ORIGINAL RESEARCH

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Toward a Theory of Concept Mastery: The Recognition View

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Abstract

Agents can think using concepts they do not fully understand. This paper investigates the question "Under what conditions does a thinker fully understand, or have mastery of, a concept?" I lay out a gauntlet of problems and desiderata with which any theory of concept mastery must cope. I use these considerations to argue against three views of concept mastery, according to which mastery is a matter of holding certain beliefs, being disposed to make certain inferences, or having certain intuitions. None of these attitudes is either necessary or sufficient for mastery. I propose and respond to objections to my own *recognition view* of the conditions under which a thinker has mastery of a concept.

1 Introduction

Concepts are the basic units of thought. The thought OSTRICHES LIKE CHOCOLATE is composed of the concepts OSTRICHES, LIKE, and CHOCOLATE. An agent *possesses* a concept when they can think thoughts containing the concept. An agent has *mastery* of a concept when they fully understand that concept. One can possess a concept without having mastery. Many use, without fully understanding, technical concepts that have worked their way into public consciousness (examples: DARK MATTER, CHAOS THEORY, ID, HEDGE FUND, FRACKING). Any theory of concept mastery must answer the following question: "Under what conditions does an agent have mastery of a concept?" This is an important and neglected philosophical project. Bealer (2002): writes, "We readily see what this notion is, and it seems important theoretically. A legitimate philosophical project would therefore be to give a positive general account of the notion. It cries out for one." This essay answers the cry.

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I argue against three versions of *the endorsement view*, according to which mastery is a matter of taking certain propositions/inferences to be true/truth-preserving. The endorsement view is a genus of at least three species: the belief view, the inference view, and the intuition view. I argue for a different approach, *the recognition view*, according to which mastery is a matter of recognizing certain rules as governing the use of the concept. Importantly, recognition is compatible with a failure to endorse.

I now offer a roadmap. Section 2 clarifies terminology, lays out assumptions, argues briefly against skepticism, and canvases four theories. Each view against which I argue maintains that some set of attitudes is necessary and sufficient for mastery of a concept. Sections 3 and 4 argue against the necessity and sufficiency (respectively) of these attitudes for mastery. The failures of these views point the way toward a successful theory, which I present in Sect. 5. Section 6 considers objections.

2 Preliminaries

2.1 Terminology and Assumptions

I use the term 'proposition' or 'thought' (Frege [1952/1892]) to describe a structured composite of concepts. The proposition OSTRICHES LIKE CHOCOLATE is composed of the concepts OSTRICHES, LIKE, and CHOCOLATE. Small capitals, e.g. OSTRICH, denote elements at the conceptual level, either concepts or propositions. I adopt a broadly Fregean approach to concepts and propositions, but do not oppose other methods of content individuation. Readers who bridle at my use of 'proposition' should substitute the word 'propersition'. The locutions I've described constitute one among many useful ways of thinking and talking about contentful mental states. Something like the above approach should be compatible with and fruitful for a wide variety of philosophical and psychological projects.

I prefer to theorize about concepts in a way that allows concepts to be shared, even between thinkers with radically different views. Not unreasonably, one could say that a utilitarian and a deontologist have different "concepts" of MORALLY WRONG. This approach suffers the flaw of making the two sides look like they talk past each other. One says that lying is always wrong$_{\text{deontology}}$ and the other says that lying is not always wrong$_{\text{utilitarianism}}$. No disagreement here. I prefer to say that both participants have the same concept—MORALLY WRONG—but they have different *conceptions* of it. A *conception* is something like one's set of attitudes involving the concept (Ezcurdia 1998). This approach, adopted throughout, allows thinkers who disagree, even about the concept's nature, to share concepts.

I assume that there is a distinction between merely possessing a concept (i.e. being able to take some attitude toward a proposition that contains the concept) and fully understanding that concept.[1] I assume also that, sometimes, thinkers entertain

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[1] For further discussion of this distinction, cf. Bealer (2002: 221–222), Burge (1979, 1982a, b, 1986, 1989), Greenberg [MS] (2001: 13–14; 2014 28–29), Sawyer (2003), Wikforss (2001, 2004).

thoughts containing concepts they do not fully understand. Thus they possess those concepts without mastery. Theorists of content and of concepts often assume, implicitly, without argument, and without recognizing that any such assumption has been made, that possession of a concept (i.e. the ability to think thoughts containing the concept) entails mastery (Greenberg 2001: 28). Often they fail to note any distinction at all between possession and mastery. The difficulty is partly due to ambiguity in the terminology of "having/possessing a concept". That locution can be used to express a relation of possession or a relation of mastery. I reserve the locution "x possesses C" to mean that x can think thoughts containing C.

In so far as theorists do recognize the possibility of concept possession without mastery, they often chalk up the phenomenon to and add a proviso about "deference", and then continue to ignore the possibility of possession without mastery. Here, I do not wish to tackle issues about the relation between concept possession and concept mastery and their relations to the theory of content and of concepts more generally. (I point the reader to the discussions of Greenberg (MS, Greenberg 2001, 2014; Burge 1979, 1986; Peacocke 1992, 1999, 2008). Instead, I simply assume that thinkers can possess concepts they have not mastered. I then seek to answer the question, "What does it take for a thinker to master, or fully understand, their concept?"

I take no official position on what is required to possess a concept, as long it does not always entail mastery. However, I believe (but will not assume) that the requirements are relatively minimal. If I hear a doctor declare that the patient has lupus, and begin believing that the patient has lupus, then despite my ignorance, I come to possess, but not master, the concept LUPUS. I know little about LUPUS other than that it refers to some type of ailment.

Perhaps most controversially, I assume a distinction between "core" elements associated with a concept and "non-core" elements. These elements might be propositions, inferences, mental transitions, rules, or something else. Core elements are central to the meaning of the concept. They play a special role in the concept's having the representational qualities that it does and being the concept that it is. For example, I take the proposition ALL BACHELORS ARE MALE to be a "core" proposition for the concept BACHELOR. ACHILLES IS A BACHELOR is non-core. One might also maintain that core propositions are analytic, contribute to *a priori* justification, individuate concepts, and/or provide necessary and sufficient conditions for application. I remain agnostic on these counts.

My project and sympathies fall within the tradition of *conceptual role semantics*, broadly construed. According to Greenberg and Harman (2006)'s characterization, conceptual role semantics "takes the recognition of internal inferential and implicational relations to be crucial to the meaning" of the concept (2). My acceptance of the notion of *core elements*, which marks those elements in the conceptual role, places me in this camp.[2] All accounts of concept mastery discussed here fall broadly within the conceptual role approach.

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[2] For more on the core vs. non-core distinction, cf. Burge (1993), Boghossian (1996, 1994), Devitt (1993), Glüer (2003), Russell (2008, 2014) and, of course, Quine (1936, 1951).

It's worth laying a few of my views on the table, partly to help the reader understand the angle from which I approach this inquiry. I believe that canonical transitions partly, but not wholly, individuate concepts. I prefer a hybrid view (Block 1988; Field 1977; Harman 1987) on which concepts are partly individuated by conceptual/inferential roles and partly by reference.

