

What should an account of knowledge-how be an account of?

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Abstract. Parties to the debate about knowledge-how agree that any account of knowledge-how should vindicate two intuitions: (1) that knowledge-how is distinctively *practical*, and (2) that knowledge-how is a kind of cognitive or epistemic achievement. What fuels the debate is that each party thinks the other has failed to fully vindicate one of these two theses. In this paper, I take an entirely new approach to the debate by treating it as an open question *which* intuitions about knowledge-how an account of knowledge-how should vindicate. I will argue that there are two versions of thesis (1) lurking in the debate about know-how and that no *one* view of know-how can vindicate both. Accordingly, I think we should reconsider what we aim to account for in our accounts of knowledge-how.

I. Introduction

The aim of the debate about knowledge-how is to characterize the necessary and sufficient conditions for *knowing how to ϕ* , where ϕ stands for any type of action that one might perform intentionally. Minimally, whatever it is that a person has when they know how to ϕ , it seems they must have *some* connection to an action type and *some* kind of cognitive achievement. This can be captured in two intuitively compelling theses:¹

1. Knowing how is distinctively practical.
2. Knowing how is a kind of cognitive–epistemic achievement.²

¹ I take some inspiration from John Bengson and Marc Moffett (2011b), who present the debate about knowledge-how as a debate about how to reconcile these three “attractive but prima facie incompatible theses about knowing how” (165):

- i. Knowing how is not merely a kind of knowing that.
- ii. Knowing how is practical: it bears a substantive connection to action.
- iii. Knowing how is a cognitive achievement: its status as a piece of practical *knowledge* is not merely coincidental.

I do not include the first thesis because it is more contentious than the others at the outset. From one vantage, it rules out Jason Stanley’s and Timothy Williamson’s (2001) view that knowing how is a subspecies of knowing that.

² A note on how I use ‘cognitive–epistemic’: I take it that all epistemic achievements are cognitive achievements but that not all cognitive achievements are epistemic achievements. Information processing that is not available to memory or verbal report might be the stuff of cognition relevant to cognitive achievement, whereas whatever is epistemic must be available to long-term memory, reasoning, verbal report, and so on. I use ‘cognitive–epistemic’ to keep thesis 2 as general and so as widely acceptable as possible.

As the standard presentation of the space of views goes, two mutually exclusive parties comprise this debate. The intellectualist typically defends the thesis that knowing-how is a subspecies of knowing-that (Stanley and Williamson 2001). The intellectualist, then, has no difficulty vindicating thesis 2. If knowing-how is a subspecies of propositional knowledge, and propositional knowledge is the paragon of cognitive–epistemic achievements, then there is no question whether or how knowing how is such an achievement. This much is straightforward. It is much *less* straightforward how the intellectualist can vindicate 1.

Conversely, *anti-intellectualism* fares much better by thesis 1. The anti-intellectualist tends to argue that knowing how is an ability or set of complex dispositions. Abilities and dispositions relate us to action directly. Typically, there is no question whether or how the anti-intellectualist vindicates 1. The common complaint against anti-intellectualism is that it fails to vindicate our intuition that knowing how is some kind of cognitive or epistemic achievement, so anti-intellectualists do have to work to show that their view can vindicate 2 (see, e.g., Markie 2019 and Kremer 2016).

So far, my aim has been to describe the state of affairs as it is typically presented and agreed to. The aim of this paper, however, is to diagnose a structural flaw in the debate about knowledge-how, or what it means to know how to φ . As it stands, theses 1 and 2 are intuitively compelling at least in part because they are coarse-grained features of know-how. But *because* they are so coarse, they cannot adjudicate between views, and it is far from clear *when* a view has vindicated either one of the theses, and when it has failed to. Progress in the debate about know-how depends on refining these theses. In what follows, I step back from the perspective of either party to consider *how* thesis 1 might be vindicated (doing the same for thesis 2 must be the task of another paper). I will argue that there are two versions of thesis 1 implicit in the debate and that no *one* view of know-how can vindicate both. It turns out that each of the *-isms* has a different goal in this debate, and these goals are irreconcilable.

In section II, I tease apart the two ways of understanding thesis 1, which I will call ‘the *Practical Thesis*’. In section III, I argue that the two ways of understanding the *Practical Thesis* are mutually exclusive—no one view of know-how can vindicate both. In section IV, I conclude by responding to the remaining possibilities for vindicating both versions of the thesis. None is ultimately satisfactory.

