I don't constantly form new attitudes to reflect that I'm in pain *now*, and *now*, and *now* ... More generally, I don't move around the world, being aware of my environment and mental states, and also, on top of it all, *accepting* my awareness as veridical. I just see, hear, taste, smell, and feel things. Period.²⁷

Furthermore, insofar as epistemic normativity is related to *justifying*, or *giving reasons*, or *providing an account*, awareness states deserve equal treatment. Justifying a belief consists in giving reason to think it is *true*. Similarly, justifying an awareness

²⁵ In what does this well-foundedness consist? As I suggested in the previous section, it depends on which theory of epistemic normativity you prefer. An externalist might say something like: An awareness state is well founded if and only if it is produced by a reliable cognitive faculty (in the environment for which it was designed), where, in this case, a cognitive faculty is reliable if and only if it produces mostly veridical awareness states (in the environment for which it was designed). An internalist will say something different. She might say: An awareness state is well founded if and only if it is supported by one's total evidence. Then, as I pointed out earlier, one might develop these accounts in more specific ways—in terms of “epistemic charge” or risk/luck, for example. I won't pick sides on these debates.

²⁶ Furthermore, consider epistemic normativity having to do with epistemic *oughts*, and epistemic praise and blame, for example. There is also a parallel with awareness states. I ought to pay attention to certain things—e.g., to the road when I am driving—particularly when I want to know of those things, or when knowledge of those things is relevant to my other epistemic aims or duties. Or if I just want to know about my immediate environment, I ought to look around and see. I can do better or worse as a perceiver, by cultivating (or failing to cultivate) practices that allow me to be in a better (or worse) position to know of the many fine-grained properties around me.

²⁷ So even if an attitude like acceptance *is* implicated in the well foundedness of my awareness states, it must be *automatic*—it must come right along with my awareness states—even as a constitutive part of them (cf., Fiocco 2017; Brentano 1874; Kriegel 2018). Byrne (2016) defends a similar proposal, though he argues that *beliefs* are constitutive of awareness states).

state consists in giving reason to think it's *veridical*. You could press me as to why I think my perceptual experiences are getting things right—accurately representing the way things are. And I could give at least a partial answer. I could say things like, “The lighting conditions are normal,” or, “My vision is pretty good.” I’m not suggesting that these are *complete* answers. But the point is, it does seem that the reason-giving practices characteristic of epistemic normativity also apply to awareness states.

Consider this issue from a different angle. We all agree that our thinking about the world—about the way things are—is sometimes (though not always) rational, reasonable, justified, well founded, etc. But not all such thinking is propositional. We also think about the world with *images*, for example. Sometimes we do so with *literal* images—pictures, icons, symbols, etc. Other times we use mental representations that are based in stored perceptual representations. When I think about the car accident I saw yesterday, I recall an image of a red sedan smashed up against a blue minivan, with two guys on the side yelling at each other. Or when I’m planning an upcoming trip to the beach, and am trying to figure out how much I can fit into my car, I imagine cramming towels, boogie boards, and a large cooler into my trunk. This thinking is imagistic. Some philosophers say that *all* thinking is imagistic.²⁸ But we needn’t go that far. What matters here is just that *some* of our thinking about the way things are is imagistic. For images aren’t propositions—they aren’t bearers of truth and falsity, expressed by declarative sentences, or embedded in ‘that’-clauses in attitude ascriptions. So the fact that we think about the world with things other than propositions, together with the fact that it’s appropriate to attribute epistemic normativity to our thinking, should open us up to attributing it to non-propositional states, such as awareness states.

The fact is, we represent the world as being thus-and-so in various different ways—in various representational formats. Some of this representing is propositional. Some of it is not. When it comes to the propositional/belief side of things, we are perfectly comfortable with the idea of sorting the good from the bad—the justified from the unjustified. But there’s also good and bad, better and worse, on the non-propositional side of things. So we should be comfortable with the idea of sorting some non-propositional representations of the way the world is, including awareness states, into good and bad. And since this sort of epistemic normativity is a hallmark of knowledge, all of this suggests that some knowledge is non-propositional.