2.2 What is Concept Mastery?

This section clarifies the target notion: mastery, or full understanding, of a concept. The notion of concept mastery is relatively pre-theoretical and everyday. We express the relation using locutions like "she fully understands the concept flying buttress" and "she grasps the meaning of 'flying buttress'".[3] Mastering a concept is not an impossible feat or an idealized state achievable only by hypothetical thinkers. You and I have mastery of many concepts.

Mastering a concept is not merely a matter of knowing many truths. If one fails to realize that chairs are for sitting, one fails to master CHAIR, no matter how many other CHAIR-truths one knows. Mastery is tied to grasping key insights about the concept. Mastery is compatible with ignorance of important truths about the concept's referent. For example, mastery of WATER is compatible with ignorance of the fact that water is H_2O. Someone who knows that water is H_2O knows more about water than someone who does not. She better understands water (the stuff) and its nature. But I deny that she better understands the concept WATER. That water is H_2O is a deep, necessary, and constitutive truth about water. But H_2O-ness is not part of the concept WATER.

2.3 Against Skepticism

Burge (1979, 1982a, 1986) deserves much credit for bringing to light the phenomenon of *incomplete understanding*. Burge (1979)'s patient approaches his doctor, complaining of arthritis in his thigh. The doctor corrects him, "Arthritis, my dear boy, occurs, by definition, only in joints." The patient accepts correction and modifies his usage of 'arthritis' and ARTHRITIS. The important point is that the patient was able to think I HAVE ARTHRITIS IN MY THIGH, and thereby possessed ARTHRITIS, while significantly misunderstanding the concept. Similar examples can be cooked up for almost any concept. If agents can possess concepts while incompletely understanding them, it's natural to ask what agents must do to completely understand - i.e. to have mastery.

Some will be skeptical that there is any such thing as "mastery" or "full understanding", or that such notions are useful.[4] I won't tackle such skepticism head on, but I mount a modest defense. Understanding is a matter of degree. Thus

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[3] We must be careful. It's possible that fully understanding the linguistic meaning of a word and fully understanding the concept it expresses could come apart (Burge 1990). We might take 'x fully understands the meaning of t' to have two uses. First use: x fully grasps the linguistic meaning of t. Second use: x fully grasps the concept that t expresses. Throughout this paper, I'll use the expression exclusively in the second sense.

[4] Skeptics include Ball (2013) and Williamson (2008, 2013, p.c.).

mastery of a concept will be a matter of degree. We can rank users of a concept according to their understanding. One end of the spectrum contains agents who meet only the minimal requirements for possession, whatever they are. The other end contains agents who know every true proposition containing the concept.

The strongest form of skepticism about concept mastery maintains that there are no theoretically significant groupings among the thinkers so ranked. Instead there's a continuous spectrum. A weaker skepticism admits that there are theoretically significant groupings, but none corresponds to mastery as I have described it. According to *linguistic accident skepticism*, we use 'fully understands the concept C' as a label for those individuals who know all the widely known truths involving C. On this view, concept mastery exists, but it marks only a linguistic or epistemic accident.

I deny all three forms of skepticism. A brief argument against the skeptic relies on two claims. First claim: Incomplete understanding occurs. Second claim: With respect to a given concept, there is a significant distinction between core truths and non-core truths. "All bachelors are male" is core vis-a-vis BACHELOR. "No bachelors live on Mars" is not. Between two agents who are otherwise the same, there's a major difference in understanding of BACHELOR between (i) the agent who fails to accept that all bachelors are male while accepting that no bachelors live on Mars and (ii) the agent who fails to accept that no bachelors live on Mars but accepts that all bachelors are male. The second understands BACHELOR better than the first. Once we have a distinction between core and non-core truths, we can define up a theoretically significant notion of concept mastery according to which mastery involves having a "grip" on the core truths. (We might also use core inferences, rules, or what have you). This tells against both the strong and weak forms of skepticism above.[5] Linguistic accident skepticism is defeated by the above argument in combination with the observation that both "all bachelors are male" and "no bachelors live on Mars" are widely known. (I address skepticism based on the idea that concepts don't have cores in Sect. 6.1.)

If one accepts (a) that incomplete understanding occurs, and (b) a rough distinction between "core" and "non-core" elements, then one already has a theoretically significant notion of concept mastery. To resist motivation (a) is to reject the tremendously successful arguments of Burge (1979, 1982a, 1986), the conclusions of which have since become philosophical orthodoxy. To resist motivation (b) is to deny ALL BACHELORS ARE MALE any special status above and beyond JAVIER IS A BACHELOR. Few are willing to pay either price. They deny the skeptical view.

2.4 Four Theories of Concept Mastery

Once we have the core/non-core distinction in place, a view naturally suggests itself. To fully understand a concept is to "grip" the concept's core. Theories of concept mastery vary according to what they take the core, and grip of it, to consist in. I consider four views.

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[5] Greenberg (2001: 134) implements a similar strategy.

According to *the belief view*, an agent has mastery of concept C if and only if they believe all C's core propositions. On this view, the elements of the core are propositions. Grip is belief. According to *the inference view*, core elements are inferences (Peacocke 1992, 1999).[6] To grip a core element is to be disposed to infer in accordance with it. Suppose that "all bachelors are male" and "all bachelors are unmarried" are the core truths for BACHELOR. The belief view claims that an agent has mastery of BACHELOR if and only if they believe both that all bachelors are male and that all bachelors are unmarried. The inference view claims that there are two core inferences associated with BACHELOR:

$$\frac{\text{x is a bachelor}}{\text{x is male}} \qquad \frac{\text{x is a bachelor}}{\text{x is not married}}$$

The variable 'x' represents the generality of the inference. The inference view claims that an agent has mastery of BACHELOR if and only if they are disposed to infer, for any x, from x IS A BACHELOR to x IS MALE and from x IS A BACHELOR to x IS NOT MARRIED.

The intuition view says that an agent has mastery of concept C exactly when they have intuitions that the core propositions are true (Bealer 2002: 221–230).[7] Core elements are propositions. To grip is to have an intuition that the proposition is true. Importantly, intuiting the truth of P is compatible with failing to believe that P, or with believing not-P. On the basis of reliable testimony, an agent might believe not-P while simultaneously feeling - i.e. intuiting - that P is true. *The recognition view* says that an agent has mastery of concept C if and only if they take all C's core elements to govern the use of C. The view is liberal regarding the nature of core elements. To grip a core element is to take it to govern the use of the concept. (Cf. Sect. 5 for greater detail).

Further variations are possible. One could claim that mastery requires grip of only a subset of core elements. One might hybridize views, claiming that mastery is a matter of believing some propositions while intuiting the truth of others. For simplicity's sake, I ignore these possibilities. They do not significantly alter the dialectic. The belief, inference, and intuition views should be seen as classes or schemas of views about the nature of concept mastery, rather than as maximally specific fully-formed theories. Specific authors (e.g. Christopher Peacocke, George Bealer) offer views that are considerably more sophisticated and complicated than

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[6] Peacocke (1992) offers a theory of what he calls "concept possession". However, Peacocke does not mean what I mean by 'concept possession' or 'possess(es) a concept'. Peacocke (29) states that "a possession condition states what is required for full mastery of a particular concept." He goes on (29–30) to explain that a thinker can consider propositions that contain the concept while failing to possess the concept. On my use of 'possess a concept', to possess a concept just is to be able to entertain propositions containing it. Thus Peacocke does not mean what I do by 'possess a concept'. His theory of "concept possession" is a theory of a more demanding relation: what I call 'concept mastery'. Greenberg [MS]: 26 agrees on this interpretation of Peacocke.

