

A Phenomenal Theory of Grasping and Understanding

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1. Introduction

It is one thing to believe something, and it is another to grasp it. For example, everyone knows that life is short, but most of us arguably do not fully grasp this fact. Grasping this fact can have a notable effect on our cognition and behavior, prompting us to reconsider how to best spend our limited time. Similarly, most of us know but seldom grasp that children are starving all around the world and that we could, if we put in a sufficient collective effort, halt much of this suffering. Grasping these facts makes us more inclined to donate to charity—or at least makes us more inclined to feel guilty if we don't. As both of these examples illustrate, grasping seems to be something above and beyond mere belief or knowledge, and it seems to make an important difference to our cognitive and decision-making processes.

In this paper, I aim to shed light on the contrast between grasping and merely believing or knowing. I argue that, subject to some qualifications, grasping some mental content is a matter of having it in phenomenal consciousness. In contrast, merely believing or knowing some content does not require having it in consciousness.

I start by clarifying my target and methodology. I then briefly explain why some initially attractive views of grasping formulated in terms of inferential role or Fregean senses are unpromising. Finally, I develop my account of grasping in terms of phenomenal consciousness. This account, which I refer to as *experientialism*, expands and improves on the view sketched in Bourget 2017a and Bourget 2018.

2. Target and methodology

The contrast between thinking with and without grasping plays a role in many types of situations, two of which I briefly alluded to in the introduction. Here are four additional and somewhat simpler examples of this contrast:

The Mary case. As in Jackson's (1982) well-known thought experiment, Mary has spent her entire life in a black-and-white room. Unlike in Jackson's thought experiment, let us stipulate that Mary cannot experience colors while in the black-and-white room (not even through mental imagery). Still, she is able to think about colors while in the room. For example, she knows, believes, and can think that ripe tomatoes are red. What Mary seems unable to do, given that she cannot experience colors, is *grasp* or *understand* what colors are like. One day, Mary is released from the black-and-white room and sees a red object for the first time. At this point, she notices that she has a better understanding of color facts: not only does she know that ripe tomatoes are red, but she *grasps* this fact.

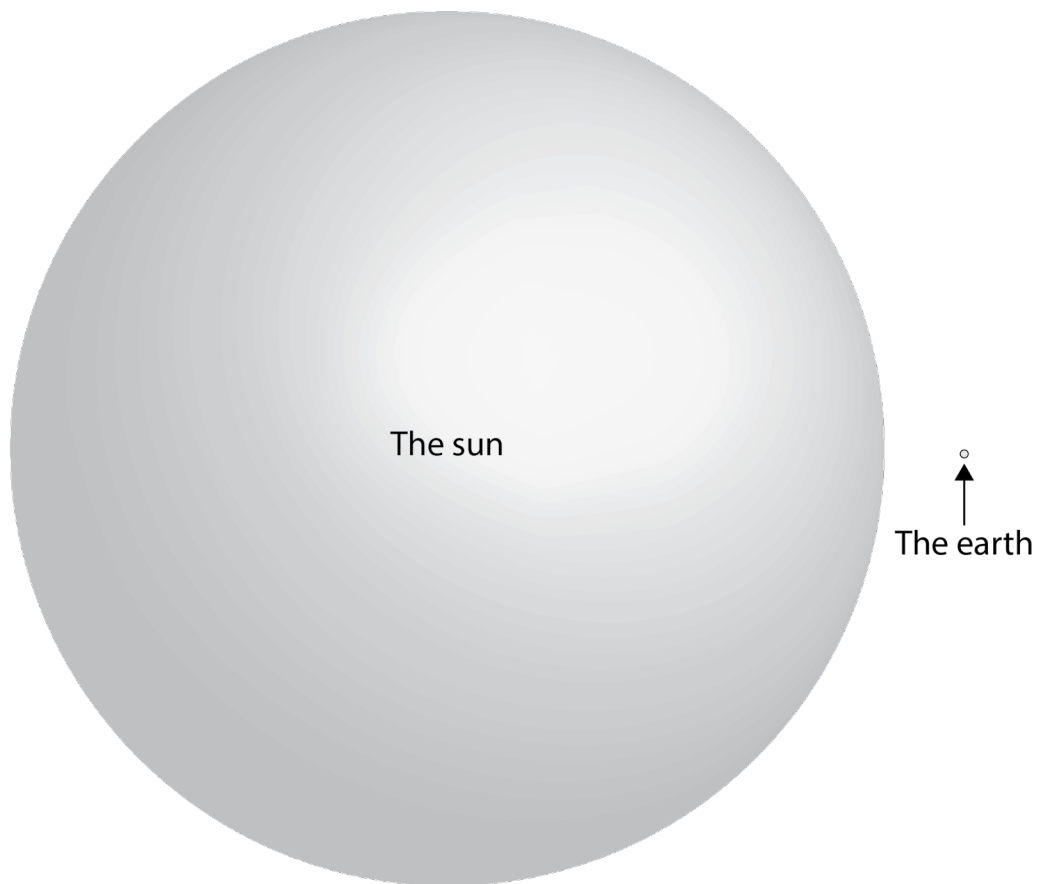


Figure 1 A scale drawing depicting the relative volumes of the sun and the earth

The sun case. Tara, a twelve year old, has just read that the sun's volume is 1.3 million times larger than the earth's. Having read this fact in an authoritative book, she fully believes it. Being good at math, she is also quite competent at reasoning about this fact. However, she does not fully grasp it. Her initial lack of grasp becomes obvious when, searching the Internet, she finds a scale illustration of the sun and the earth (Fig. 1). The illustration makes vivid to her—allows her to fully appreciate—just how big the sun is compared to the earth. She knew, prior to viewing the illustration, that the sun was 1.3 million times larger than the earth, but she did not fully *grasp* this fact.

The slaughterhouse case. Annie is a kind woman who loves animals and would never want to hurt them. She knows that meat comes from sentient animals and that the animals we eat generally have short, miserable lives full of suffering. She is also knowledgeable about the specifics of the slaughtering process. She has learned all of this from credible sources and can tell anyone who asks. Despite this knowledge and her kind dispositions, Annie is a regular buyer and consumer of all sorts of meats. The implications of meat-eating that she knows about don't seem to have "registered" with her. One day, she visits a bovine slaughterhouse, where she sees cows suffering and being slaughtered. The visit does not teach Annie any new general facts about meat-eating since she was already very knowledgeable about the slaughtering process prior to the visit. However, seeing the animals suffering and being slaughtered makes the implications of meat-eating alive to her. Grasping the implications of meat-eating for the first time, Annie finds herself unable to ignore them in her decision making and resolves to become vegetarian.

The supervenience case. Sue, who is taking an introductory course in the philosophy of mind, has learned that supervenience is the relation that obtains between two kinds of facts when facts of one kind (the supervenient ones) never differ between two possible worlds without a difference in facts of the other kind. Sue's instructor has asked her class a tricky question: is it true that, if there is a necessarily existing god, its existence supervenes on the number of stars? Sue cannot work out the answer at the time. She can state the definition of supervenience (one might say she *grasps* the concept of supervenience) as well as the conditional claim about a necessarily existing god, but she cannot tell that the latter is true. Despite this unrewarding experience, Sue goes on to study more philosophy and write a PhD thesis on the mind-body problem, which leads to a second encounter with the question about a necessarily existing god.

This time, thanks to her training, Sue is able to *grasp* the entire logical structure of the claim at once, which enables her to see that it is true.

These stories all have roughly the same form. In each case, there is a "before" condition and an "after" condition. In the "before" condition, there is something that the protagonist knows, believes, and can think about but that they cannot grasp (or at least not grasp fully). In the "after" condition, the protagonist gets to grasp what they initially failed to grasp (or to grasp it better). The protagonist finally "gets it". In each case, the protagonist can point to a first-person observable episode of grasping. The occurrent thoughts the protagonists have during these episodes are the same that they previously had, but they differ in being *graspy*. So these cases illustrate that we do not grasp everything we think: some thoughts are graspy while others with the exact same contents are not—let us call them *empty*.¹ The transitions that occur in these cases also illustrate that originally empty thoughts can become graspy (or be replaced by graspy thoughts).

Similar uses of a notion of grasping can be found in many areas of philosophy.² Perhaps most prominently, several epistemologists have suggested that grasping is the cornerstone of understanding, in that understanding a proposition, theory, mechanism, or other complex entity requires grasping one or more relevant propositions (the proposition itself in the case of understanding-that and relevant propositions in the other cases).³ If this is right (and I believe it is), a theory of grasping is also a theory of understanding. It is also natural to think about conceivability arguments in terms of grasping: imagination is a guide to possibility when we actually grasp—as opposed to entertaining without grasping—what we imagine.⁴ Among other uses, grasping has also been invoked to specify a notion of *a priori* knowability,⁵ explain what is special about transformative choices,⁶ distinguish singular from other thoughts,⁷ shed light on the

¹ This use of "empty" arcs back to Kant's description of concepts unmoored from intuition as empty.