II. Two Versions of the Practical Thesis

Take the idea that knowledge-how, whatever it is, is distinctively *practical*. If it is a kind of knowledge, as intellectualism alleges, it differs from propositional knowledge *at least insofar as* it has some more

substantive connection to action than propositional knowledge has.³ If propositional knowledge has a connection to action, it's likely that we think of it as *permitting* action, in some kind of knowledge norm of action: we are permitted to act on what we *know*, and not (perhaps) on what we do not know. Knowing-how, in contrast, is something more than *permission* to do whatever it is we know how to do.

The distinctively practical aspect of knowing-how, then, is not a matter of *permitting* action, but you might think that knowing-how is connected to action in this way: that *if* I intend to ϕ in not-unfavorable circumstances, I will manage to ϕ successfully (at least, this will be the case often enough; see Hawley 2003). Certain complications aside, for now, it looks like knowing-how puts me in a position of being able to intentionally ϕ . Because I know how to make pour-over coffee, I can intentionally make pour-over coffee. However, this will not quite satisfy the intuition that knowledge-how is distinctively practical, because we can think of cases of being able to intentionally ϕ without knowing how to ϕ . Katherine Hawley (2003) gives us this case: Susie thinks that her smoking annoys Joe. So, when Susie intends to annoy Joe, she thinks she can do this by smoking. Susie isn't quite right about this, however. What actually annoys Joe is Susie's tapping her cigarette case, which she does whenever she smokes. So although Susie *does* annoy Joe whenever she smokes, it seems that Susie does not *know how* to annoy Joe, since her tapping her cigarette case is only a contingent feature of her smoking.

The Susie-and-Joe case shows that what we want to be able to say is that knowing how *informs* action in the right way. It should make a difference to *how* one tries to do something.⁴ My knowing how to make pour-over coffee means that there are some ways I will *not* try to make pour-over coffee (e.g., by filtering it through a sock), and that there are some steps I *will* take to make pour-over coffee (e.g., first bringing water to boil). This is at least one way to think of the connection between knowledge-how and *successful* action: knowing-how increases the likelihood that an action will succeed because it informs and constrains the ways in which the knower-how will try to perform that action.⁵

³ Even such intellectualists as Jason Stanley and Timothy Williamson (2001) should agree to this much. It is the reasoning behind their notion of *practical modes of presentation*, which I discuss in section III.1.

⁴ It might turn out that propositional knowledge informs action in the right way, in which case, the fact that knowledge-how informs action is not what makes it a *distinctively practical* kind of knowledge. I will consider what it would take for propositional knowledge to inform action in the right way in section III.1, but I will not try to determine whether knowledge-how is *more* substantively practical than propositional knowledge.

⁵ Jason Stanley and John W. Krakauer (2013) articulate and defend a version of this claim.

This much gets us to one way of understanding how knowledge-how is practical, or bears a substantive connection to action:

Know-how is practical because, or insofar as, it explains *why I am likely (enough) to succeed at ϕ -ing if I try to ϕ .*⁶

Call this the *Practical Probability Thesis* (or *Probability*, for short) because it claims that knowing how bears on the probability of an agent's pulling off a successful performance of some action type.

However, there is another sense in which knowing-how may be practical. To my knowledge, no one working on knowledge-how acknowledges this possibility, though it seems to me that it has been implicit in the literature since, and *because of*, Gilbert Ryle's (1946) distinction between *knowing how* and *knowing that*.⁷ Any account of knowledge-how that follows Ryle's closely enough smuggles in the idea that know-how is distinctively practical because know-how explains the very possibility of intelligent action. This is the point of Ryle's famous regress argument, which I think is best understood as a reductio against the idea that propositional knowledge can explain the possibility of intelligent action. So, assume for reductio that knowing how to ϕ can be reduced to knowing a complete set of propositions relevant to ϕ -ing.⁸ Consider, for example, a student who is learning *how to reason*. The teacher presents an argument, but the student "fails to see that the conclusion follows from the premisses" (1946, 6). So, the teacher tells the student that the argument is valid. And the teacher tells the student that if the argument is valid, then if the premisses are true, the conclusion must be true. The student can *accept as true* these two propositions: (1) the argument is valid; and (2) if its premisses are true, then its conclusion must be true. Further, the student can accept the proposition that the argument's premisses are true. It follows that the student *should* accept that the conclusion is true (and the student might even recognize this—that they *should* accept that the conclusion is true!). But it does not follow that the student can *see* that the conclusion follows from the premisses, or that they can infer

⁶ I suspect that what constitutes 'likely enough' success will vary depending on the kind of action at issue (see Hawley 2003).