[7] Bealer calls mastery of a concept "determinate possession". His theory is more nuanced, and more complicated, than the simplistic intuition view I consider. However, his theory is a form of the intuition view. It shares the same general shape as well as most of the same advantages and disadvantages. Due to space considerations, a proper discussion of Bealer's view has been omitted from this paper. Interested readers should contact the author for details of the arguments against Bealer's intuition view.

the simple versions of the views I initially describe. My strategy will be to first argue against the simple version of a view, and afterward to consider a specific author's full theory with all bells and whistles. Furthermore, the problems that afflict more sophisticated versions of the inference and intuition views stem from the same basic source as the problems with the simple versions.

3 Deviant Masters

3.1 Overview

Section 3 uses the phenomenon of non-standard, or "deviant", masters to argue against the necessity of belief in, inference in accord with, or intuiting the truth of, core elements for concept mastery. Deviant masters fully understand the concept but neglect to endorse core elements. The inference view will be my representative stalking horse.

3.2 The Argument

The basic problem with the inference view is that an agent can master a concept without being disposed to infer in accordance with core inference patterns. Being disposed to infer in accordance with a concept's core inferences is not necessary for mastery. Consider the concept BOCHE, a racial pejorative applied to Germans *circa* World War I. BOCHE has two core inference rules.

$$\frac{\text{x is German}}{\text{x is a boche}} \qquad \frac{\text{x is a boche}}{\text{x is cruel}}$$

If a thinker is disposed to make both inferences, then they are disposed to infer from "x is German" to "x is cruel". According to the inference view, an agent who has mastered BOCHE must be disposed to infer from "x is German" to "x is cruel".

Here's the counterexample. Agnes once fully understood BOCHE. She was disposed to infer, and often did infer, in the manner just described. However, during her travels in Germany, Agnes dined, lived, and fraternized with many Germans. She made German friends. As a result, Agnes ceased to be disposed to infer from a subject's German-hood to their cruelty. Agnes stopped believing that all Germans are cruel. However, Agnes still realizes that the inference patterns above play a central role in the meaning of BOCHE and in the use of 'boche'.

(P1) If the inference view is true, then Agnes has lost her mastery of BOCHE.
(P2) Agnes has not lost her mastery of BOCHE.
(C) Therefore: the inference view is false.

(P1) follows from the statement of the inference view in combination with the description of the thought experiment. (P2) is tremendously plausible. Agnes

understands BOCHE at least as well as, and perhaps better than, her unenlightened co-linguals.[8] Agnes still recognizes the inference patterns as rules that govern the use of BOCHE. She simply refuses to obey them. The argument is valid. The conclusion follows: the inference view is false. Being disposed to infer in accordance with core inferences in not necessary for mastery.

3.3 Response 1: Agnes Remains Disposed to Infer

Proponents of the inference view might deny (P2), claiming that Agnes remains disposed to infer from "x is German" to "x is cruel". Dispositions can be masked; they need not always manifest. A wine glass retains its disposition to break when struck even when that disposition is masked by protective wrapping. The proposed response claims that Agnes retains the disposition to infer in accordance with BOCHE's core, but the disposition is masked, perhaps by her positive feelings toward certain Germans.

The suggested move is unmotivated and *ad hoc*. *Prima facie*, Agnes lacks the disposition. To maintain otherwise one must posit reasons in favor of a masked disposition. No such reason has been offered, other than that a masked disposition supports a favored theory. Furthermore, as long as it's possible to know what the inference rules governing a concept are without being disposed to obey them, we can cook up a case in which Agnes lacks the disposition. This is possible, so counterexamples will be available whatever precise story inference theorists offer about what it is to have a disposition to infer.

3.4 Response 2: BOCHE is not a Concept

BOCHE is an odd concept. Its inference rules are not truth-preserving. Anyone who follows them will be led into error. (Few Germans are cruel). Such concepts can be called 'defective'. Proponents of inference-style views have sometimes claimed that there are no concepts like BOCHE (Horwich 2010: 203–4; Peacocke 1992: 21, 171–5; Boghossian 2001). If there is and cannot be any BOCHE concept, the counterexample fails.[9]

I make six points in response. First, the move is (once again) *ad hoc*. Denial of the existence of defective concepts seems motivated by a desire to save the theory from counterexample.[10] Second, rival views, including my preferred recognition view, can accept the existence of defective concepts. Other things being equal, this counts in favor of the recognition view and against the inference view. Third, the

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[8] Williamson (2009: 141) agrees.

[9] It's controversial whether 1910s-era thinkers actually used the concept BOCHE as I've described it. Research on slurs has led some to deny that they express the concept GERMAN instead (Williamson 2003). If they did not express BOCHE, this weakens the argument, but not significantly. The argument works if some agents could think with BOCHE, even if no one actually did so *circa* World War I.

[10] Research on slurs has led some to deny that slurs yield defective concepts (Bolinger 2017). Inferentialists might look to the slur literature for less *ad hoc* motivations for denying the existence of defective concepts. This strategy is unlikely to succeed, mostly because some defective concepts, including the naive conception of SET, are not slurs. Thanks are due here to an anonymous referee.

move is implausible. *Prima facie*, BOCHE is a concept. People think thoughts containing it, including THAT JERK IS A BOCHE. The behavior of BOCHE-users is repugnant precisely because they use a racist concept and express racist thoughts, not because they use no concept and fail to express any thought (Boghossian 2003: 242–3; Williamson 2009: 140).

Fourth, some resistance to acceptance of defective concepts stems from the thought that if BOCHE is accepted then any set of inference rules constitutes a concept. This does not follow; one can accept the existence of BOCHE without going "whole hog". There are many differences between BOCHE and wilder defective concepts like Prior 1960's TONK, which licenses any inference whatsoever. (Two differences: (i) BOCHE's failure to preserve truth can't be ruled out *a priori* (ii) TONK rapidly leads its user into error and incoherence, BOCHE does not).

Fifth, defective concepts go well beyond BOCHE. The naive conception of SET may be defective because its core elements include a naive comprehension schema that leads to contradiction via Russell's paradox (Russell 1902). Others have argued that our concept of TRUTH is defective, because it leads to the liar paradox and other anomalies (Eklund 2002a, b, 2005, 2007; Ludwig 2001; Ludwig and Badici 2007; Patterson 2006, 2007, 2009; Priest 1979; Scharp 2013; Tarski 1936, 1944; Yablo 1993a, b). Even if there is and was no concept BOCHE that behaves as I have described, the counterexample can be run using TRUTH or the naive concept of SET. The mere possibility of defective concepts is enough to run the argument.