² But, of course, not everyone uses the quasi-metaphorical term "grasp" in this way. For example, Williamson clearly means something less demanding when he states that "to grasp a thought is to entertain it" (Williamson 2006, p. 2).

³ See, for example, Zagzebski (2001), Kvanvig (2003), Elgin (2007), Grimm (2011), and Strevens (2013).

⁴ See Loar (1990) and Goff (2011).

⁵ See Chalmers & Jackson (2001), and Yablo (2002).

⁶ See Paul (2015).

⁷ See Dokic (1996) and Armstrong & Stanley (2011).

epistemology of divinity,⁸ formulate Ramseyan Humility,⁹ describe our relationship to Fregean senses,¹⁰ explicate Aristotle's and Plato's views on reason,¹¹ and address issues about rule-following.¹²

We often seem to have clear intuitions regarding who grasps what, but my aim here is not to systematize these intuitions through conceptual analysis. I don't believe our grasp of grasping is sufficiently complete for it to be fruitful to try to shed light on this phenomenon solely by reflecting in a purely *a priori* manner on possible cases. Not only do we plausibly lack a sufficient grasp of grasping to be able to reveal its nature *a priori*, but humility requires that we allow that our conception of it does not cut nature precisely at the joints. I am interested in figuring out how thinking works, not in how we have pre-theoretically used the term "grasping". Consequently, I propose to treat "grasping" as a natural kind term, by which I mean a term whose reference is intended to be the natural feature that unifies certain paradigm examples. More specifically, I take grasping to be the natural feature that best unifies what we gesture at using "grasping" and cognate language (e.g. "getting it", "appreciating" "really understanding", etc.) in examples such as the above.

As I see things, intuitions about cases have a place in this approach, but their role is limited to selecting the actual instances of grasping to be accounted for, not in settling who grasps what in far-fetched imaginary scenarios. At best, reflection on far-fetch imaginary cases would reveal what our concepts or tacit theories of grasping currently say, not what the actual contours of the real natural kinds in the vicinity are, and I am interested in the latter, not the former.¹³

For present purposes, I take all the cases described above as paradigmatic, including the two examples with which I opened the introduction, but I am going to focus my discussion on the four cases described in the present section. (I set aside the two examples from the introduction because they require slightly more complicated treatments and I don't have the space to talk about every interesting case in detail.)

⁸ See Plantinga (2000) and Bishop (2007).

⁹ See Kelly (2013).

¹⁰ See Ludwig (2013), Reiland (2019), Longworth (2013), May (2006), and, of course, Frege (1952).

¹¹ See Moss (2014), Bronstein (2012), Morison (2019), Gasser-Wingate (2016), and Barton (1999).

¹² See Croom (2010), Miller (2019), Ginsborg (2021), and Demont (2012).

¹³ Thanks to Angela Mendelovici and Torin Alter for probing questions that led to improvements to this section.

Of course, my four examples are imaginary, but they are not *far-fetched*. They are meant to serve the same role as actual paradigm examples. They can play this role because we know that they are realistic and that there are concrete cases that are (in relevant respects) just as I describe them. The point of these cases is to bring out commonalities that may have previously gone largely unnoticed but are there for anyone to see.

Two further observations about my four paradigm cases will help structure how I approach them. First, all illustrate the grasping of *propositions*, which we can think of as possible (or actual) contents of complete thoughts. In the supervenience case, the proposition may be thought to be <If there is a necessarily existing god, its existence supervenes on facts about the number of stars>, which I will refer to as the *supervenience proposition*.¹⁴ In the slaughterhouse case, the grasped proposition is a complex proposition describing the consequences of meat-eating. Let us call it *the meat-eating proposition*. In the sun case, the relevant proposition is something along the lines of <the sun's volume is 1.3 million times larger than the earth's> (*the sun proposition*). There are multiple relevant propositions in the Mary case since Mary could not grasp *any* color-involving proposition before her release. A simple, minimalist example that will serve us well here is <some things are red> (*the color proposition*).

In the same way that we can be said to "understand" many different types of things (propositions, explanations, theories, mechanisms, maps, people, etc.), we can also be said to "grasp" many different types of things, including propositions, explanations, instructions, and concepts. The reason my examples mainly highlight propositional grasping is that I believe non-propositional forms of grasping are derivative of propositional grasping. It is clear that we grasp explanations, instructions, and other complex, non-propositional entities by grasping relevant propositions. It is less clear (at the outset at least) that our grasp of concepts is derivative of our grasp of propositions. I discuss conceptual grasping toward the end of the paper. For now, my goal is to offer an account of propositional grasping.

¹⁴ I use angle-bracket expressions such as "<There is a cat on the mat>" to refer to propositions on the assumption that they are structured entities (the notation could be understood differently if that assumption were rejected). Such an expression refers to a proposition whose structure is that of the embedded sentence (here roughly "There is x, y: C(x) and Unique(y, M) and R(x,y)") and whose constituents are the referents of all the non-logical terms in the sentence, which here may reasonably be thought to be *being a cat*, *being a mat*, and the *on* relation.

A second initial observation about my four paradigm cases is that they really illustrate two closely related, grasping-like phenomena: *occurrent* and *non-occurrent* propositional grasping. I stressed that each protagonist undergoes an occurrent episode of "grasping" the relevant proposition. But each protagonist also undergoes a more permanent change that deserves to be described in these terms. Barring any memory loss, we would expect each protagonist to acquire a standing, non-occurrent grasp of the relevant propositions. For example, post-liberation Mary can be said to grasp color propositions whether or not she is occurrently thinking about colors. The sort of grasp that she has continuously is a *non-occurrent grasp*. Since non-occurrent grasping seems derivative of occurrent grasping, I am going to be mostly focusing on occurrent grasping in this paper, but I will ultimately explain both. For ease of exposition, I am going to use the term *thought* to encompass all cognitive mental states, whether occurrent or non-occurrent.

It might not be obvious upon first encountering my four paradigm cases that they are deeply unified in some interesting way. The quasi-technical, quasi-metaphorical term "grasping" often employed by philosophers seems to describe a key element of each case, but perhaps not everyone understands this term in the relevant way. Even to those who agree that the cases seem unified in some way that is captured by use of the "grasping" language, it may not be clear that the unity runs deep. This is all fine. My aim here, again, is not to offer an *analysis* of some pre-existing, fully-formed concept of grasping, but to point out that our (or at least *my*) intuitive, inarticulate, perhaps partial grasp of a common factor in the four cases—which I gesture at using the quasi-metaphorical "grasping" language—tracks an important joint in nature. What I want to do is to shed light on a deep similarity in these four cases, not to analyze the term "grasping". I don't expect the deep similarity to be *a priori* obvious. The main import of the paper is a point that can be stated without using the term "grasping" at all: it is that consciousness plays a central role in cognition, which is illustrated by my four examples. The benefit of "grasping" language is that it conveys a little more precisely—to anyone who has some grasp of its intuitive meaning—what that role is.

3. Candidate accounts

If we treat "grasping" as a natural kind term—one whose reference is to be discovered by studying the nature of paradigm cases rather than *a priori* reflection—as I do, the way to find out what grasping is is to dissect examples such as the above for relevant commonalities. There are three features that are clearly correlated with grasping in at least some of these cases, and these features suggest three broad approaches: inferentialism, experientialism, and Fregeanism.