⁷ There is an exception. Kieran Setiya (2012) argues "that knowing how to ϕ , as it relates to intentional action, is not propositional knowledge" (285). I think Setiya *does* acknowledge this version of the *Practical Thesis*.

⁸ By 'complete set', I mean all of the propositions that comprise a way to ϕ . Having to identify the propositions that are members of a relevant set might seem like implausible conjecture regarding some action types (e.g., what are all the propositions one needs to know to know a way to catch a fly ball?), but we can at least non-controversially demonstrate the idea with examples like reasoning about valid arguments and playing chess, where the relevant propositions are much easier to identify.

the argument's conclusion from its premises. No additional propositions or rules of logic can force the student to “*apply* them in practice” (6).⁹ The student, then, knows the set of propositions relevant to an action type (here, *reasoning*, or *accepting the conclusion of a valid argument with true premises*) without being able to perform the action that their propositional knowledge recommends, or, in Ryle's words, without *knowing how* to perform that action.

What Ryle brings to light with his regress argument is a *desideratum*: explain how knowledge of facts manifests in method. The assumed view—that knowing how to ϕ can be reduced to knowing a complete set of propositions relevant to ϕ -ing—cannot satisfy this *desideratum*. It is not by *knowing more facts*, or even rules, that a student comes to *see* that an argument's conclusion follows from its premises. This is, Ryle points out, the point of Lewis Carroll's puzzle in “What the Tortoise Said to Achilles.” Ryle's solution is that, at bottom, there must be some *ability* or *disposition* that makes factual knowledge (e.g., of the rules of chess) into *practical* knowledge (though not in the Anscombean sense), or knowledge-in-practice (e.g., a competent move in a game of chess).¹⁰

So here we have the other way of understanding how knowledge-how is practical, or bears a substantive connection to action:

Know-how is practical because, or insofar as, it explains *how intelligence manifests in action*.

Call this the *Practical Possibility Thesis* (or *Possibility*, for short) because it claims that knowing how bears on the very possibility of performing some action type. As I understand *Possibility*, it will require an account of know-how to say *what must be true* of a person who manages to perform an intelligent action, where an *intelligent* action is any action that it would make sense to evaluate according to the criteria or standards of its type. To take one more example from Ryle, the clown's tripping and tumbling is

⁹ Sandy Goldberg has suggested that what might be lacking in cases like these is a kind of knowledge-when, and I think there is something to this. Consider Ryle's chess players. The novice's difficulty might be in *recognizing* that this state of the board constitutes the conditions in which *this* bit of propositional knowledge (about a rule or maxim or strategy) applies. If the novice does, however, have that piece of ‘knowledge-when to apply knowledge-that’, then it looks like there may be a sense in which their propositional knowledge brings them closer to closing the gap between knowledge and action. I think this is right. However, as Will Small (2017) points out, there are actually two junctures at which Rylean regress arises: at the *selection* of some propositionally structured maxim to guide my action, and in the *application* of that maxim to my action. It's at the *application* juncture where regress still arises.

¹⁰ Brian Weatherson (2017) develops an argument for this that does not depend on the idea that propositional knowledge is behaviorally inert. For my purposes, I'm content with Ryle's argument. The takeaway is that knowing facts does not entail skillful employment of those facts.

intelligent because it makes sense to evaluate the clown's tumbling according to criteria for good clowning (e.g., how effectively it makes people laugh while the clown keeps from actual injury), whereas it does not (should not) make sense to evaluate tripping and tumbling that is the result of mere clumsiness (1949: 33). An intelligent action is any action that can be ranked *better* or *worse* according to some criteria—even a very bad move in a game of chess is, nonetheless, an intelligent action. *Possibility*, then, takes know-how to be the thing that makes it possible for us act according to norms or criteria for action. *Knowing how* is what allows us to perform actions out of our own agency.