Sixth, the argument can be made without a defective concept. I sketch a counterexample using the non-defective concept CHAIR. Assume that the inference from "x is a chair" to "x is for sitting" is core for CHAIR. This is a teleological claim about the function of chairs. It does not entail that every chair can or should be sat in. Professor X, a distinguished historian of furniture, specializes in chairs. His seminal work on the Roman curule seat is heavily cited. Despite these credentials, Professor X endorses a wild conspiracy theory about chairs. He believes that all chairs are religious artifacts abandoned by an alien civilization.[11] The Professor denies that chairs are for sitting. He has no disposition to infer from "x is a chair" to "x is for sitting". But Professor X understands how 'chair' and CHAIR are typically used. He believes that the inference from "x is a chair" to "x is for sitting" partly constitutes the meaning of CHAIR. He argued as much in his publication on the semantics of furniture words. However, he believes that this inference does not preserve truth. Professor X's conspiracy theory is incorrect. Chairs are not alien religious artifacts; they are for sitting. The inference view entails that Professor X does not have mastery of CHAIR. But he does. He is the one of, if not the, world's foremost experts on chairs. We don't need defective concepts to defeat the inference view. All we need is a thinker, like Professor X, who believes that a concept is defective.

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[11] This example modifies a thought experiment from Burge (1986: 263–64).

3.5 Extending the Argument to the Belief and Intuition Views

Arguments analogous to those above can be used to defeat the belief and intuition views. The modifications required to counterexample these affiliated views are minimal. I won't go through the details. One argument form defeats all three views because of a common feature: they are all endorsement theories, according to which mastery is a matter of taking core elements to be true, or at least truth-preserving. The views disagree only about the form of endorsement. But deviant masters demonstrate that full understanding does not require endorsement.

The intuition view fares slightly better than the belief or inference view. The intuition view allows that a thinker could fail to believe and/or be disposed to infer in accordance with a core element, yet master the concept nonetheless, as long as the thinker intuited that the core propositions were true. However, the Agnes-BOCHE case still defeats the intuition view. She has no intuitions that all Germans are cruel, but still fully understands the concept.

4 The Special Status Problem

4.1 Overview

This section argues that believing, inferring, and intuiting are not, by themselves, sufficient for mastery. Thinkers must take core elements to have special status.

4.2 Not Merely Belief

Sofia and Felipe believe that all bachelors are male and that all bachelors are unmarried. Sofia believes these propositions because she takes them to be central to the meaning of BACHELOR. Felipe, on the other hand, believes that all bachelors are male as a matter of happenstance. Felipe is open to the possibility of female bachelors, though he believes that none currently exist. Felipe's attitude toward ALL BACHELORS ARE MALE is similar to my attitude toward THERE ARE NO BACHELORS ON MARS.[12] It's true that there are no bachelors on Mars. But that has nothing in particular to do with the meaning of BACHELOR or MARS. Sofia has mastery of BACHELOR. Felipe does not. This counterexamples the belief view. Similar counterexamples can be given to the inference and intuition views.

(P1) Felipe believes all of BACHELOR's core propositions.

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[12] One might take this case as motivation to adopt a view on which core propositions are necessary in form. This move does not help. There remains a difference between someone who takes "necessarily, all bachelors are male" to have special status with respect to, or to be "part of the meaning" of, BACHELOR and someone who does not. For example, x might take "necessarily, all bachelors are male" to be true because the actual world is the only possible world and all actual bachelors are male. But x could believe that maleness has nothing to do with the meaning of BACHELOR. Similar remarks apply to a strategy on which the core element is the generic proposition BACHELORS ARE MALE. Thanks are due here to an anonymous referee.

(P2) If the belief view is true, then if Felipe believes all of BACHELOR's core propositions, he has mastery of BACHELOR.

(P3) Felipe does not have mastery of BACHELOR.

(C) Therefore: the belief view is false.

Premise (P1) is a stipulation of the case. Whatever the core propositions are, suppose Felipe believes them. (P2) follows from the statement of the belief view. (P3) is very plausible. Felipe thinks bachelors can be female! The argument is valid. The conclusion follows: the belief view is false.

4.3 Sophisticated Views

These examples teach us that to master a concept one must take its core elements to have a special status (Peacocke 1992; Greenberg 2014: 8fn6). Peacocke[ibid.] admits that agents who make the appropriate inferences need not fully understand. He recognizes the need for a special stance toward core elements; Peacocke requires the agent to find core inferences *primitively compelling*.

A version of Peacocke's stratagem can be adopted by any of the belief, inference, or intuition views. For example, intuition theorists could require that core propositions play a special role in the generation of the intuition. I won't canvas all the options. Call any version of the belief, inference, or intuition view that adopts some method of requiring that beliefs in, dispositions to infer in accordance with, or intuitions with respect to, core elements have a special status a *sophisticated belief/ inference/intuition view*.

4.4 The All and Only Problem

Taking a special attitude toward core elements (e.g. finding primitively compelling) is still not sufficient for concept mastery. The special attitude must be taken toward *all and only* the core elements. An agent who builds extra elements into her concept's core loses mastery.

Consider a sophisticated inference view where inferences are accorded special status by the thinker if and only if they are primitively compelling for that thinker. Suppose Malik finds the inferences from "x is a bachelor" to "x is male" and from "x is a bachelor" to "x is unmarried" primitively compelling. According to the sophisticated inference view, Malik has mastery of BACHELOR. But, unfortunately, Malik also finds the inferences from "x is a bachelor" to "x never cleans his apartment" and "x plays too many video games" primitively compelling. Malik has a bizarre conception of bachelors, and he takes these inferences to be part of the meaning of BACHELOR. Malik lacks mastery of BACHELOR.

The obvious move is to ban the inclusion of "extra" inferences. On such a modified view, a thinker has mastery of C if and only if she is disposed to infer in accordance with C's core inferences and finds *all and only* those inferences primitively compelling. Unfortunately, this view entails that a thinker can't master more than one concept at a time. If an agent is to master more than one concept,

she'll need to find the core inferences of at least two concepts primitively compelling. So she can't find all and only the inferences associated with C primitively compelling.

There is no way around this problem using only a simple notion of "primitively compelling inference". Notions of "primitive belief" and "primitive intuition" face the same problem. The deep problem lies in the logical form of the primitively compelling relation. It is a two-place relation: finds-primitively-compelling(thinker T, inference I). The problem can be solved only by a three-place relation. For example, one might use the "finds primitively compelling in virtue of concept C" relation: finds-primitively-compelling-in-virtue-of(thinker T, inference I, concept C). With this relation, a thinker could find some inferences primitively compelling because of the role C_1 plays in the inference, while finding other inferences primitively compelling because of the role C_2 plays. With a 3-place relation, concepts cease stepping on each other's toes, preventing mastery of each other.

There are difficult exegetical issues concerning whether Peacocke's "primitively compelling" is a 2- or 3-place relation.[13] If it is 3-place, then his view will handle the all and only and masking problems. I'm ready to give the benefit of the doubt and take Peacocke's official stance to incorporate a 3-place "primitively compelling" relation.