The first feature that is correlated with grasping in at least some cases is *inferential connections*. In the supervenience case, post-training Sue's improved grasp of the supervenience proposition is accompanied by a newfound ability to tell that the proposition is necessarily true. In the slaughterhouse case, Annie's grasping of the consequences of meat-eating is accompanied by a stark change in practical reasoning that seems to bring her actions more in line with her values and beliefs without her having learned any relevant new propositions (she already knew all the key implications of meat-eating). (This, incidentally, is also an interesting feature of the cases briefly mentioned in the introduction.) Thus, grasping a proposition seems to be at least sometimes associated with an improvement in rationality with respect to the proposition. Such improvements in rationality may be thought to be either *constitutive* or *symptomatic* of grasping. *Inferentialism* is the view of grasping that takes a certain proficiency in drawing inferences between thoughts to be constitutive of grasping. There are multiple ways of formulating such a view, but I set aside the details for now.¹⁵

While inferentialism may seem attractively "reductive", it is not initially clear that it can account for the Mary and sun cases, in which the protagonists' improved grasps do not seem to be associated with improved inferential abilities. I stipulated, as is plausible, that Tara has extensive inferential abilities with respect to the sun proposition. It is far from clear how these abilities improve after seeing the illustration. We can at least say that they do not seem to improve proportionately to Tara's improvement in grasp. In the Mary case, we might naturally expect inferential abilities to *degrade* after Mary leaves the room (at least for a time): it seems likely that the distracting sight of colors would, at least initially, impede post-liberation Mary's

¹⁵ Proponents of variants of inferentialism include Grimm (2006), Wilkenfeld (2013, 2019), and Hills (2016). There are also broadly inferentialist views of concepts or concept mastery that are naturally extended to give an inferentialist account of propositional grasping (Bealer 1999, Peacocke 1992, Rabin 2020).

ability to draw inferences about colors, thereby degrading the inferential connections between her color thoughts and other thoughts relative to those of pre-liberation Mary. These concrete possibilities are in tension with the inferentialist view. These sorts of issues are discussed at length in (Bourget 2017a), so I won't dwell on them here.

What is saliently associated with an improved grasp in the Mary and sun cases is a change in experiential abilities. This is most obvious in the Mary case, where it seems that Mary's grasp of color propositions is somehow enabled by her experiencing colors and gaining the ability to subsequently visualize them.¹⁶ In the sun case, it seems that *seeing* an illustration enables Tara to grasp the sun proposition, and the effective part of the seeing is not the perceptual part (the fact that Tara's experience is veridical) but the phenomenal part—a hallucination could have been just as useful for the purposes of grasping the sun proposition. The Mary and sun cases suggest *experientialism*, which we can (as a first pass) understand as the view that we occurrently grasp propositions by having relevant contents in consciousness.¹⁷ As with inferentialism, however, it is not entirely clear that experientialism can accommodate all the cases: it is not obvious what changes in consciousness might accompany the improved grasp in the slaughterhouse and supervenience cases. I will return to experientialism after this section.

It might be tempting to think that something like Frege's sense/reference distinction can explain the contrast that we find in the "before" and "after" conditions. This is most plausible in the Mary case because it is natural to suppose that pre-liberation Mary would, if asked what she means by "red", give us a definition along these lines: *it's the color called "red"*. Pre-liberation Mary has a deferential concept of redness that works in the same way as laypersons' deferential concepts of quasars and enteroviruses. The important feature of these ways of thinking about things is that they are *indirect*: they involve picking out a property or kind by some contingent feature it has (in the case of deferential concepts, the contingent feature is typically what the

¹⁶ The subsequent ability to bring back visual memories seems important: if Mary lost all memory traces of colors after seeing them for the first time, we would not be inclined to say that she continues to grasp colors.

¹⁷ Related views can be found in Strawson (1994), Siewert (2013), Bengson (2015), Bourget (2017a, 2018), El-Shazly (2021), and McSweeney (forthcoming). Campbell's "experientialism" about thought also bears some similarity to my experientialism, but its focus is on the relationship between experience and singular thought, and it is a much stronger thesis, denying the very possibility of (at least certain types of) thought without experience. See Campbell (2002), Campbell & Cassam (2014).

thing is called by experts or the rest of the community).¹⁸ Thus, there seems to be a correlation between grasping and representing through a direct mode of presentation, where a *direct* mode of presentation is one that is not indirect. This correlation suggests a *Fregean view* of grasping, on which grasping is representing with a direct mode of presentation.

The fact that the Fregean view relies on an old and somewhat widely accepted distinction may make it seem attractively economical, but the economy is largely illusory: the view only seems economical because the explanation it offers is more superficial than those offered by inferentialism and experientialism. A thought's "having" a Fregean mode of presentation, if there are such, is not a primitive mental fact. It is itself to be explained in more fundamental terms, and virtually all attempts to explain such putative facts have appealed to inferential role, consciousness, or a mix of the two.

The Fregean view also seems to fail to account for the majority of our cases on the most common understandings of Fregean senses. It is not clear what more direct way of referring to constituents of the sun proposition Tara might acquire. Perhaps she initially thinks of 1.3 million as the successor of 1299999 or the number called "1.3 million", but does she associate different senses with her concept of 1.3 million after seeing the illustration? It is natural to suppose that she does not. (Besides, "the successor of 1299999" is not a contingent description.) It is also unclear that Annie acquires a new, more direct way of referring to the suffering of animals after her visit. The supervenience case may seem to be importantly similar to the Mary case because it is easy to imagine a student who has a purely deferential concept of supervenience and, as a result, cannot work out that the supervenience proposition is necessary. This is a possible scenario, but it is not the one I described: I stated that Sue is able to give the definition of supervenience. She does not have a deferential concept. She fully grasps the concept, but she cannot grasp the whole proposition. So it is unclear what she might be referring to indirectly. Insofar as we think that all my cases have something in common deserving of the label "grasping", the fact that the Fregean view can account for only one of them puts this view behind the pack.

¹⁸ The "contingent" qualification is required so that a description that refers to some x through some trivially equivalent feature (e.g. "the y such that $y = x$ ") counts as direct.

A related concern with the Fregean view is that the notions of mode of presentation and Fregean sense are not well-defined and unproblematic. Theorists who try to go beyond Frege's vague characterizations have found it necessary to employ all sorts of technical devices to satisfactorily characterize senses or modes of presentations.

David Chalmers (2006, 2012) has probably gone farther than anyone else in his attempts to put the Fregean distinction on a solid footing. The result is a set of definitions that rest on the notion of *idealized doxastic apriority*, a thought's being such that it can be conclusively known on ideal reflection independently of experience.

Chalmers' definitions work for his purposes, but they do not work for my purposes because they tacitly invoke the notion of grasping. This can be brought out in multiple ways. To mention only one, notice that a thought's being known is shorthand for a thought's being known *to be true*. And for a thought to be true is for its *content* to be true. Fregeans believe thoughts have two or more contents, so the preceding definition of idealized doxastic apriority tacitly invokes a distinction between contents that are relevant to apriority and others that are not. The tacitly invoked distinction is none other than the one we are trying to explain, that is, the distinction between grasped and ungrasped content: a thought is *a priori* when *the content the subject grasps in having the thought* can be conclusively known on ideal reflection independently of experience.¹⁹ If we understand senses in terms of this kind of apriority, we cannot use senses to explain grasping on pain of circularity.²⁰

Setting the Fregean view aside, we have two main contenders: experientialism and inferentialism. My aim here is primarily to flesh out the experientialist view, not to attack the alternatives, but I will briefly mention one motivation to prefer experientialism over

¹⁹ Except in Chalmers & Jackson (2001), where he invokes conceptual grasping, Chalmers does not resort to a characterization in terms of "grasping". Instead, the different accounts of idealized doxastic apriority he gives, which take various directions, appeal to other notions that seem to be ultimately, tacitly tied to grasping through their relationships to the notions of truth and content, such as the notions of warrant and justification. Chalmers' definitions are adequate for his purposes, but they seem unsuitable for the purposes of explaining grasping because any complete precisification and clarification of these definitions seems bound to explicitly invoke grasping. This makes a Fregean account of grasping *super-circular* (circular under any full precisification and clarification).

²⁰ One could argue that Frege's vaguely defined sense/reference distinction should be superseded by the grasped/ungrasped distinction since the latter is more fundamental and cuts closer to nature's joints. Mendelovici (2019) gives an account of Fregean senses in terms of consciousness and grasping (which she equates).

inferentialism: there is something it is like to suddenly, occurrently grasp an idea we could not grasp before, but there is nothing it is like to acquire new inferential abilities. At least in this regard, experientialism seems to offer a more promising account of our paradigm cases.

4. Experientialism: a first pass

To see how a detailed experientialist account of grasping is possible, we need to take into account two widely accepted but not entirely uncontroversial points regarding the structure of consciousness.