This is also highly relevant to another (final) hallmark of knowledge: *reasoning*. Where there’s sound reasoning, there’s knowledge. For sound reasoning not only confers knowledge, it also requires or presupposes it. You can’t learn something new by reasoning on the basis of what you don’t know. So if you know *x* on the basis of *y* and *z*, you know *y* and *z*.²⁹ In this way, sound reasoning requires knowledge. And

²⁸ Prinz (2002) offers a helpful historical overview of imagism. Proponents include Aristotle, Epicurus, Lucretius, Locke, Berkeley, Hume, Titchener, Russell, and Price. Prinz himself is attracted to a version of imagism.

²⁹ Audi (2010) discusses the philosophical importance of this claim. There are some alleged counterexamples to it [see Warfield (2005) and Luzzi (2014) for discussion]. But even if these are genuine counterexamples (which I doubt), they are far removed from the kinds of cases I’ll discuss below—cases that are clearly good instances of the above claim. Plus, everyone should at least agree that there is a very strong connection between reasoning and knowledge such that if a state features in sound reasoning (in the right way) then we have good reason to think that it’s knowledge.

awareness states figure heavily in our reasoning. One way they do so is by providing *inputs* to our reasoning processes. I see the specific look on the waiter's face, and I use what I see to reason that he's having a rough day. Or I use my awareness of the spatial layout of the restaurant to reason about how to get to your table. My awareness of these things thus provides inputs to my reasoning about what to believe and do.

You might think that's all, though. And you might think that these perceptual inputs just plug into propositions that we then do "real" reasoning with. Not so. First of all, awareness states don't just provide inputs, plugs, filler, etc., for our reasons. They *themselves* can be reasons. For awareness states have "reason-giving significance" (cf., Pryor 2000). That is, being (consciously) aware of ostensible objects and properties is sufficient to give one reason to believe certain things about them. For example, if I see three patches of color—one blue, one blue-green, and one red—I thereby have sufficient reason to believe that the blue-green patch is more similar in color to the blue patch than to the red patch. Some philosophers (e.g., Pryor 2000) defend the very general claim that, necessarily, if one is consciously aware of object *o* having property *P*, then one has *prima facie* reason to believe that *o* is *P*. But we needn't go that far to see that sometimes—indeed, often—awareness states have reason-giving significance. And thus, in this way, awareness states figure not only as inputs to our reasoning, but as reasons themselves.

Maybe you disagree with what I just said about awareness states and reason-giving significance. Or maybe you agree, but still think it's not enough. Maybe you think that "real" reasoning—what turns old knowledge into new knowledge—has to be a deliberate process that extends beyond our judgments about colors, for example. And maybe you think that awareness states don't feature in our reasoning in *that* way.

But they do. Awareness states feature in reasoning, not only as reasons, but as the very things we deliberate with and draw conclusions on the basis of. Awareness states (or their contents, to be precise) are particularly well suited to do this in certain types of reasoning. Consider *association*, for example. In the restaurant, when the waiter responds to my questions about the menu with a certain manner and tone of voice characteristic of sarcasm, I may attend to and think about his manner and tone, and then associate these characteristics with sarcasm. And then, given the context, I may also associate that sarcasm with displeasure, and thus conclude that the waiter is displeased with my dawdling.³⁰ Some of the background knowledge underlying these associations may be propositional. But when I actually use association to (knowingly) infer that the waiter is displeased, *what I am associating* are not propositions—they're certain properties, some of which I perceive. I associate a highly specific tone of voice that I hear and a highly specific bodily manner that I see with sarcasm, and I associate that sarcasm with displeasure. What it is that I am associating are the contents of perception (specific properties and objects that I hear and see), a type of expression

³⁰ Some say—and you might think—that association is not a genuine form of reasoning, because associations are sometimes brute causal processes that don't involve deliberation. But this is not always the case. For arguments in favor of treating association as a genuine form of reasoning, see Camp (2014). Camp describes association as "intuitive, holistic, and context-sensitive" (p. 601), and (especially relevant in this context) she points out that, "concrete images play an important role in associative thought" (p. 602). Camp also does a nice job of laying out the benefits and shortcomings of associative reasoning. See also Sloman (1996), Prinz (2002), Carruthers (2006), and Evans (2008).