4.5 The Masking Problem

We can motivate the need for a 3-place relation another way. Suppose Felipe finds BACHELOR's core inferences (2-place) primitively compelling. But Felipe finds the inference from "x is a bachelor" to "x is male" primitively compelling because of the role that MALE plays in the inference. Felipe accords this inference no special status vis-a-vis BACHELOR. Felipe has a quirky conception of MALE, according to which he finds every inference of the form "x is F" to "x is male" primitively compelling. As a result, Felipe lacks mastery of BACHELOR, despite the fact that he finds all BACHELOR's core inferences primitively compelling. The primitively compelling status of the inference from "x IS A BACHELOR" to "x IS MALE" comes

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[13] The evidence for interpreting Peacocke (1992)'s version of the inference view as relativizing compelling-ness to concept comes from the following explication of "primitively compelling": "for possession of the concept C... he does not need to take the correctness of the transitions as answerable to anything else." (6). By 'concept possession', Peacocke means what I call 'concept mastery' (cf. footnote 6).

There are several exegetical issues in this passage. First, Peacocke must mean "needs not to take" rather than "does not need to take". If he means the latter (as the passage is worded), he is not stating a necessary condition on possession, but instead stating that a certain condition is not necessary. Second, the crucial interpretative issue turns on what is meant by 'anything else'. If 'anything else' means "anything other than the transition", then we are merely being told, in greater detail, that to be primitively compelling a transition must not be "answerable to" anything else, for example, by being derived from more primitive transitions. If 'anything else' means "anything other than the concept" then Peacocke appears to utilize a 3-place relation that relativizes compelling-ness to the concept.

I'm not sure what to think. Peacocke often speaks as if primitive compelling-ness is 2-place. A thinker either finds a transition primitive compelling or not. He never discusses the possibility that a transition could be primitively compelling for one concept and not primitively compelling for another. (Thanks are due here to Mark Greenberg (Greenberg 2001:111, fn4, p.c.).)

from the wrong source: it arises from Felipe's misunderstanding of MALE rather than his understanding of BACHELOR. A 2-place "takes to have special status" relation can't distinguish between the case where a thinker accords a core element of concept C a special status because they understand C and the case where they accord special status because they misunderstand C'. The thinker's misunderstanding of C' (MALE) *masks* their failure to master C (BACHELOR). Without a 3-place relation with the concept itself as a relata, a thinker could take the special attitude toward all and only the concept's core elements, but lack mastery nonetheless.

We've covered three distinct reasons for moving from a 2-place to a 3-place special attitude toward core elements. First, a 2-place relation does not allow a thinker to adopt the special attitude toward all and only the core elements of C while simultaneously mastering more than one concept. A 3-place relation does. Second, a thinker can adopt a 2-place attitude to all and only the core elements of a concept C while failing to master that concept. The Felipe-BACHELOR example demonstrates this point. Instead, the thinker must accord the core elements some special status *with respect to C*. Third, misunderstanding of concept C' can cause a thinker to have the 2-place special attitude toward a core element of C. This is masking. The thinker has the special attitude for the wrong reason. Relativizing the special attitude to the concept C prevents masking problems.

4.6 Moving On

The special status problem is not fatal. Something more than mere belief, inference, or intuition must be appealed to, but the theories can be modified appropriately. The thinker must adopt a special attitude toward the core. But not even this is enough. The special attitude must be taken to core elements *vis-a-vis the concept*.

5 The Recognition View

5.1 From the Failures of Rivals to the Recognition View

The two failures of endorsement views motivate my positive account. Endorsement views fail first by neglecting the possibility of deviant masters who fail to endorse core elements. Endorsement of core elements is not necessary for concept mastery. The second failure was ignoring the need for thinkers to adopt some special attitude toward core elements. Neither bare believing in, inferring in accordance with, or intuiting the truth of, core elements is sufficient for mastery.

Endorsement views are overly demanding in one sense and not demanding enough in another. They're overly demanding because they require masters to take core elements to be true. They're not demanding enough because they don't require masters to accord core elements a special status. The recognition view jettisons the overly demanding aspect of these views and adds the feature they neglect. According to the recognition view, concept mastery is purely a matter of recognizing core elements to have a special status vis-a-vis the concept. That's it.

Importantly, recognizing the core elements as having a special status is compatible with a failure to endorse.

- **The Recognition View:** An agent who possesses concept C has mastery of C if and only if the agent takes all and only the elements in C's core to govern the use of C.[14]

The recognition view is permissive about the nature of core elements. They could be propositions, patterns of inference, mental transitions, rules, or something else. Recognizing a core element as governing the use of C can be factored into two components. First, the agent must take the core element to govern the use. Second, the rule must actually govern the use. The next two sections explain these components.

5.2 Taking to Govern Use

To explain the recognition view, I must explicate what it is for an agent to *take* a core element to govern the use of C. For ease of exposition, I'll speak of core elements as *rules*. But 'rule' should be construed broadly to include inference patterns, propositions, and mental transitions.

I offer no reductive theory of the "taking" relation. One should not construe taking in too heavy-weight a manner. A thinker need not have the concepts CONCEPT, GOVERN THE USE, or MEANING-CONSTITUTING RULE in order to recognize a core element as governing use. Whether a thinker takes a rule to govern the concept is determined by idealization from the psychology of the agent. Past usage and present dispositions should be taken into account. Whether an agent takes a core rule to govern is a genuine fact about the agent's psychology. It is not merely a "stance" that theorists take. Taking will have ramifications for the thinker's behavior. Reaction to counterfactuals provides a useful heuristic for determining whether a thinker takes a rule to govern use (rather than merely taking to be true). There are actually none, but could there be female bachelors?

There are many ways to take a given proposition to govern the use of a concept. Most straightforwardly, a sophisticated thinker might directly believe that ALL BACHELORS ARE MALE governs the use of BACHELOR. Professor X's taking *chairs are for sitting* to govern the use of CHAIR has this form. Taking to govern use will usually be less sophisticated. The agent will be confounded when others claim that some bachelors are not male. This perplexation will be different than the reaction to someone claiming that several bachelors live on Mars. She'll predict the latter interlocutor to be misinformed. Perhaps they heard that the Mars rover *Opportunity* is a crewed mission. In contrast, she'll think that the believer in female bachelors misunderstands BACHELOR.

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[14] In formulating the recognition view, I choose 'takes' over the stylistically preferable 'recognizes' because recognition is factive. If x recognizes that P, then P. Factivity makes it impossible to recognize non-core elements as core. But if a thinker takes a non-core element to govern the use of C, that should count against their mastery. The recognition view should reflect this phenomenon. Thus I use 'take' in lieu of 'recognize'.

We can distinguish *explicit* taking to govern use from *implicit* taking. Professor X's taking of CHAIRS ARE FOR SITTING to govern CHAIR is explicit. Implicit taking to govern use is less intellectual and more common. Implicit taking could be a belief, a disposition to infer, an intuition, or another psychological state. In this way, the recognition view is more liberal than the belief, inference, or intuition view when it comes to the variety of states that can generate mastery. But, heeding the special status problem, the recognition view requires thinkers to treat core elements as special. It is this treating of a core rule as special, without any explicit belief in a privileged status, that makes the taking implicit.