The first point is a conjunction of claims that are often held together: i) consciousness has an act-object structure, in that it consists in a generic act of awareness that can be "directed at" different objects (or *contents*), and ii) the contents of consciousness are akin to ways things (particulars, the entire world) can be. This view goes back at least to Moore (1903) but has gained attention recently as part of intentionalist or representationalist accounts of consciousness. For present purposes, I want to set aside the question of whether experience is really a kind of representation or intentionality. The important point to recognize is that consciousness has an act-object structure and its objects are best called "contents" because they are ways things can be: properties or arrangements of properties (and perhaps particulars). To illustrate, right now my overall visual experience has for content a scene (an arrangement of properties) including various colored shapes (the icons in my computer's dock), little gray wiggles on a black background (this text), etc. For lack of better terminology, let's call the view just stated (the view consisting of (i) and (ii)) *minimal representationalism*. I am not going to defend minimal representationalism here since this has already been done elsewhere.²¹

In what follows, I will refer to the contents of experiences that constitute their act-object structure as *phenomenal contents*. Experiences have contents in other senses too. For example, they have informational content (what they carry information about), and it is often (perhaps usually) the case that their informational contents are distinct from their phenomenal contents. It is important not to assume that anything that may be loosely described as the "content" or

²¹ See Harman (1990), Byrne (2001), Chalmers (2004), Crane (2003), Pautz (2009), Seager & Bourget (2007), Bourget & Mendelovici (2014), Mendelovici (2018, 2013), Speaks (2015), and Bourget (2017b, 2015, 2010).

"information" carried by an experience is identical to or part of its phenomenal content (this is clearly false; just think about how many different kinds of information anything can carry; see also Mendelovici & Bourget 2019, 2022).

The second point it is important to recognize in order to make sense of experientialism about grasping is that consciousness is not limited to sensory perception. The most salient examples of phenomenal experiences are perceptual experiences, bodily sensations, and emotional feelings, but there are experiences that go beyond sensory perception in two important ways. First, our cognitive lives are filled with experiences that occur "offline", not as a direct, predictable result of sensory stimulation. Our streams of thought are punctuated with various forms of imagery, feelings, and perhaps other forms of consciousness we might describe as *conscious thoughts*. Second, the *contents* of our experiences can go beyond simple sensible properties such as shapes and colors. We can also experience such contents as <person>, <object>, <danger>, <living thing>, <good>, <bad>, <cause>, and <multiplicity>. There can be something it is like specifically to recognize something as a person, as an object, as dangerous, etc. This is because the aforementioned contents are sometimes part of the phenomenal contents of experiences.²²

I don't know exactly how far phenomenal content can reach in human subjects. This is hard to determine because cognitive phenomenology is fleeting compared to perceptual phenomenology (which can be kept relatively stable with the help of stable stimuli). By the time we try to inspect our stream of consciousness for high-level contents, they have moved on. That said, I am quite sure phenomenal contents reach at least as far as the high-level contents noted above and *not* as far as iPhones, viruses, electrons, galaxies, contracts, and large language models. As a rough heuristic informed by reflection on such examples, I suggest that our phenomenal contents plausibly extend roughly just as far as the contents that our prehistoric ancestors had frequent need to entertain. I don't know whether consciousness really requires genetic groundlaying to extend to any given type of content, but it is as if this were the case.

My claim that we cannot have iPhones as part of our phenomenal contents may seem surprising. After all, we can *experience* iPhones. This is true, but only on an irrelevant reading of

²² Authors who argue that we can experience high-level properties include Strawson (1994), Horgan & Tienson (2002), Pitt (2004), Siegel (2010), and Siewert (2011), among many others.

"experience iPhones". The irrelevant reading is one on which the term "experience" is given its ordinary, non-technical meaning, on which it also makes sense to talk of a person experiencing a pandemic or a corporation experiencing a loss of income. In this sense, which most dictionaries recognize as primary, experiencing X is encountering or undergoing X. This kind of experiencing has little to do with phenomenal consciousness. Philosophers have developed a different, technical sense that is often disambiguated using the qualifier "phenomenally". Phenomenally experiencing is undergoing a state of phenomenal consciousness. It is instantiating a phenomenal property, which is to be understood as a purely mental, felt property. This is the kind of experience or experiencing that is relevant to experientialism. In this sense, it does not seem possible to experience an iPhone (or to have it as part of one's phenomenal content): this would require being phenomenally presented with genuine-iPhone-ness, but this is impossible (for *Home Sapiens*). The best that one can do is have an iPhone-shape (which has nothing intrinsically to do with genuine iPhones from Apple Inc.) as part of one's consciousness.

These remarks may seem to speak against what I just said about the experience of high-level properties. Can we really experience people and living things in the technical sense of "experience"? Setting aside the irrelevant, ordinary sense of "experience" makes this claim less obvious than it may have seemed at first. But another distinction is helpful. There are plausibly two different kinds or properties associated with experiences of people or living things: there are the kinds or properties that figure within our phenomenal experiences (the *experienced properties or kinds*), and there are the typical causes of such experiences, which we can only discover through empirical investigation (the *scientific properties or kinds*). While I allowed myself to talk about experiences of persons and living things, I believe this is a way of describing the relevant experiences that abuses the terms "person" and "living things", which are generally taken to refer to the scientific kinds. When we experience personhood, we don't experience the scientific kind, to which the term "person" conventionally refers (and which remains to be discovered and spelled out, as research on personhood is ongoing). The same goes, perhaps more clearly, for living things, whose study is the purview of biologists. There is a sense in which we can see things as living, but that is not the sense of "living" in which only biologists can tell us what a living thing really is. We experience high-level properties and kinds, but not quite those that we study empirically.

With these clarifications in mind, we can formulate a first-pass phenomenal account of grasping in terms of phenomenal content as follows:

First-pass experientialism: Occurrently grasping P is having P as phenomenal content.

The things we grasp are propositions, understood as possible contents of thoughts, and the things we experience (according to minimal representationalism) are ways things can be, including possible states of affairs (PSOAs). So, for first-pass experientialism to be true, some PSOAs have to be propositions (possible contents of thoughts). This seems plausible, but I won't defend this claim here since there is a simple alternative approach to experientialism if someone believes the contents we think are something else than PSOAs (for example, sets of possible worlds): it is straightforward to map PSOAs to propositions of other types such as sets of possible world, so we can say that grasping P (in thought) involves experiencing the PSOA that corresponds to P.

As stated, first-pass experientialism does not account for non-occurrent grasping. However, the account can be naturally extended to non-occurrent grasping, which seems to boil down to not much more than an ability or disposition to occurrently grasp. I will come back to non-occurrent grasping after having refined the present account of occurrent grasping.

I stress that first-pass experientialism does *not* say that to grasp P is to have some kind of "aha!" feeling, feeling of understanding, or experience of understanding (in the sense of an experience directed at understanding itself).²³ Experientialism does not appeal to such feelings. The view is that grasping a proposition involves experiencing *it* (the proposition), not some unrelated, generic feeling. There is a whole class of feelings of understanding that are mixtures of various simpler feelings such as relief and excitement. They play a role in our cognitive lives and may be associated with grasping propositions, but they should not be conflated with the graspings of propositions themselves, because they can also occur in absence of any actual grasping.²⁴

First-pass experientialism already gives a fairly plausible account of the Mary case, which is the easiest for a phenomenal account of grasping to explain: prior to leaving her black-and-

²³ This is a major difference with the consciousness-first view presented by Strawson (1994), at least on a salient possible reading of Strawson.

²⁴ See Gopnik (1998).

white room, Mary cannot experience colors, so it follows from first-pass experientialism that she cannot grasp them occurrently; after having left the room, however, she is able to have experiences with contents such as <such and such shape is red>; when she does this, she grasps these contents.

The sun case is a little more complicated to account for than the Mary case. First, it seems implausible that Tara ever experiences the sun and the earth themselves (in the sense of having them as part of her phenomenal contents), so it does not seem that she can ever experience the sun proposition in full. It is more plausible that she can experience the relation *being 1.3 million times larger than* (which I am going to refer to as *the volume relation*). After all, the illustration she found shows spheres that stand in this relation (assuming they are drawn perfectly accurately), so she can plausibly experience *something* like the volume relation while looking at the illustration or visualizing it from memory. Still, it is implausible that she experiences *precisely* this relation, even assuming she is looking at a perfect illustration. Arguably, the contents of our experiences are not so precise. So, there are two ways in which Tara's experiences fall short of what is needed in order to grasp the sun proposition according to first-pass experientialism: there are things that she does not experience at all but would have to experience (the sun and the earth), and there is something that she does not experience precisely but would have to experience precisely (the volume relation). As a result, first-pass experientialism does not allow us to say that Tara grasps the sun proposition in the "after" condition, and it does not account for any sort of improvement in grasp that might occur between the "before" and "after" condition. The next section elaborates a more sophisticated form of experientialism that addresses these shortcomings.

5. Partial grasping

There are two ways in which Tara's experience falls short of enabling her to grasp the sun proposition on the first-pass experientialist view: she cannot experience all the constituents of the proposition, and there is a constituent that she might in a sense experience, but only imperfectly. We need an account of grasping that allows us to acknowledge Tara's partial grasp and accommodate the observation that her grasp has improved.