So far, I have argued that there are two ways of understanding how know-how may be distinctively practical, or how knowing-how relates a person to an action type. These are the two versions of the *Practical Thesis*:

Probability. Know-how is practical because, or insofar as, it explains *why I am likely (enough) to succeed at ϕ -ing if I try to ϕ .*

Possibility. Know-how is practical because, or insofar as, it explains *how intelligence manifests in action.*

It is perhaps obvious that *Possibility* is logically prior to *Probability*. If an event is *likely enough* to occur (at least, or especially, in the sense relevant to *Probability*), it must at least be possible ($P > 0$). But *that* an event is possible does not entail that it is likely enough to occur. If know-how is practical because it explains why I am likely to successfully ϕ , and it does this because it informs or constrains the method(s) by which I will try to ϕ , then *Probability* might be vindicated by positing propositional knowledge about ways to ϕ and ways not to ϕ . By Ryle's reductio, however, a person can have all of the relevant propositional knowledge about ways to ϕ and still fail to manifest that knowledge in ϕ -ing. So, it looks like something over and above a kind of propositional knowledge is necessary to vindicate *Possibility* and *not Probability*. In this way, *Possibility* is more demanding than *Probability*.¹¹

Both theses are legitimate contenders for the sense in which knowledge-how is distinctively practical. Neither reduces the practical nature of know-how to *permitting* action. One might even think that an account of knowledge-how should *both* explain why I am likely enough to succeed at ϕ -ing if I try to ϕ *and* how intelligence manifests in action in the first place. In fact, I think this is the motivation

¹¹ It is possible that the probability thesis is more demanding than the possibility thesis but in another way. There may be more ways of vindicating the probability thesis than the possibility thesis. So, if there is (let's say) a *unique* way to vindicate the possibility thesis, it is more demanding than the probability thesis *because* it drastically constrains the scope of ways it might be vindicated.

behind recent views that discard the mutually exclusive space of views in favor of something amenable to the intuitions underlying both -isms (see, e.g., Habgood-Coote 2019, Elzinga 2021, Löwenstein 2017, 2021, and Worthmann 2021). However, in what follows, I will argue that vindicating *either* one of these theses by an account of know-how forecloses the possibility of vindicating the other, at least without significant cost. These theses are mutually exclusive.

III. Argument for Mutual Exclusivity

III.1. *Intellectualism' about Knowledge-How*

Consider a view that vindicates *Probability*. A shortcut to this kind of view is finding the difference between two physiologically identical actions, where one is purposeful, or intelligent, and the other is merely lucky. “Subtracting” the features of the lucky one from the intelligent one should leave us with whatever it is that makes success more likely than lucky. Another case adapted from Hawley (2003) can help illustrate: Sally, who happens to be an Olympic swimmer, is skiing when she encounters an avalanche. Fighting to survive, Sally finds herself making swimming motions. Consider two variations:

(intelligent case) She makes swimming motions to try to escape the avalanche.

(lucky case) She makes swimming motions due to some confusion about what was happening, and she survives the avalanche.

Sally’s ability to survive does not vary between these cases, since she *can* and *does* make swimming motions in both. A natural response—and one that intellectualists of various stripes have argued for—is that in the intelligent case, but not the lucky one, Sally *knows* that making swimming motions is a way to survive an avalanche. Knowing this proposition is what makes Sally’s success more likely than lucky. Sally is more likely to succeed in the intelligent case, then, in virtue of having propositional knowledge about a way to survive an avalanche.

Carlotta Pavese (2021) argues that knowledge-how (on her view: propositional knowledge that *w* is a way to ϕ) explains non-accidental successes like this. And so do John Bengson and Marc Moffett (2011b). On Bengson’s and Moffett’s view, knowing how is having a conception of ϕ -ing that meets these conditions: it must be *correct* (e.g., standing stock still would not be a correct conception of a way to escape an avalanche, even if one were lucky enough to survive this way) and *complete* (i.e., must

include all the steps).¹² What Sally has in the intelligent case but not the lucky one is a *correct and complete conception* of how to escape an avalanche.

For now, let's table Bengson's and Moffett's view and adopt the hypothesis that knowing that *w* is a way for me to ϕ is knowing how to ϕ . This is Jason Stanley's and Timothy Williamson's (2001) view of know-how, it is the view Stanley (2011) develops independently, and it is the view Carlotta Pavese (2017, 2019, 2021) champions in recent work. So far, it seems to vindicate the *Probability Thesis*. Knowing that *w* is a way for me to ϕ will make a difference to how I will try to ϕ , and if I try to ϕ in way *w*, it looks like I am more likely to succeed at ϕ -ing than if I didn't know the proposition about *w*. (I believe a similar-enough explanation is available to Bengson's and Moffett's view as well.) However, it is still too easy to generate cases in which knowing a proposition about a way fails to make the knower more likely to succeed at ϕ -ing. Consider what Stanley and Williamson (2001) say about Hannah, who doesn't know how to ride a bike but sees John riding a bike. Hannah has propositional knowledge: pointing to John, Hannah can say that *that* is a way for her to ride a bike. Hannah is right about this, and her belief is justified. Nevertheless, it's clear that Hannah still does not know how to ride a bike.