5.3 Governing Use

Core elements are guidelines for the use of the concept. They have normative force, prescribing how one should and should not use the concept. *Meaning postulates* are axioms laid down to establish the meaning of a term. Similarly, core elements help to give the concept its meaning. Taking a core element to govern the use of a concept is similar to taking that element to be a meaning postulate that contributes to the concept's meaning.

The possibility of defective concepts poses a special problem for my approach to core elements as use-governors and/or meaning postulates. Defective concepts like BOCHE have core inferences that do not preserve truth. If core inferences need not preserve truth, in what sense do they "govern the use" of the concept? An analogy with legal norms helps explain. Suppose that the law, and particular laws, have certain purposes or functions: to improve citizen's lives, prevent injustice, express the will of the people, prohibit immoral action, etc. (That law(s) do have goals or functions in this way, that are not merely the goals of law-makers, is controversial. But the position is certainly coherent, which is all the analogy requires.)

Sometimes a law achieves these goals; sometimes it does not. When a law does not achieve its goal, it remains a law with legal normative force. The law's failure to improve citizen's lives does not annul it. Those who disobey the law still violate a legal norm. They can be punished. As a legal defense, "the law I broke does not achieve the goal of our legal system" will impress neither judge nor jury. If the law is immoral, then violating the legal norm may be the only way to obey a moral norm.

Rules of use have a function as well. They aim, broadly speaking, toward truth. They can aim at truth itself (propositions), or at the preservation of truth (inferences). Rules may have other functions as well. But rules of use, much like the laws of a body politic, can fail to achieve their aims. The core rules of defective concepts such as BOCHE fail in exactly this way. They fail to meet their truth-oriented functional goal. But those rules still govern the use of BOCHE. They retain normative force. In some cases, the only way to obey the epistemic norm of believing truths will be to flout the meaning norm governing the use of a concept. Agnes recognizes this feature of her situation. She elects to obey the epistemic norm at the cost of flouting the use norm. There is a clear sense in which a rule can generate a norm that governs the use of a concept, even when that norm is defective.

5.4 A Comparison

Mark Greenberg (Greenberg 2001, Greenberg [MS], Greenberg 2014) offers a view according to which "mastery of a concept is a practically available understanding of what is essential to the concept" (Greenberg 2014: 337fn9). He speaks also of "understanding of the concept's nature" (ibid.). Greenberg's theory may be a version of the recognition view. I briefly compare. Greenberg and I both require the thinker to accord the concept's nature a special status (Greenberg 2014: 337fn9). We are both liberal about the types of elements one must grasp to have mastery. Where Greenberg employs the notion of a concept's nature or essence, I utilize the notion of a "core element".

Greenberg claims that mastery requires a practical understanding of the concept's nature. Natures individuate concepts. So Greenberg's theory entails that mastery requires a practical understanding of that which individuates the concept from other concepts. My view is less demanding. For example, because the natures of WATER (which refers to H_2O) and TWIN-WATER (which refers to XYZ (Putnam 1975)) are different, Greenberg requires a practical understanding of this difference in order to master the concept. This strikes me as a bad result.

Another difference arises from Greenberg's insistence that understanding of the concept's essence be "practical". This permits normal thinkers, without philosophical sophistication, to master concepts. The worrisome case involves a thinker who has an intellectual, but no practical, understanding of the concept's nature. Lack of practical understanding would be reflected by the absence of a disposition to make core inferences. The Agnes-BOCHE example fits this description. Greenberg might run into trouble with this example. The fundamental difference between our views is that I allow agents to take rules to govern use in at least two ways: the theoretical way (as Agnes does) or the practical way (as Agnes's compatriots do). For Greenberg, the practical way looks like the only way. Greenberg's view might actually be a sophisticated endorsement view, rather than a genuine recognition view. Much will turn on what a "practical understanding" turns out to be.

6 Four Objections

6.1 Objection 1: Against Cores

Do concepts have cores? Many have thought they do not (Quine 1951; Williamson 2008, p.c). This is not an objection to the recognition view in particular, but rather an objection to the entire conceptual role approach to concept mastery. Behind this thought is that there is nothing shared by all those who are said to have mastered a concept.

I have some sympathy with this criticism. However, much of the objection's force can be deflected by independently plausible softenings of the approach. For simplicity, Sect. 2.4 assumed that mastery involved grasping *all* the concept's core elements. But once we relax that assumption, we can accommodate the objector's intuition that there is nothing shared by all masters of a concept. All those who fully

understand JUSTICE might grasp some significant portion of the core, without any proposition being grasped by all. However, it's not implausible that, for some concepts, all masters do share grasp of core elements. Any agent who does not recognize that arthritis involves inflammation, that swords have blades, that chairs are for sitting, or that justice requires fairness, does not fully understand ARTHRITIS, SWORD, CHAIR, or JUSTICE.

The approach to concept mastery adopted here, according to which mastery is a matter of grasping core elements, is not committed to the idea that a concept's core contains necessary and sufficient conditions for falling under the concept. I am tremendously skeptical of that claim. Some of the skepticism towards cores more generally (cf. Quine 1951) arises from skepticism that concepts contain necessary and sufficient conditions for their application. This form of skepticism does not affect any of the views discussed here.[15]

A core-oriented approach to concept mastery can, and I believe should, strengthen its position by broadening the notion of "core element" (more on this in Sect. 6.4). One can include as core elements transitions from perceptions to other contentual states. For example, one might take the transition from (i) a red experience to classification of that experience as RED (ii) an observation of Tibbles to the thought THAT IS A CAT, or (iii) a visual image of a moving horse to an ascription of GALLOPS. Mastery will then require grasp of these liberalized core elements. A recognitional ability constitutes one way to grasp such elements. Once we relax the assumption that mastery requires grasp of all core elements, broaden our conception of what cores can contain, and permit multiple ways to grip the core, core-oriented approaches become simultaneously more flexible and plausible.

Lastly, my task here is not to defend the idea that concepts have cores. My approach assumes that they do and that mastery involves taking some attitude toward them. I seek the best view of concept mastery given those (admittedly controversial) assumptions. I'm willing to conditionalize my conclusion: If there is such a thing as concept mastery, and it is a matter of taking some attitude to core elements, then that attitude is recognition, not endorsement through belief, intuition, or a disposition to infer. However, I'm optimistic that the conditionalization is unnecessary.

6.2 Objection 2: Against the Notion of "Taking a Rule to Govern the Use"

Opponents might object that the notion of "taking a rule to govern the use", on which the recognition view relies, is under-explained and/or unexplanatory because it is too similar to the target notion: fully understanding a concept. Perhaps "taking a rule to govern use" is under-explained. I've done some work to get the reader on to the idea. One reason for under-explanation is that I've tried to be relatively agnostic about the nature of core elements. My agnosticism has a theoretical basis: I think that different types of concepts require different types of cores. Clearly, there is

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[15] Exception: Peacocke (2003) argues that concept users do have a grasp on necessary and sufficient conditions.

further work to be done in exploring the notion of "taking a rule to govern the use of a concept". But I have made headway.