In some ways, the solution to the first aspect of the problem (missing constituents) is obvious: we can say that a subject's grasp of a proposition is more or less complete depending on how many of the constituents of the proposition they are experiencing. We can then recognize that Tara's grasp improves because she became capable of grasping the volume relation thanks to the illustration (setting aside the second problem for now). This is a good start, but it depends on the non-trivial assumption that there is some meaningful way of individuating and counting the constituents of propositions. How can we do this?

For our purposes here, a plausible observation about consciousness can help simplify the problem. Experiences do not normally come in isolation. For example, it seems impossible to experience the content <a square is next to a circle> without experiencing circularity (or <something is circular>) and squareness (or <something is square>), which are distinct contents. A natural proposal is to take something to be a constituent of a proposition (experienced or not) if and only if one must experience *it* when experiencing the proposition. This gives us the following definition of *propositional constituent*:

Propositional constituent: X is a constituent of proposition P just in case, necessarily, having an experience of P necessitates having an experience of X.

Put a little more loosely and intuitively, the idea is that something (a property, another proposition, the logical form of a proposition) is part of a proposition if and only if it is something that one experiences as part of experiencing the proposition. For our purposes at least, there is nothing wrong with using the structure of consciousness to pinpoint the structure of propositions in this way. That's in the spirit of a consciousness-first approach to mental representation. This proposal has the virtue of excluding intuitively disjunctive, gruesome, or negative properties from counting as constituents of phenomenal contents in many cases, even if these contents are logically equivalent to propositions that include such properties. The result is an acceptably sparse account of propositional constituents that (by construction) aligns with phenomenology.

Given this notion of propositional constituent, we can naturally account for the partial grasp of a proposition P in terms of the experiencing of the constituents of P: the more constituents of P a subject experiences, the more complete their occurrent grasp of P. This seems to solve the first problem that the sun case poses.

Notice that I didn't say "the more constituents are experienced, the *better* the grasp". Completeness is distinct from quality in that quality is purpose-relative: a grasp (or anything, really) may be good for one purpose but bad for another. Depending on one's purposes, a grasp that is less complete than another might be better because it serves the purpose better. My goal here is mainly to account for the completeness of individuals' grasps of propositions, but I am happy to say, in addition, that one's grasp of a proposition is good for a purpose to the extent that it is complete enough for that purpose.

The second problem posed by the sun case is that Tara probably did not experience the precise volume relation. Here we have two options. The first option is to allow for a second way in which what a subject experiences can depart from a proposition: in addition to potentially missing certain constituents of the proposition, the subject might experience less precise or less determinate variants of the properties that constitute the proposition. When X is a less precise or determinate version of Y, let us say simply that X is a *version* of Y and Y is the *original*. Intuitively, versions can be more or less close to originals. Let us count any X as a (maximally close) version of itself. We can then say that another way in which an experienced content can confer a more or less complete grasp of P is by including more or less close versions of the constituents of P.

A second approach to the second problem relies on the hypothesis that experiencing a property often necessitates experiencing less determinate or precise properties. For example, it is not implausible that experiencing a specific shade of green necessitates experiencing greenness: how can one experience that specific green without generic greenness entering one's consciousness at the same time? It seems that it must. If this is right, the content <green> (or <something is green>) is a constituent of the proposition <something is lime green> per the preceding definition of "constituent". It may be generally true that, if a subject partially grasps a proposition P by experiencing a proposition Q that contains some X that is a version of a constituent of P, then X is also a constituent of P. This would mean that our first dimension of completeness is enough to capture what happens with the volume relation in the sun case. So, we could say that Tara's grasp of the sun proposition improved (without becoming perfect) because she came to experience a constituent of that proposition, namely, the relation *being much bigger than*, or perhaps *being 1.3-million-ish times larger than*.

While I find this second approach attractively simple, I will not adopt it here. I will talk about versions of constituents of propositions. If the hypothesis that versions of constituents are also constituents is true, what I say in terms of versions of constituents could be simplified since we need only talk about constituents. But I will use the more complicated formulation to remain neutral on the two approaches.

One assumption that I will make in what follows is that, generally speaking, the relationships between constituents of propositions are constituents of the propositions (and each proposition is a constituent of itself). That each proposition is a constituent of itself follows from our definition of constituents and the trivial fact that experiencing a proposition necessitates experiencing it. It is also plausible that relationships between constituents of propositions are also constituents. For example, experiencing a cube on a table in the corner seems to require experiencing both the *being on* relation and the cube's standing in that relation to the table. If this wasn't the case, we would need to stipulate that relationships are constituents of propositions.

Should we say, then, that a subject occurrently grasps P to the extent that they experience close versions of all the constituents of P (the closer the constituents, the more complete the grasp)? One problem with this proposal is that any given experience would confer a partial grasp of infinitely many propositions: any property is a constituent of infinitely many propositions (even on our demanding conception of constituents).

A tempting solution is to say that a subject grasps P to the extent that they experience versions of the constituents of P *while thinking* P. This proposal addresses the infinite-grasp issue, but it is open to a more subtle difficulty. Consider a subject who thinks P and has completely unrelated experiences of the constituents of P: the experiences are not causally or constitutively connected to the thought in any way. This does not seem to be a case of partially or fully grasping P. Intuitively, what makes for a partial occurrent grasp of a proposition is not merely that we phenomenally represent some of its constituents, but that we *think it by phenomenally representing some of its constituents*. This suggests that we should state experientialism as follows:

Experientialism about occurrent grasping: A subject's thought that P is occurrently graspy to the extent that it is constituted by occurrent experiences of close versions of all the constituents of P.

By "constituted", I mean that the thought is (partially) grounded in or identical to certain experiences. In the limit case of full grasping, a thought that P might simply *be* an experience with content P. Of course, it might also be grounded in an experience of content P. Experientialism is neutral on this. In other, more common cases, a thought that P might be "pieced together" through a combination of experiences of (versions of) constituents of P and other representations. This is most likely what Tara does when she first encounters the illustration: she has a thought that she might verbalize as *the sun* [this much] *larger than the earth*, where the demonstrative part of her thought is filled by attending to the volume relation (or a less precise relation) she experiences while looking at the illustration. Her pointing at the experienced volume relation is not a mere commentary; it is constitutive of the thought. I am going to call the experiences that constitute thoughts in this and other ways (in the limit case, the experiences that are identical to thoughts) *the phenomenal grounds* of thoughts.

We will soon see how this account extends to other cases beyond the Mary and sun cases, but first I want to address non-occurrent grasping.

6. Non-occurrent grasping

As noted above, it is plausible that non-occurrent grasping is in some way derivative of occurrent grasping. However, it cannot merely be the ability to occurrently grasp a proposition. Take an individual who *can* grasp (experience) P but who is completely unwilling to do so and therefore *will not* in any circumstances do so. Or take a "cross-wired" individual who can experience P and is inclined to do so, but only (confusedly) when trying to think about some very distinct proposition. These individuals may have the *ability* to have relevant experiences and thereby occurrently grasp P, but they do not intuitively qualify as grasping P (non-occurrently) when they are thinking P without experiencing it or any of its constituents.

The account of non-occurrent grasping that is the natural complement of our experientialist account of occurrent grasping is the following:

Experientialism about non-occurrent grasping: A subject's thought that P (whether occurrent or non-occurrent) is non-occurrently graspy to the extent that it is constituted by dispositions to have experiences of close versions of all the constituents of P.

Put simply, the idea is that a thought that P is non-occurrently graspy when it has P as content in virtue of connections to possible experiences of constituents of P. It is not just that the subject has the disposition to have relevant experiences, but that their disposition to produce relevant experiences (typically, from perceptual memory) is constitutive of the thought's content.

This account applies both to occurrent and non-occurrent (standing) thoughts. In the case of occurrent thoughts, those that are non-occurrently graspy may have no or little phenomenology that is relevant to their contents. For example, perhaps the subject merely voices "I will buy apples" in their inner monologue. However, if the subject is disposed to "unpack" this occurrent state using cognitive experiences to get clearer on what they mean (say, by visualizing apples), this makes the thought at least partially graspy because the content of the thought is inherited from the related experiences. This is plausibly why post-liberation Mary's occurrent thoughts about colors are all graspy (in a non-occurrent sense) even when she is not experiencing colors: she is disposed to fetch experiences from memory as needed to ground her thinking about colors. Similarly, if all goes well Tara's fully non-experiential thoughts will be graspy after she has seen the picture because she will, as needed, bring back visual memories of the picture in order to ground her thoughts.²⁵

The account applies in similar ways to non-occurrent thoughts: one's having a standing belief or desire that P can be constituted by dispositions one has to employ cognitive or other experiences in certain ways. The use of experiences to ground derived mental content is discussed in detail in Bourget (2010), Bourget (2018), Mendelovici (2018), and Mendelovici & Bourget (2020).