(sarcasm), and a feeling or emotion (displeasure). These are not propositions. Thus, the constituents of associative reasoning are not always propositional. Sometimes they're things of which we are aware. Hence, association is one form of reasoning—a *genuine* form of reasoning that generates new knowledge—that awareness states are particularly well suited to feature in.³¹

A defender of the orthodox view of knowledge might insist that, insofar as what I'm doing in the above case is reasoning from old knowledge to new knowledge, the old knowledge must be propositional—beliefs such as *that* the waiter looks and sounds thus-and-so, *that* anyone who looks and sounds thus-and-so is being sarcastic, *that* sarcastic strangers tend to be displeased, etc. But that's simply not right. First of all, it's doubtful that this propositional model of my reasoning could succeed *in principle*, since, among other things, it's doubtful that I have beliefs about which *specific* properties are sufficient for sarcasm. But, even setting that aside, the fact is: Propositional reasoning is not what I'm doing. That's just not how I'm reasoning. I'm associating, not deducing. And what I'm associating are *things*—objects and properties—not propositions.³² So, with association, awareness states are sometimes the (knowledgable) bases of reasoning.

Another form of reasoning that awareness states are particularly well suited to figure in is *instrumental reasoning*. One engages in instrumental reasoning when one identifies a non-actual state of affairs that may not be desirable in itself but that will help one achieve some goal (cf. Camp and Shupe 2017). Packing my car for the beach is a good example. My goal is to have a good time at the beach. In order to do that, I have to bring the right stuff. So I identify a certain state of affairs—my car filled with beach stuff—that is not desirable in itself, but that will help me achieve my goal. This sort of reasoning often involves reasoning with awareness states. One kind of case involves *simulation* (see Camp and Shupe 2017, p. 103; Millikan 2006, p. 118; Prinz 2002, Ch. 6). As I stand outside looking at the trunk of my car, I mentally simulate packing various items in my car in order to determine whether the trunk will fit everything. This simulation is based in part on my perceptual awareness of the trunk and in part on stored perceptual information that helps me imagine the sizes and shapes of the chairs, cooler, towels, and other objects that I want to fit into the trunk. So awareness states are part of what I'm reasoning with in this case. Hence, instrumental reasoning is another kind of reasoning that awareness states are particularly well suited to figure in.

³¹ What Camp (2014) says about the quasi-conceptual items that often feature in association, which she calls 'characterizations', may sound familiar: "Despite this importantly non-propositional dimension of characterizations, we can still endorse, reject and argue about them. Even though they are complex, nuanced, context-sensitive and intuitive, and even though they may be quite idiosyncratic, they are not just Jamesean causal associations. Endorsing a characterization amounts to accepting that its assignment of fittingness, prominence, and centrality are consistent with the objective distribution of properties in the world (*modulo* discrepancies introduced by fittingness) and conducive to achieving one's current cognitive goals. And although I cannot compel you by propositional means to even entertain my characterization, let alone endorse it, I can help you to "get it" by directing your attention toward the features that are most prominent and central for me, and explaining why I take them to be highly intense, diagnostic, central, and fitting" (p. 610–611).

³² See Camp (2014) for an explanation of the differences between deduction (or other forms of propositional reasoning) and association.

One more form of reasoning that awareness states are particularly well suited to figure in is *problem solving*. In a now-famous series of experiments, Roger Shepard showed that some problem solving involves *mental rotation*. Shepard and Metzler (1971) gave subjects a pair of pictures of three-dimensional figures—composed of cubes in various arrangements—and asked subjects to report, as quickly as possible, whether the figures in these pictures were the same. In some cases, the figures were the same, but one was just rotated relative to the other; in other cases, they were different. As it turns out, when the figures were the same, the time it took subjects to report that they were the same was proportional to the degree to which the one figure was rotated relative to the other. Shepard and Metzler's (1971) conclusion was that subjects engaged in an internal, imagistic “mental rotation” of the figures in order to solve this problem. While this was controversial at first (see Block (1982) for some dissent), Shepard and others were able to replicate their results in various different experimental designs and in ways that heavily supported their initial conclusion.³³ Now the existence of mental rotation is widely accepted by philosophers and psychologists.

What's relevant for our purposes is that at least some cases of mental rotation involve non-propositional reasoning—reasoning with awareness states as bases. Mental rotation is based in part on one's perceptual awareness of the figures in the pictures and in part on one's mental rotations of those figures. Again, awareness states are part of what's reasoned with. Thus, problem solving, such as that which involves mental rotation, is yet another kind of reasoning that awareness states are particularly well suited to figure in.