The best response to this observation is to appeal to the mode of presentation under which the proposition relevant to a piece of knowing how is known. This feature of the account is supposed to capture what is distinctively practical about knowing how. Stanley and Williamson (2001, p. 428) develop the basic idea from an analogy with modes of presentation of Russellian propositions. Here are their examples. John sees a man whose pants are on fire; unbeknownst to John, John is looking in a mirror, and the pants are his own.

- (1) John believes that *that* man has burning pants.
- (2) John believes that he himself has burning pants.

The former sentence can be true while the latter is false. The explanation for this is that in (1), John entertains the indexical proposition (that *that man has burning pants*) under a *demonstrative* mode of presentation. For (2) to be true, he would need to entertain the proposition under a *first-personal* mode of presentation. In the same way, Hannah, who does not yet know how to ride a bike, can watch John ride his bike and believe an indexical proposition about a way for *her* to ride a bike.

¹² Why a conception must be complete is best seen in cases of activities that require the sequential performance of steps. For example, one does not know how to build a kytoon if one knows only the first step to building a kytoon and plans to Google the rest thereafter.

- (3) Hannah knows that *that* is a way for her to ride a bike.
- (4) Hannah knows how to ride a bike.

In this case, (3) can be true while (4) is false. The explanation is the same as before: in (3), Hannah believes the indexical proposition (that *that is a way for her to ride a bike*), but she does not *know* it because she entertains it under the wrong mode of presentation, a demonstrative one. For (4) to be true, Hannah would need to know the proposition in something more like a first-personal mode of presentation; specifically, she would need to know it under a distinctively *practical* mode of presentation.¹³

Stanley and Williamson posit practical modes of presentation to try to capture the sense in which knowing the right proposition about how to ϕ does not always amount to knowing how to ϕ . Hannah can know *that* without knowing *how*, just as Ryle's student of logic can know *that* without knowing *how*. With practical modes of presentation in hand, the intellectualist can vindicate the *Probability Thesis*: I am likely (enough) to successfully ϕ if I try to ϕ in way *w*, where I represent *w* under a practical mode of presentation. And although Stanley and Williamson did not posit practical modes of presentation to vindicate the *Possibility Thesis per se*, it seems that an intellectualist account of knowledge-how *could* vindicate this thesis by appeal to them.¹⁴ Consider how such an account might explain the difference between Ryle's (1946) chess players. What makes the difference between a chess player who knows *and* plays by the rules and maxims of chess and a novice who has been taught all of the same rules and maxims but cannot put them together to form any coherent strategy? Perhaps the player who fails to

¹³ I'm concealing some complications here. For my purposes, they're beside the point, but it's worth mentioning that because Stanley and Williamson are defending a thesis about the unity of knowledge (knowledge-how just is a kind of knowledge-that), they won't want to grant that knowledge-how requires entertaining a proposition under a practical mode of presentation while knowledge-that does not. Instead, on their view it should turn out that certain propositions just have to be entertained under certain modes of presentation in order to be known. Of course, this requires an account of what makes the difference between kinds of propositions such that some must be entertained under one mode and others under another, but there is no such account, and I'm skeptical of the possibility of one. Thanks to Will Small for pointing this out to me.

¹⁴ Intellectualists about knowledge-how have traditionally held that having the right propositional knowledge (or attitude) *suffices* for knowing how, and so have insisted that knowing how does not entail ability (Ginet 1975, Stanley and Williamson 2001, Snowdon 2004; but cf. Pavese 2015, 2021). They reject Ryle's method of avoiding regress, then, and they do not replace it with a method of their own. Intellectualists who *do* engage with Ryle's regress in some form argue that it fails by its own lights (Stanley and Williamson 2001, Stanley 2011), or that it is irrelevant to intellectualism about knowledge-how (see Small 2017). Either way, they have not tried to say what keeps Lewis-Carroll style regresses of propositional knowledge from turning vicious in an explanation of the possibility of intelligent action.

implement a successful strategy just fails to know the strategy under a practical mode of presentation, while the successful player does. Similarly, the logic student's struggle to *see* an argument's validity might be explained as a struggle to know the definition of validity under the right mode of presentation.