Notice that the preceding accounts of occurrent and non-occurrent grasping make them complementary features that can be had simultaneously, in that a thought might represent certain constituents of its content through occurrent experiences while representing others through connections to non-occurrent experiences. This makes it natural to combine experientialism about occurrent and non-occurrent grasping into a general account of propositional grasping (occurrent or not) as follows:

²⁵ My account of grasping is inspired by Russell's early views on acquaintance, and one important improvement over Russell's views is that it clarifies the role of memory.

Experientialism about propositional grasping: A subject's thought that P (whether occurrent or not) is graspy to the extent that it is constituted by experiences (or dispositions to have experiences) of close versions of all the constituents of P.

On the resulting view, a thought is graspy to the extent that we have it in virtue of having experiences of versions of its constituents, which experiences serve as phenomenal grounds of the thought. These experiences may be co-occurrent with the thought or mere possible experiences that we are disposed to use to ground the content of the thought.

7. Application to the paradigm cases

Let us now see in more detail how the full experientialist view applies to our examples. I will go quickly over the Mary and sun cases since the previous sections already gave us a fairly good sense of how the view applies to these.

As seen already, pre-liberation Mary's lack of occurrent grasp (or very poor occurrent grasp) of the color proposition can be explained by the fact that she lacks the ability to experience colors. Perhaps she can experience the notion of existence (or the existential structure) found in the proposition <some things are red>, but she is far from being able to experience the totality of this proposition because she cannot experience redness. On the experientialist account, this means that she has, at best, a very incomplete occurrent and non-occurrent grasps of the color proposition. Post-liberation Mary, on the other hand, can readily experience colors, both in perception and in imagination. The moment she comes out of the room, she looks at a red object and thinks *some things are like* [that], using her perceptual experience of the color to complete her thought. When she does this, she is plausibly having an experience that is a thought that phenomenally represents <some things are red>, which means (on the experientialist account) that she fully grasps this proposition. Alternatively, she could have a thought that is not identical to an experience but piggybacks on an experience of redness, which acts as a phenomenal ground of the thought. In either case, she forms a thought that is more graspy of the color proposition by experiencing redness.

The Mary case illustrates a subtlety of the experientialist account that has sometimes elicited questions. On this account, fully grasping a proposition is a matter of experiencing it,

period. The account does not make reference to any particular "mode of experience", such as experiencing *perceptually* or experiencing *in imagination*. One might ask whether such modes of experience are relevant. I think they are not relevant (not *per se*). I don't think it makes a difference whether Mary imagines or perceptually experiences redness: either way, the experience allows her to grasp redness. Otherwise, we could not explain non-occurrent grasping in the way that I did. Perceptual experience only seems to be required in order to grasp highly determinate properties (such as the specific shades sold by paint manufacturers). I suggest that this requires perceptual experience because we cannot experience such determinate colors in imagination at all (see Bourget 2017b), not because a perceptual mode of experience is relevant *per se*.²⁶

In the sun case, Tara's initial condition is one in which she has no relevant experience. The only thing that enters her consciousness when she thinks the sun proposition is the *sentence* "the sun is 1.3 million times larger in volume than the earth". This experience is very far from a complete phenomenal ground for thoughts about the sun proposition (though linguistic experiences like this can play an important role in cognition, as another case to be discussed below illustrates). However, when Tara is looking at (or re-imagining) the illustration, she has an experience with a relevant related content. As noted above, she has an experience of two spheres standing in a relation such as *being 1.3-million-ish times bigger than*, which is plausibly a close version of a constituent of the sun proposition. This experience is a more complete ground for her thought about the sun proposition. Thus, experientialism predicts that she has a more complete occurrent grasp of the proposition. Even when she is not looking at the illustration or re-imagining it based on her visual memory, she retains the disposition to do so as needed, so she might retain a fairly complete non-occurrent grasp of the sun proposition.

The meat-eating case is more complex. To some extent, it is obvious that consciousness plays a causal role in this case: it is *seeing* what is done to the animals that convinced Annie to stop eating meat. But it is not clear that experience plays a *constitutive* role in her grasp of the meat-eating proposition.

In order to see how experientialism applies to this case, we need to look more closely at Annie's stream of consciousness as she made up her mind about meat-eating. Before her visit to

²⁶ This addresses El-Shazly's (2021) claim that only perceptual experience is sufficient for grasping.

the slaughterhouse, Annie knew that eating meat results in animals suffering (as captured by the meat-eating proposition), but she was not disposed to have any related experiences. During her visit, she directly observed a number of the facts that are part of the meat-eating proposition. She saw the animals looking sad on the feed lot. She saw them being bled and skinned. Crucially, she plausibly had an empathic experience of misery: she felt miserable *for them*. There is room to debate exactly what empathy is and how it works, but it is *prima facie* plausible that we can experience feelings such as suffering (at least of an emotional sort) and sadness on behalf of others, whether this counts as empathy or something else. When we do so, we (perhaps faintly) suffer or feel sad ourselves, but for reasons that lie in what is happening to others. On the minimal representationalist view, suffering or feeling sad is a matter of phenomenally representing a certain content, most plausibly, that one instantiates certain (largely ineffable) qualities. Whatever the contents of our experiences of suffering and sadness are, it is plausible that they are similar to cows'. So, our experiencing ourselves as suffering or sad can be a partial phenomenal ground for thinking about cows' suffering or sadness, and similarly for other feelings that can arise through empathic mechanisms. So, Annie's slaughterhouse visit plausibly caused her to have (and subsequently re-live) multiple experiences whose contents include multiple close versions of constituents of the meat-eating proposition, including in particular the properties of suffering and sadness and other properties experienced by cows as they suffer. These experiences jointly make a fairly complete phenomenal ground of thoughts about the meat-eating proposition. Assuming, as is plausible, that post-visit Annie (and not pre-visit Annie) draws on these experiences when thinking about meat-eating, experientialism correctly predicts that her grasp of the meat-eating proposition was increased by her visit.

The experientialist view not only makes the correct prediction regarding Annie's grasp of the meat-eating proposition but also accounts for the apparent role of grasping in inference in this case, which I initially recognized seems to point to an inferentialist view. In the version of the story I told, Annie resolves to stop eating meat at the slaughterhouse: looking at the cows and feeling their suffering, she resolves to stop eating meat because eating meat implies that *this* (pointing at what she experiences) will continue. This is a scenario in which Annie's thoughts are partly grounded in her slaughterhouse experiences (they contribute the content of "this"). Annie could also have made up her mind later, when she was first presented with the opportunity to eat meat. She could have then considered the meat-eating proposition, grounding her thoughts in her

memories of her experiences from the slaughterhouse and thinking *I don't want [this], so I won't eat meat*. In this case, too, experiences presenting her with key aspects of the meat-eating proposition seem to partially ground her thoughts while playing a role in her decision-making process.

It is not hard to see why thoughts grounded in experiences of the kind Annie had would be more potent to drive behavioral changes than largely empty thoughts. Consider in particular her experience of the suffering of the cows. We can expect this feeling to have caused Annie to experience meat-eating as *wrong* or *bad* (which was not part of the meat-eating proposition as stated, which is purely descriptive). I don't have a detailed explanation why, but it is a familiar fact that experiencing descriptive facts that we judge to be bad or wrong (such as suffering cows) is a reliable mechanism to elicit normative experiences of badness or wrongness. And we can expect such normative experiences to greatly affect behavior: when we genuinely feel that something is wrong (as opposed to merely *thinking* it is wrong), we have an almost irresistible urge to avoid it. This is plausibly what explains Annie's change of behavior. So, the complete explanation for her change of behavior is that she stopped eating meat because she was presented with the consequences of eating meat in a way (experientially) that was apt to cause her to *experience* the act of meat-eating in a way (as wrong) that is a more or less direct determinant of (avoidance) behavior.

It is a familiar fact that experiences can have a large impact on behavior. For example, we are much more likely to help those we can *see* suffering than those we merely believe to be suffering. It is also a familiar fact that individuals experiencing changes in behavior such as Annie's normally seem to have a rational basis for their behavioral changes—the decisions they make are not based on completely inarticulate emotional upheavals. When someone acts with altruism thanks to the "the power of images" (or experiences), their behavior does not (usually) seem to be a product of some irrational process. Experientialism explains how this can be: grasping through experience results in behavioral changes that are not based on new information *yet* are rational because it results in representing our reasons in (experiential) ways that make them more apt to play the role they rationally ought to play.²⁷ Grasping can promote practical

²⁷ Of course, that is not to say that it is *impossible* for someone like Annie to be nudged toward new behavior in a purely emotional manner, without any cognitive basis. I have stipulated that the scenario of interest is not one of those. It is a scenario in which grasping plays the key role in generating a change of

rationality because there is a more direct connection between the contents of experiences and behavior than between the contents of empty mental states and behavior. This should not surprise us if consciousness is a relatively old (perhaps the oldest) form of mental representation. After all, the original purpose of mental representations is no doubt to control behavior.