So association, instrumental reasoning (via simulation), and problem solving (via mental rotation) are three kinds of reasoning that awareness states are particularly well suited to feature in. And the contents of awareness states feature in these forms of reasoning, not just as inputs, but as the very things that we deliberate with and draw conclusions on the basis of. Thus, awareness states bear this important hallmark of knowledge.

Maybe you're still not satisfied on this point. Maybe you want to reserve the term 'reasoning' for a very specific kind of thinking—logic, deduction, or something like that. You wouldn't be alone in this desire. And maybe you also believe, or assume, that this sort of thinking is—indeed, *must be*—propositional. Thus, you might consider this a final refuge for the orthodox—a rallying point against this consideration about reasoning.

However, the claim (or assumption) that all logical reasoning is or must be propositional turns out to be seriously overblown, if not simply mistaken. This is illustrated by Sun-Joo Shin's work on diagrams and Elisabeth Camp's work on maps. Shin (1994) shows that Venn diagrams, for example, are governed by formal rules of inference that are sound and complete up to expressive equivalence with monadic first-order predicate logic (cf., Camp 2007, p. 153). And Camp (2007) shows that some maps have many of the formal features of sentences and propositions that make them well suited to feature in logical reasoning, such that they are made up of abstract formal elements that can be recombined in various systematic ways (see p. 154).

³³ See Nigel (2017) an overview of these experiments and a general discussion of mental rotation.

What this illustrates is that logical reasoning needn't be propositional. It can be diagrammatic or cartographic. And since we actually do reason with diagrams and maps (as Shin (1994) and Camp (2007) argue), the above also illustrates that not all *actual* logical reasoning is propositional. Some of it is diagrammatic or cartographic.

This in itself doesn't show that we engage in logical reasoning with any other kind of representation. But it should open us up to that possibility. And, indeed, I think it should open us up to the possibility that we can and do engage in logical reasoning with awareness states. For much of what can be said about diagrams and (especially) maps can be said about the representational contents of our awareness states. It is well beyond the scope of this paper to give a logic of awareness. But let me offer just a few remarks.

Like propositions and maps, awareness states represent the world as being a certain way, and they do so by combining various representational elements in a structured way. Awareness states are also like maps (but not necessarily propositions) in a number of other ways. Consider my visual awareness in the restaurant. When I see my environment, I represent properties and objects as being in a certain spatial configuration. As with many maps, this representation is largely analog—it represents continuous spatial arrays and carries information specifying fine-grained property values, such as color values (Camp 2007, p. 156). And, as with many maps, the structure of my visual experience is partially spatial—it represents things and properties as being in various locations around the room and in relation to each other.

As with maps, logical reasoning with awareness states is limited in certain ways. For example, while we may draw disjunctive conclusions on the basis of awareness states, disjunctions cannot themselves be represented in awareness. The same goes for negation. Awareness states are also limited in their ability to represent quantificational information. When I see you in the back of the restaurant, I represent you as *existing*, but I cannot visually represent some universal generalizations, such as that every waiter is stressed. So logical reasoning with awareness states is limited compared to sentential or propositional logical systems. Indeed, you might say awareness states aren't particularly well suited to feature in logical reasoning.

But even if that's true, it doesn't affect the main point here, which is that even logical reasoning is within the domain of reasoning with awareness states. This last refuge of the orthodox is no refuge at all. Awareness states are heavily involved in and integrated into our reasoning at various levels, and not just as inputs to our reasoning, but as the very things we deliberate with and draw conclusions on the basis of. Awareness states thus bear this hallmark of knowledge. And this is a good reason to think that they *are* knowledge.

So now I've made my main case for knowledge of things. In the last section I argued that, in the restaurant case, I *know* about the particular objects and fine-grained properties around me. In this section, I argued that some of this knowledge is *of things*. First I appealed to introspection and the fine-grainedness and inexpressibility of the knowledge in question to make my case. Then I appealed to ordinary language usage. Finally, I returned to the hallmarks of knowledge—focusing on reality-grasping, evidence, justification, and reasoning—and argued that awareness states bear these hallmarks of knowledge independently of any propositional knowledge. And thus, I now conclude that some of my knowledge of the particular objects and fine-grained

properties around me in the restaurant is constituted, not by beliefs toward propositions, but by awareness of properties and objects. It is knowledge, not of truths, but of things.