I admit that "taking a rule to govern the use" is more similar to the target notion - fully understanding / mastering the concept - than believing or inferring. But this is a step in the right direction. The failures of the belief and inference views are due partly to their overly reductive ambitions. To achieve a successful theory of concept mastery, we must appeal to notions that are closer in nature to understanding itself. "Taking to govern use" is closer to understanding. That's partly why the recognition view succeeds where rivals fail.

I reply also with a "companions in guilt" response: the objection applies equally to my rivals. The lesson of the special status problem is that any successful theory must demand concept-masters to accord core elements a special status. I hypothesize that any account of "accords special status" will, like "taking to govern use", be close in nature to the explanandum: fully understanding a concept.

6.3 Objection 3: Mastery Without Taking to Govern Use

This objection maintains that the recognition view is false because a thinker can have mastery of a concept without taking a core rule to govern use. Professor Y, philosopher of mind and language, works on concepts. She has read this paper. She detests it. Professor Y believes that there is no distinction between core and non-core rules, nor any such thing as a rule that "governs the use" of the concept. Professor Y denies every claim of the form "Rule R governs the use of concept C".

(P1) Professor Y has mastery of many concepts.
(P2) Professor Y does not take any rules to govern the use of those concepts.
(P3) If (P1) and (P2), the recognition view is false.
(C) Therefore: the recognition view is false.

(P1) is very plausible. Everyone has mastery of at least a few concepts (e.g. AND, HERE). (P2) is plausible as well. Professor Y explicitly denies that rules govern the use of concepts. (P3) follows from the statement of the recognition view.

I deny (P2). Professor Y denies all claims of the form "rule R governs the use of concept C". She believes many propositions of the form "rule R does not govern the use of concept C". I claim that, nonetheless, Professor Y takes many rules to govern the use of many concepts. Consider her behavior. She frowns in confusion when you talk about female bachelors. She won't understand if you attempt to use 'here' to refer to a location other than the current one. She'll claim (unreflectively) that you're incorrectly using the concept HERE. Professor Y's belief that rules do not govern use is compatible with her taking certain rules to govern use. Furthermore, I don't see how Professor Y could think, or use any concepts at all, if she never took any rule to govern the use of any concept. The rules guide her use of the concepts. Professor Y teaches us that an agent who implicitly takes a rule to govern the use of a concept can explicitly deny that the rule does so.

6.4 Objection 4: Taking to Govern Use Without Mastery

Elsewhere I have argued (Rabin 2011) that mastery of phenomenal concepts such as RED$_{ph}$ requires certain abilities, including the ability to recognize a red sensation as an instance of RED$_{ph}$.[16] If so, then it seems that someone could take whatever the core rules associated with RED$_{ph}$ (perhaps "red$_{ph}$ is a sensation") are to govern the use of RED$_{ph}$ whilst being unable to recognize a red$_{ph}$ experience as red$_{ph}$. Let Jane be a color-blind person who does not experience red$_{ph}$ at all. She experiences green$_{ph}$ instead. She has never experienced red$_{ph}$ and cannot recognize a red$_{ph}$ sensation as an instance of RED$_{ph}$. But Jane, a philosopher of mind and meaning, is an expert on the semantics of 'red' and on the concept RED$_{ph}$. She certainly seems to know the rules governing the use of the concept.

> (P1) Jane takes all and only the rules governing the use of RED$_{ph}$ to govern the use of RED$_{ph}$.
> (P2) If (P1), then if the recognition view is true, Jane has mastery of RED$_{ph}$.
> (P3) Jane is unable to recognize a red$_{ph}$ sensation as an instance of RED$_{ph}$.
> (P4) If (P3), then Jane does not have mastery of RED$_{ph}$.
> (C) Therefore: the recognition view is false.

(P1) is supported by Jane's philosophical expertise. (P2) follows from the statement of the recognition view. (P3) is a stipulation about the case. (P4) is a plausible claim about mastery of any phenomenal concept, including RED$_{ph}$. I argue for (P4) in (Rabin 2011).

One simple response would be to accept the argument and weaken the recognition view by claiming that taking all and only a concept's core rules to govern use is only a necessary, but not a sufficient, condition for mastery. But doing so significantly reduces the interest and scope of the recognition view. I prefer to deny (P1). The key idea is to consider the possibility that the ability to recognize red$_{ph}$ experiences as instances of RED$_{ph}$ is itself a core element. An inference rule is a form of mental transition. The shift from an experience of red$_{ph}$ to a labeling of that experience as RED$_{ph}$ is also a mental transition. This transition could be a core element governing the use of RED$_{ph}$. On reflection, this seems correct. There is something about labeling red$_{ph}$ experiences as red$_{ph}$ that is central to the meaning and use of RED$_{ph}$. Here, we see a broadening of the kinds of elements that can occur in a concept's core.[17] If the mental transition from a red$_{ph}$ experience to recognition of that experience as RED$_{ph}$ is core for RED$_{ph}$, then (P1) is false. Jane's inability to recognize red$_{ph}$ experiences entails that she fails to take a core rule to govern the use of RED$_{ph}$.

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[16] RED$_{ph}$ is the phenomenal, experiential, concept of red. RED$_{ph}$ applies to experiences with a certain qualitative character (you know the one). Neither light-waves nor objects can be red$_{ph}$. Tomatoes, fire trucks, and strawberries are red, but they cause red$_{ph}$ sensations.

[17] Peacocke (1992: 7–8) adopts a similar move. This strategy is discussed in Greenberg and Harman (2006) and Greenberg (2009: 149).

7 Conclusion

For now, this ends my attempt to answer the question "Under what conditions does an agent master, or fully understand, a concept?" Even a reader who disagrees with my positive theory can recognize that any theory of concept mastery must cope with the phenomena of incomplete understanding, deviant masters, the special status problem, and the masking problem. I have done my best to navigate these treacherous waters.

At root, the belief, inference, and intuition views all make the same error. They all require thinkers to *endorse* core elements, i.e. to take those elements to be true (or truth-preserving). In contrast, the recognition view is, for lack of a better term, a *recognition* view. Mastery is recognizing the concept's core. Importantly, as the phenomenon of deviant masters teaches us, recognition is compatible with a failure to endorse.

I conclude that mastering, i.e. fully understanding, a concept is not a matter of merely having certain beliefs, making certain inferences, or intuiting certain propositions. Mastering a concept is a matter of recognizing, perhaps implicitly, the rules governing the use of the concept. This should not come as a surprise. Using a concept includes being subject to a normative standard associated with that concept. This normative standard is determined, in large part, by the rules that govern the use of the concept. To understand the concept is to grasp those rules.

References

Ball, D. (2013). Consciousness and conceptual mastery. *Mind*, *122*, 497–508.

Bealer, G. (2002). Intuition and the autonomy of philosophy. In M. Depaul & W. Ramsey (Eds.), *Rethinking intuition: The psychology of intuition and its role in philosophical inquiry* (pp. 201–239). Lanham: Rowman and Littlefield.

Block, N. (1988). Functional role and truth conditions. *Proceedings of the Aristotelian Society*, *61*, 157–181.

Boghossian, P. (1996). Analyticity reconsidered. *Nous*, *30*, 360–91.

Boghossian, P. (2001). How are objective epistemic reasons possible? *Philosophical Studies*, *106*, 1–40.