Let us turn to the supervenience case, in which experience may seem to play no significant role. As in the other cases, the experientialist has no trouble accounting for the initial lack of grasp: pre-training Sue has no relevant experiences, so she has no grasp. My initial description of the case did not say that she has any relevant experiences in the "after" condition, but we know from personal experience that she likely has some experiences that are potentially relevant. At least the first time post-training Sue encounters the supervenience proposition, she is likely to work out the answer through conscious linguistic manipulation. She might work out the answer through a monologue (in writing, out loud, in inner speech, or in a mixed format) that goes roughly as follows:

Is it the case that, if there is a necessarily existent god, its existence supervenes on the number of stars? A necessarily existent god is a god that exists at every world. So, if there is a necessarily existent god, the fact of the god's existence is the same at every world. A fact supervenes on other facts when: for any two worlds that are the same with respect to the other facts, the two worlds are the same with respect to the fact. Here the fact (the existence of the god) is always the same so the consequent of the claim is always true. So the conditional is true. So the answer is "yes".

Of course, the words Sue uses in inner speech, speaks out loud, or writes down are not going to be exactly those. She might well take some shortcuts. In inner speech, she would likely experience relevant linguistic constructions only schematically.²⁸ And this reasoning is not going to proceed in exactly the same way twice. The important point is that Sue likely works out the answer through some form of *conscious* linguistic manipulation, as she *experiences* linguistic structures. When she does this, she does not merely experience the superficial orthographic forms of the expressions, but she experiences their logical structure. For example, she

behavior. My point is that experientialism sheds light on the normal (or at least a common) relationship between experience, grasping, and emotional responses in this kind of decision making.

²⁸ See Hulburt & Heavy (2004) and Jorba & Vicente (2014) for discussion of the flavors of inner speech.

consciously grasps that the anaphoric use of "the fact" refers to the same entity as the anchor expression. She consciously grasps the overall form of the claim she is assessing as being *if NecessarilyExistent, then (for any two worlds, if StarSame, then ExistenceSame)*, and she *sees* that NecessarilyExistent guarantees the truth of ExistenceSame, which in turns guarantees the truth of the whole claim because of its overall form. Linguistic experience seems to play a crucial role in guiding her reasoning.

The contents of the experiences Sue has are far from capturing the whole supervenience proposition: she is not experiencing a god or stars. But she experiences the logical structure of the proposition, which is an important aspect of it. Indeed, the logical structure of the proposition is what matters here, so we can reasonably say that, in the circumstances, post-training Sue has a much better grasp of the supervenience proposition than pre-training Sue has.

Here, as in the meat-eating case, there is a salient cognitive and behavioral change that goes with an improved grasp. Here too, the experientialist account sheds light on this change: the reason Sue needed to get more training before she could determine the truth of the supervenience proposition is that it takes some practice with verbal reasoning to be able to engage in the above-described conscious process. I stipulated that pre-training Sue could state the supervenience proposition and recite the relevant definition of supervenience (with understanding), which clearly enabled her to have thoughts about that proposition and that metaphysical relation, but this leaves open that pre-training Sue could not fully experience the structure of the supervenience proposition in the way that post-training Sue can. This change in verbal-experiential abilities with respect to the supervenience proposition explains Sue's change in reasoning abilities.

One might object that it is not consciousness that drives the reasoning in this case, but linguistic processing. The worry here is that it is accidental that the reasoning is conscious; it might just as well have been unconscious.

No doubt, we can *imagine* linguistic processing of the sort described taking place unconsciously. But this is irrelevant. Our question here is how the subjects in the paradigm cases of grasping do what they do; we want to know what accounts for the salient differences we see between the "before" and "after" conditions *in these particular cases*. In practice (though perhaps not in principle), consciousness is not a sideshow to the linguistic processes I described; it is the

very medium in which they unfold. The linguistic forms are represented consciously, plausibly in some kind of linguistic working memory that is centrally tied to higher reasoning capacities. The idea that we can strip away the consciousness and retain the process intact presupposes a kind of epiphenomenal dualism about consciousness. In reality, either consciousness boils down to short-term memory processes of the kind described (as the large majority of materialist theories of consciousness claim, following Baars 1988), or, if consciousness is in some way irreducible, it is closely tied to physical processes through laws that wouldn't allow the physical process to go on without it (say, because it underlies physical laws, as panpsychists claim). So long as we reject epiphenomenalism, we should not be suspicious that a causal role that is apparently played by consciousness is really played by something else. It *might* turn out that consciousness is causally irrelevant to some particular process, but we should not systematically suspect that it is when it seems causally relevant. We should be comfortable taking the apparent causal roles of consciousness at face value.

8. Experientialism generalized

As noted at the beginning of this paper, we don't just grasp propositions. We also grasp concepts and other things. There is little space here to defend controversial views on concepts, but I would like to point out that an attractive view of conceptual grasping flows from the experientialist account of propositional grasping.

The term "concept" is ambiguous between two main senses: one on which it refers to constituents of propositions insofar as they are constituents of propositions, and one on which it refers to (hypothesized) representations of such constituents. When we talk about grasping concepts, we generally mean grasping constituents of propositions, but we also tend to suppose (and I will go along with this supposition) that what constitutes such a grasp is the having or employment of a certain kind of representation or representational mechanism for such a constituent, viz., the having or employment of a concept in the second sense.

There is an obvious way of extending our account of propositional grasping to conceptual grasping: we can say that a concept of X (a representation of a sub-propositional constituent X) is graspy to the extent to which it is constituted (qua representation with content) by experiences of the constituents of X (actual or possible). This requires that we extend our technical notion of

constituent to sub-propositional contents. In order to do so, we can say that a content (propositional or sub-propositional) C has X as *constituent* if experiencing C requires experiencing X. Given this generic notion of constituent, we can state a fully general definition of experientialism about grasping (occurrent or non-occurrent, propositional or conceptual) as follows:

Experientialism about grasping: A representation of C is graspy to the extent to which it is constituted by experiences (actual or possible) of close versions of all the constituents of C.

Let us see how this account applies to concepts. Pre-liberation Mary not only fails to grasp the color proposition, but she also fails to grasp the concept (property) of redness. Experientialism can explain why: she cannot experience it or any of its constituents (or close versions of such constituents). Upon leaving her room, though, she becomes capable of forming mental images of colors at will, and these possible experiences henceforth ground her thinking about colors. Parallel remarks apply to the sun case: Tara's grasp of the volume relation, a concept, is clearly improved when she starts using visual experiences to ground her thinking about this relation.

My other cases don't illustrate conceptual grasping as clearly because they are not cases in which the protagonists initially have a poor grasp of any concept. Rather, they are cases in which the protagonist initially has difficulty putting together graspy concepts in order to grasp whole propositions. This does not indicate a problem for experientialism; this merely illustrates that propositional grasping is something above and beyond conceptual grasping.²⁹

9. Objections

One likely source of doubt regarding experientialism is that it seems to be in tension with the way we learn abstract facts and concepts, for example, when learning advanced mathematics. It

²⁹ None of the preceding settles the question whether propositional or conceptual grasping is prior to the other. For all I said, either could be prior, or they could have equal priority. The answer to this question depends on whether experiences of sub-propositional contents are prior to experiences of propositional contents. In my view, the latter are prior because we cannot experience mere qualities, only whole propositions. We can *talk* about experiences of redness and other qualities, but that is mere shorthand for talking about experiences of things *having* these qualities. See Bourget (2017c) and (2019) for discussion.

is a familiar fact that, for the average person at least, grasping abstract mathematical claims requires practice with the relevant formalisms. For the average student, at least, there is a certain intuitive understanding—a grasp, one might say—that comes only through doing a lot of exercises. Since the point of practice seems to be to make us more proficient at drawing various inferences, this might seem to suggest that grasping is constitutively tied to inferential proficiency (as the inferentialist claims).