One more thing. After all of these points drawn from the restaurant, it's fitting that I end this section with some icing on the cake—an interesting kind of case that ought to make knowledge of things even more pleasing to your palate. What I'm referring to are *Gettier cases*. In standard Gettier cases, someone has a justified true belief that isn't knowledge. These cases have become a sort of hallmark of knowledge in their own right—what one expects to find when working in the epistemic realm. So if there are Gettier cases for awareness states, this would further confirm that awareness is the stuff of genuine knowledge. Such a case would involve, not a justified true belief, but rather, a well-founded veridical awareness state that isn't knowledge.

One such example is that of a *double* or *veridical illusion*. This is where two illusions offset each other so that, despite there being not just one but two distortions, a subject has a *veridical* perception of some object or property. Consider an example adapted from Mark Johnston (2006): Two wires of equal length are presented in the style of the Muller-Lyer illusion—one with arrows on its ends, one with wings—so that one looks longer than the other. But then one end of the longer-looking wire is angled away from a viewer (unbeknownst to her) so that its apparent length is shortened. The overall effect is that the two wires look to be of equal length. And indeed they are! So the viewer's perception is veridical. However, this veridical perception is caused by two distortions—it's a double illusion.

This is a non-propositional Gettier case.³⁴ It's an awareness state that is well founded and veridical, yet not knowledge (after all, just adding a distortion doesn't turn non-knowledge into knowledge). So this case further shows just how much awareness looks like knowledge, warts and all. So for this and every other reason I've given, I conclude that some knowledge is constituted by awareness of objects and properties. There is knowledge of things.

3 Objections

Throughout this paper I've been responding to potential objections as they've come up. But now I'll tie up a few loose ends by very briefly addressing some other potential objections that I've not yet mentioned.

Objection 1 If awareness of things is knowledge, then all sorts of animals who are aware of things—including “lower” animals—would have knowledge. But they don't! So awareness of things must not be knowledge.

Reply That *our* awareness states constitute knowledge does not entail that any other animal's awareness states constitute knowledge. It could be that our awareness states are relevantly different from many animals (cf., Tye 2009). Or it could be that various other animals' awareness states don't play the right roles with respect to evidence, justification, reasoning, etc., and thus don't deserve to be called knowledge. Or, on the other hand, you might like the idea that some animals have knowledge. There's

³⁴ Thanks to Jack Spencer for causing me to consider whether there are any non-propositional Gettier cases, and to Todd Ganson for bringing examples like the one above to my attention.

plenty of room for further debate on this topic. And, at this stage, there's a place for all sides at the knowledge of things table.

Objection 2 We don't need to introduce knowledge of things in order to model perceptual knowledge. For it's possible to represent a person's perceptual states algebraically, or with a probability distribution, or in some other formal way. Then these states can be modelled in line with the orthodox view of knowledge.

Reply Some of my arguments in this paper—e.g., the arguments from inexpressibility and fine-grainedness—suggest that some perceptual knowledge can't be fully captured propositionally. So some of my arguments suggest that a propositional modeling is bound to leave something out in terms of what we know. So I reject the guiding assumption of this objection that our knowledge can be fully represented propositionally.

And even setting that aside, several other of my arguments take no stand whatsoever on whether perceptual knowledge can be represented or modeled propositionally—e.g., the arguments from introspection, ordinary language, and the hallmarks of knowledge. That is to say, they are consistent with the possibility of such a modeling. Yet they still support the conclusion that there is knowledge of things—that awareness of things sometimes constitutes knowledge. Thus, even if all perceptual knowledge *could* be fully represented propositionally, still, there would be plenty of reason to believe that some knowledge is of things.

So suppose such a representation is possible. My response is: So what? It wouldn't capture the true nature of the kind of knowledge I've been arguing for. By analogy, suppose we're looking at a painting and you tell me that you could, in principle, give me some Dickensian description of all its features. Congrats. But just don't go telling me that what we're looking at is a story, not a picture. The fact that a representation of one type can be modelled using a representation of another type doesn't mean the former is, in fact, the latter.