Boghossian, P. (2003). Blind reasoning. *Aristotelian Society Supplementary*, *77*, 225–248.

Boghossian, P. A. (1994). Analyticity and conceptual truth. *Philosophical Issues*, *5*, 117–131.

Bolinger, R. J. (2017). The pragmatics of slurs. *Noûs*, *51*(1), 439–462.

Burge, T. (1979). Individualism and the mental. *Midwest Studies in Philosophy*, *IV*, 73–122.

Burge, T. (1982a). Other bodies. In A. Woodfield (Ed.), *Thought and object: Essays on intentionality* (pp. 97–120). Oxford: Clarendon Press.

Burge, T. (1982b). Two thought experiments reviewed. *Notre Dame Journal of Formal Logic*, *23*(July), 284–94.

Burge, T. (1986). Intellectual norms and foundations of mind. *Journal of Philosophy*, *83*, 697–720.

Burge, T. (1989). Wherein is language social? In A. George (Ed.), *Reflections on chomsky* (pp. 175–191). Oxford: Blackwell.

Burge. (1990). Frege on sense and linguistic meaning. In D. Bell & N. Cooper (Eds.), *The analytic tradition*, pp. 30–60.

Burge, T. (1993). Concepts, definitions, and meaning. *Metaphilosophy*, *24*(4), 309–25.

Devitt, M. (1993). Localism and analyticity. *Philosophy and Phenomenological Research*, *53*(3), 641–646.

Eklund, M. (2002a). Deep inconsistency. *Australasian Journal of Philosophy*, *80*(3), 321–331.

Eklund, M. (2002b). Inconsistent languages. *Philosophy and Phenomenological Research*, *64*(2), 251–275.

Eklund, M. (2005). What vagueness consists in. *Philosophical Studies*, *125*(1), 27–60.

Eklund, M. (2007). Meaning-constitutivity. *Inquiry*, *50*(6), 559–574.

Ezcurdia, M. (1998). The concept-conception distinction. *Philosophical Issues*, *9*, 187–192.

Field, H. (1977). Logic, meaning, and conceptual role. *Journal of Philosophy*, *74*(July), 379–409.

Frege, G. (1952). The thought: A logical enquiry. In P. Geach & M. Black (Eds.), *Translations of the philosophical writings of gottlob frege*. Oxford: Blackwell.

Glüer, K. (2003). Analyticity and implicit definition. *Grazer Philosophische Studien*, *66*(1), 37–60.

Greenberg, M. (2001). *Thoughts without masters: Incomplete understanding and the content of mind*. Ph.D. thesis, Oxford University.

Greenberg, M. (2009). Moral concepts and motivation. *Philosophical Perspectives*, *23*, 137–64.

Greenberg, M. (2014). Troubles for content I. In *Metasemantics: New essays on the foundations of meaning* (pp. 333–380).

Greenberg, M. *Incomplete understanding, deference, and the content of thought*.

Greenberg, M., & Harman, G. (2006). Conceptual role semantics. In*The Oxford handbook of philosophy of language*.

Harman, G. (1987). (Nonsolipsistic) Conceptual role semantics. In E. LePore (Ed.), *Notre Dame Journal of Formal Logic* (pp. 242–256). Academic Press.

Horwich, P. (2010). *Truth–meaning–reality*. Oxford: Oxford University Press.

Ludwig, K. (2001). What is the role of a truth theory in a meaning theory? In *Truth and meaning: Topics in contemporary philosophy* (pp. 142–163).

Ludwig, K., & Badici, E. (2007). The concept of truth and the semantics of the truth predicate. *Inquiry*, *50*(6), 622–638.

Patterson, D. (2007). Inconsistency theories: The significance of semantic ascent. *Inquiry*, *50*(6), 575–589.

Patterson, D. (2009). Inconsistency theories of semantic paradox. *Philosophy and Phenomenological Research*, *79*(2), 387–422.

Patterson, D. E. (2006). Tarski, the liar, and inconsistent languages. *The Monist*, *89*(1), 150–177.

Peacocke, C. (1992). *A study of concepts*. Cambridge: MIT Press.

Peacocke, C. (1999). *Being known*. Oxford: Oxford University Press.

Peacocke, C. (2003). Implicit concepts, understanding, and rationality.

Peacocke, C. (2008). *Truly understood*. Oxford: Oxford University Press.

Priest, G. (1979). The logic of paradox. *Journal of Philosophical Logic*, *8*(1), 219–241.

Prior, A. N. (1960). The runabout inference ticket. *Analysis*, *21*, 38–39.

Putnam, H. (1975). The meaning of 'meaning'. *Mind, language and reality: Philosophical papers* (Vol. 2, pp. 215–71). Cambridge: Cambridge University Press.

Quine, W. V. O. (1936). Truth by convention. In O. H. Lee (Ed.), *Philosophical essays for A. N. Whitehead* (pp. 90–124). New York: Longmans.

Quine, W. V. O. (1951). Two dogmas of empiricism. *Philosophical Review*, *60*, 20–43.

Rabin, G. (2011). Conceptual mastery and the knowledge argument. *Philosophical Studies*, *54*, 125–147.

Russell, B. (1902). Letter to frege. In van Heijenoort, J. (ed.), *From frege to godel* (124–125).

Russell, G. (2014). Quine on the analytic/synthetic distinction. In G. Harman & E. Lepore (Eds.), *A companion to W.V.O. quine* (pp. 181–202). Chichester, West Sussex: Wiley-Blackwell.

Russell, G. K. (2008). *Truth in virtue of meaning*. Oxford University Press.

Sawyer, S. (2003). Conceptual errors and social externalism. *The Philosophical Quarterly*, *53*, 265–273.

Scharp, K. (2013). *Replacing truth*. Oxford: Oxford University Press.

Tarski, A. (Ed.). (1936). The concept of truth in formalized languages. In *Logic, semantics, metamathematics* (pp. 152–278). Oxford University Press.

Tarski, A. (1944). The semantic conception of truth: And the foundations of semantics. *Philosophy and Phenomenological Research, 4*(3), 341–376.

Wikforss, A. (2001). Social externalism and conceptual errors. *The Philosophical Quarterly, 51*, 217–231.

Wikforss, A. (2004). Externalism and incomplete understanding. *The Philosophical Quarterly, 54*, 287–294.

Williamson, T. (2003). Blind reasoning II–understanding and inference. *Aristotelian Society Supplemental, 77*, 249–293.

Williamson, T. (2008). *The philosophy of philosophy*. Oxford: Blackwell.

Williamson, T. (2009). Reference, inference, and the semantics of pejoratives. In *The philosophy of David Kaplan* (pp. 137–158).

Williamson, T. (2013). How deep is the distinction between a priori and a posteriori knowledge? In R. Casullo & J. C. Thurow (Eds.), *The a priori in philosophy*. Oxford University Press.

Yablo, S. (1993a). Definitions, consistent and inconsistent. *Philosophical Studies, 72*(2–3), 147–175.

Yablo, S. (1993b). Hop, skip and jump: The agonistic conception of truth. *Philosophical Perspectives, 7*(1), 371–396.