Two points must be kept in mind in response. First, non-occurrent grasping is akin to an inferential ability: it is a disposition to construct phenomenal representations as needed to ground a thought. Second, we probably cannot fully grasp most abstract mathematical claims. In most cases, what we can plausibly do is entertain various phenomenal representations that are partial phenomenal grounds of abstract mathematical thoughts. For example, when thinking about vector spaces with more than three dimensions, we often invoke experiences of two-dimensional or three-dimensional spaces as guides to our reasoning. In this way, we can partially grasp abstract propositions about high-dimensional vector spaces without being able to experience them in full.³⁰ The ability to summon incomplete phenomenal grounds for thoughts about abstract propositions confers us a partial, non-occurrent grasp of these propositions. Now, it is also plausible that this sort of ability is developed through repeated manipulations of the relevant formalisms alongside with the use of partial phenomenal grasps of relevant claims. Drilled symbolic manipulations come to play a dual role: they solve problems symbolically (without grasping), and they act as channels to evoke experiences that partially ground abstract thoughts. For example, one's ability to symbolically project a high-dimensional vector on a plane, combined with one's ability to visualize the projection on the plane as a two-dimensional vector, can contribute to grounding one's thoughts about the high-dimensional vector. Thus, experientialism can account for the apparent role of practice with formalisms in helping us grasp abstract and/or complex notions: practice is useful because it helps us develop a (partial) non-occurrent grasp of these notions (and not because inferential connections are constitutive of grasping).

³⁰ Of course, it may also be that we (or some gifted mathematicians among us) can stretch our experiential abilities with practice. I believe this does happen to some extent.

Another objection I have encountered appeals to imaginary cases of experiences of complex propositions occurring in absence of any relevant inferential abilities. In one version of this objection, the subject is an imaginary individual whose experiences have been severed from the rest of their cognitive apparatus: the individual experiences a complex proposition without having any relevant inferential dispositions. In another version, the subject is a non-rational animal that lacks the intellectual abilities to reason about the relevant complex proposition, for example, a beaver. The intuition is supposed to be that these subjects experience but do not grasp the relevant complex proposition.³¹ This might seem to show that experience is not sufficient for grasping, contrary to what experientialism implies.

I am not sure the intuitions invoked by the two versions of this objection are stable and fully consistent with all other intuitions about grasping. Consider that the situations described don't seem to be relevantly different from a normal human subject having a sudden revelation (in the form of an experience of a proposition) that is so absorbing that the subject is momentarily unable to have any other thoughts. In this sort of scenario, I have no inclination to say that the subject fails to grasp the proposition. It is not clear that the other scenarios are relevantly different: if we can have a grasp of a proposition that is momentarily detached from any inferential abilities, why couldn't a creature have a grasp of a proposition that is permanently detached from inferential abilities?

In any case, intuitions about far-fetched imaginary cases are not relevant. I am interested in what is happening in paradigm cases and similar realistic cases in which we want to draw a distinction between graspy and empty thoughts. I am merely using the term "grasping" as a shorthand for the feature of thoughts that is central to such cases. On this usage of "grasping", there is grasping in a possible situation just in case it involves the same thing as the paradigm cases. Direct intuitions regarding the presence or absence of grasping in far-fetched cases are not relevant. They can at best express our *theories* about the nature of grasping; they cannot serve as

³¹ Thanks to Carla Merino-Rajme, Evan Cave, and Stephen Grimm for different versions of this objection, which they offered in response to earlier versions of my account (against which the objection had more bite).

evidence for these theories. What we need to do is take a close look at the paradigm cases to find out what is happening in these cases.³²

A superficially similar but importantly different objection goes as follows. Suppose a subject has the same phenomenology as expert epistemologists when thinking about knowledge but reliably shows, through the judgments and inferences they make, that they take knowledge not to be factive. Does this not show that phenomenology is insufficient for grasping a concept such as knowledge?³³ This seems to be a realistic example that cannot be dismissed as irrelevant.

This example is tricky because it is not entirely clear what sort of phenomenology is associated with the concept of knowledge. In effect, knowledge falls in the penumbra between two importantly different classes of concepts: those concepts that are fully graspable because we can form experiences of their exact contents (for example, the concepts of redness and squareness), and those concepts whose contents we can only experience partially or piecemeal, such as the concept of a vector space with infinite dimensionality. Suppose for a moment that knowledge is like infinite-dimensional vector spaces: at best, we can grasp aspects of knowledge (perhaps we can grasp justification and safety). On this assumption, the case proposed is not a counterexample to experientialism because it is not a case in which experientialism predicts that the ignoramus grasps knowledge: neither the expert epistemologist nor the described ignoramus has the phenomenology required for this. On this hypothesis, what distinguishes the expert from the ignoramus is that the expert is disposed to associate knowledge thoughts with experiences that capture aspects of knowledge, such as justification and truth. Since these dispositions are inference-like, the experientialist can explain why it seems that the ignoramus with poor inferential dispositions has less of a grasp of knowledge than the expert: their dispositions confer them a worse non-occurrent grasp. Suppose instead that we can experience knowledge as such. In this case, knowledge is like redness or squareness. If we keep this in mind, we should say that the ignoramus who has a vivid experience of knowledge does grasp what it is despite making

³² Note also that the fact that the graspable states in our paradigm cases all exhibit a certain integration with the subject's overall cognition is consistent with grasping coming apart from the rest of a subject's cognition in exceptional circumstances. It is nearly unavoidable that, whatever grasping turns out to be, it is going to be dissociable from its typical characteristics in exceptional cases.

³³ Thanks to Andrew Lee for raising this objection.

systematic errors in their reasoning. However, it is hard to feel this intuition because it is hard to pin down the phenomenology of knowledge.

Another objection arises from the impressive progress made by AI in recent years. It is very natural to speak of today's best large language models as "understanding" what we ask them.³⁴ Sometimes they understand (or grasp, one might say) their prompts, and sometimes they don't. But we don't think the servers running the models are conscious in any way. Doesn't this show that understanding and grasping are independent of consciousness (and experientialism false)?

In response, what we find natural to say about systems that are designed to mimic human intellectual abilities seems irrelevant to the nature of understanding or grasping given that these systems are *not* designed to deeply resemble human minds. Such opinions seem especially irrelevant if formed *without knowing the nature of understanding or grasping*. The objection at hand is comparable to objecting to the view that whales are not fish on the basis that people who are completely ignorant of marine biology find it natural to say that whales are fish. The situation is exactly parallel, in that a) there are two kinds with striking superficial similarities but deep internal differences, b) the relevant term ("fish" in one case, "grasping" in the other) is intended to classify things by their deep internal nature, and c) the term is naturally applied to both kinds by individuals who are ignorant of the kinds' deep internal differences.

This, one might reply, is fine as far as it goes—I am allowed to use "grasping" to refer to the actual mechanism of grasping in my preferred cases, narrowly construed—but leaves me exposed to the objection that my terminological choice is misguided for the simple reason that large language models show that consciousness is not playing an important role in human reasoning: non-conscious neural firing patterns are doing the work. We know this, one might say, because it's obvious that non-conscious neural firing patterns are doing the work in large language models.

It would be a mistake to infer that *we* don't use our phenomenal states for reasoning because AI models don't use such states. The fact that we can build machines with input-output signatures similar to those of our brains does not mean that what is in our brains is doing no

³⁴ The leading model at the time of writing was OpenAI's ChatGPT version 4.

work in generating our outputs. We might as well conclude that calcium ions are doing no work in neurons since AI models don't have those either.

In any case, it is true that our neurons are likely doing the bulk of the work with their firing patterns (this is plausible independently of the bad argument from AI). However, we should not assume that such firing patterns do not involve consciousness in some way: perhaps experiences *are* identical to or realized by certain neural firings as many physicalists believe, or perhaps experience somehow underlies neural firings as panpsychists believe. We have no reason to conclude that the importance of neurons implies the insignificance of consciousness unless we assume some form of epiphenomenalism about consciousness, which everyone should reject.³⁵

10. Conclusion

I have offered an account of what it is to grasp a proposition or concept. I did this by looking closely at paradigm examples of grasping and failing to grasp, which I argued point to an experiential account on which we grasp by thinking through experience: we grasp to the extent that our thoughts are grounded in experience, whether occurrent or non-occurrent. This is not a semantic point about how we use the term "grasp" and cognate expressions. This is an empirical claim about how thinking works, and one that has important downstream implications because it explains why grasping and experience both seem to matter in cognition. As we saw briefly in the context of the slaughterhouse and supervenience cases, what we experience matters to how we reason because that is how we are wired: consciousness isn't a late addition to our minds; it is the most central, causally potent form of mental activity. What seems to be a late addition is the purely syntactic, largely consciousness-free type of reasoning of the kind exemplified by the supervenience case, but even empty thought seems to be typically scaffolded on a phenomenal grasp of logical-syntactic structure.

³⁵ See my 2018 article for more discussion of the causal role of consciousness in relation to grasping. See also Bourget (2020) regarding the causal role of consciousness in nature.

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