Objection 3 Maybe we should give up certain assumptions about propositions, such as that they are abstract bearers of truth and falsity, or certain assumptions about beliefs, such as that their objects are propositions in the standard sense. After all, some philosophers say that beliefs are defined by certain theoretical/explanatory roles that they play. So if the facts about perceptual knowledge require us to drop certain assumptions about propositions or beliefs, so be it. Then maybe we can accept the arguments in this paper while still holding that all knowledge is constituted by "beliefs" toward "propositions" in an adjusted sense.

Reply This objection simply changes the terms of the debate (and, as we'll see, to no avail). I've assumed that propositions are abstract bearers of truth and falsity, expressible by declarative sentences, marked out by that-clauses in attitude ascriptions, and are the objects of beliefs. These are very standard assumptions (see, e.g., McGrath and Frank 2018; King 2017; Hanks 2009; Merricks 2015; Bealer 1998; Soames 1999). In fact, some of the main justifications for positing propositions depend on the truth of these assumptions (ibid.). So if the content of some knowledge doesn't have the above features, then I think the appropriate response is to deny that all knowledge is propositional, not to redefine what propositions (or propositional attitudes) are. By analogy, if I say all ravens are black, but then you show me a white raven, I think the

appropriate response is to reject my claim that all ravens are black, not to redefine ‘black’.³⁵

And even if you disagree, it’s unclear what you gain. If the goal is to preserve the orthodox view that all knowledge (save know-how) is constituted by beliefs toward propositions, then radically changing the standard account of what propositions or beliefs are isn’t going to do that any more than changing my concept of *black* is going to allow to me preserve my prior understanding of what all ravens look like. Either way, how we think of knowledge will be quite different from how we thought of it before. In particular, if knowledge doesn’t require or even involve true belief in the usual sense, or indeed if it doesn’t involve any relation to an entity that could even be true or false, then orthodoxy is undone. So the present objection misses its mark—it doesn’t so much preserve the orthodox view of knowledge as it recasts the way in which it should be rejected.

Objection 4 What’s had in the restaurant is knowledge, and it’s non-propositional. But it’s just *know-how*—knowledge constituted by abilities.

Reply Abilities do come into play in the restaurant. But my perceptual knowledge of properties and objects around me is not itself an ability. It may *require* abilities, such as sight. And it may *yield* abilities, such as the ability to re-identify what I saw. But my perception of colors, shapes, people, etc., is not *itself* an ability.

Objection 5 The view according to which there is only propositional knowledge is simpler. So, all else being equal, we should prefer that view.

Reply All else is not equal. Sure, the propositional-knowledge-only view is relatively simple. So is the view that everything is water. These views are unsupported by our evidence. So, simple or not, we should reject them.

4 Connections

Knowledge of things is totally at odds with the orthodox view in contemporary philosophy, which is that all knowledge (save know-how) is propositional. So that there is knowledge of things is, in itself, a big result.

But knowledge of things also bears on other issues in philosophy. Let me mention just a few. First, there’s an ongoing debate about the epistemic significance of experience. Everyone agrees that perceptual experience plays *some* role in generating perceptual knowledge. But what this role is has proven elusive. A lot of philosophers, who assume that perceptual knowledge must be propositional, have attempted to solve the problem by positing a link between perceptual experience and perceptual belief—an evidential or causal link, for example. But this solution isn’t fully satisfying. For it seems we could have justified perceptual beliefs *without* perceptual experiences, as in blindsight (cf. Byrne 2016). So the question remains: Why do we

³⁵ As I’ve said, there are commonalities between the contents of knowledge of things and knowledge of truths (see Sect. 1). But there are differences between them as well, which I’ve detailed throughout this paper. And I think these differences are interesting and theoretically significant enough to warrant accepting that some knowledge is non-propositional rather than accepting that propositions or beliefs are something other than what we thought.

need experience? How does perceptual experience per se help generate perceptual knowledge?

The answer: It *is* knowledge. So perceptual experience helps generate perceptual knowledge by *being it*. This answer sidesteps the elusive experience-belief link. And it thus provides a simple solution to the problem.³⁶

A related issue is the *problem of the speckled hen*. Suppose I see 48 speckles on a hen. I see *exactly* 48 speckles, and yet, I'm not justified in believing that those are 48 speckles. This is a problem for foundationalists who assume that all knowledge is propositional and believe that experience is epistemically significant in the sense that experiencing P is sufficient to justify the belief that P. Luckily, knowledge of things provides a solution. We can sidestep the experience-belief link, appeal instead to knowledge of things to account for the epistemic significance of experience, and then admit that I don't know *that* there are exactly 48 speckles on the side of the hen. So we say: I know *of* 48 speckles (knowledge of things), but I don't know *that* there are 48 speckles there (knowledge of truths). The problem of the speckled hen is thus solved.

There are other connections between knowledge of things and various issues in epistemology and philosophy of mind having to do with foundationalism, the Given, the Knowledge Argument, self-knowledge, explanation, understanding, certainty, intuition, and transformative experience, to name a few. But let me conclude with a connection that is a bit farther afield—in philosophy of religion—to illustrate the far reach of knowledge of things.

In her *Wandering in Darkness*, Stump (2010) introduces what she calls “Franciscan knowledge,” which is a kind of non-propositional knowledge that is (at least largely) knowledge of oneself and other people. Stump appeals to this kind of knowledge in the course of addressing the problem of evil. She argues that in order to truly understand the suffering of others, and God's relationship to this suffering, we must appeal to this other, interpersonal kind of knowledge. But Stump's discussion naturally forges other connections as well. For instance, some philosophers and theologians are concerned with a tension between the idea that God is utterly transcendent—and thus beyond human conception and description—and the idea that God is knowable. Franciscan knowledge—or knowledge of things, as I would say—eases this tension. The idea would be that we know *of* God, but not *that* God is thus-and-so.

Another connection raised by Stump (2010) extends beyond philosophy of religion. She sees the omission of Franciscan knowledge as unfortunate, not just for philosophy of religion, but also for analytic philosophy more generally. Stump starts by saying that, due to its omission of Franciscan knowledge, analytic philosophy is “incomplete at best when it comes to describing the parts of reality including persons” (p. 37).

³⁶ This in itself doesn't solve *every* problem in the vicinity. For example, one might still wonder: What is the epistemic significance of perceptual experience for perceptual knowledge *of truths*? However, my previous discussion about how awareness states figure in our reasoning may go some way to providing an answer here. The answer won't be that (conscious) awareness states are the *only* way to generate perceptual knowledge of truths. For once it is established that there's some perceptual knowledge that requires perceptual experience—namely, some knowledge of things—there is no longer a demand to explain why perceptual experience is sometimes necessary for perceptual knowledge. So the answer regarding perceptual knowledge of truths can be that reasoning with awareness states via association, simulation, mental rotation, and logic, for example, is one way to get new perceptual knowledge of truths.

She later adds, “There are, then, more things in heaven and earth than are captured by analytic philosophy” (p. 62). Yet she ends on this hopeful note:

Chastened and willing to learn from the Franciscan approach, analytic metaphysics, as well as the rest of analytic philosophy, is as powerful as it is incisive. Both the Franciscan and [the current approach of analytic philosophy] are needed for understanding the world and the way we can best live in it (p. 63).

There’s a lot going on here, most of which I won’t comment on. But one relevant, and I think correct, point from Stump’s discussion is this: Recognizing knowledge of things has the potential to not just reshape (or settle) particular debates within philosophy; it also has the potential to change the way we think about reasoning and, indeed, the way we reason. Not all premises are propositions—some good arguments depend on knowledge of things. So while recognizing knowledge of things is important both in itself and in relation to other debates within philosophy, what may be even more important is how recognizing knowledge of things has the potential to change the way we perceive philosophy and how we go about doing it.

Acknowledgements Thanks to Tomas Bogardus, Matt Braich, Andrew Cortens, Nina Emery, Trip Glazer, Dan Greco, Louis Gularte, Lorraine Keller, Colin McLearn, Paul Nedelisky, Adam Pautz, Doug Reed, Nick Rimell, Tomoji Shogenji, Jack Spencer, Rush Stewart, Donovan Wishon, two anonymous reviewers, and audiences at DePauw University, MIT, Pepperdine University, University of California at Irvine, University of Connecticut, and University of Rhode Island for discussion of and/or comments on this paper.

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