The trouble is that even if the intellectualist can vindicate *Probability*, they have no route to vindicating *Possibility*. First, the intellectualist is committed to anti-entailment, the claim that *knowing how to ϕ does not entail being able to ϕ* .¹⁵ Stanley (2011) is quite clear about this. And insofar as the intellectualist is committed to anti-entailment, or that knowing how does not require ability, they clearly do not mean to explain how it is that know-how makes intelligent action *possible*. But suppose the intellectualist *does* want to vindicate *Possibility*—they won't be able to. To see this, recall Hannah. The way that she comes to know that *that* is a way for her to ride a bike (pointing to John) *under a practical mode of presentation* cannot be by learning more propositions about bike riding. Knowing the relevant proposition under the right mode of presentation comes with practice—from hopping on a bike and trying and failing a few times. So it seems Hannah will be unable to know the proposition about a way for her to ride a bike *practically* until she *has the ability* to ride a bike.¹⁶ More straightforwardly, knowing a proposition about how to ϕ under the requisite mode of presentation entails acquiring (or having acquired) the ability to ϕ . At best, then, the intellectualist about knowledge-how offers a view about what it is that an agent *has* when they *can* ϕ such that we can expect them to ϕ successfully often enough. As soon as the intellectualist sets out to *also* vindicate *Possibility*—to explain what makes intelligent action possible—they get the order of explanation backwards.

¹⁵ Carlotta Pavese (2015) allows that knowing how to ϕ entails being able to ϕ *in a qualified sense* and has added flesh to this bare-bones notion of practical modes or, in Pavese's (2015) terminology, *practical senses* (cf. Pavese 2021). However, even the intellectualist who *accepts* that know-how entails ability won't be able to vindicate *Possibility*. (Because if know-how entails ability, the intellectualist explanation of the possibility of intelligent action is as meaningful as explaining that a pill causes sleep because it has a *dormitive virtue*.)

¹⁶ Ephraim Glick (2015) makes an argument very much like this. He reasons:

It's in virtue of learning to do something, and so coming to know how to do it, that one ends up in a position to grasp that...*this* is the way to do such-and-such. What the defender of [practical modes of presentation] needs is the claim that know-how is in part *constituted by* such ways of thinking, so that it's because one grasps that *this* is the way to do such-and-such that one knows how to do it, rather than vice versa. (543)

I think Glick is right, but he's right because his critique assumes that the intellectualist about know-how should vindicate *Possibility*, whereas I do not think they should.

Intellectualist views about know-how do not have the resources to vindicate *Possibility*. In case this is beginning to sound like a run-of-the-mill objection to intellectualism, here's why I think it is not. We end up with a novel diagnosis for *why* these views fail in this way as well as a novel recommendation for what to do about it. These views fail to vindicate *Possibility* because they vindicate *Probability*. To explain why an agent is likely enough to successfully ϕ , an account must posit *some kind* of access-conscious mental state, whether it is a propositional attitude or conception. This should be straightforwardly acceptable on the basis of one observation that tends to be leveraged on behalf of the intellectualist (against the sufficiency of ability for know-how): that knowing how to ϕ is transparent to the knower, while merely being able to ϕ may be opaque. Without some access-conscious mental state available to me in my attempt to ϕ , my attempt to ϕ is left to go awry or succeed by mere luck, and this will not help vindicate *Probability*. (Recall that this is what made the difference between the two variations of the avalanche case.) But it is precisely this access-conscious mental state that needs some explanation for *how* it manifests in action. An account of the mental state itself cannot do this (on pain of Rylean regress, for which, see Small 2017), so something else is required. I will consider the possibility of this 'something else' in section IV. For now, however, it looks like *Probability* is at odds with *Possibility*.

III.2. *The Mere Ability View of Knowledge-How*

There is a view in the literature on know-how that is very well positioned to vindicate the *Possibility Thesis*. On this view, a certain kind of anti-intellectualism about knowledge-how, knowledge-how to ϕ *just is* (or essentially involves) an ability or disposition to ϕ . It's this kind of view that has an elegantly simple response to Ryle's regress. What makes the difference between two chess players who have all of the same propositional knowledge about chess? Well, Ryle's anti-intellectualist will answer that it is a matter of ability—one player has an ability that the other does not—and they will argue that this ability is itself a kind of intelligence. For my purposes, I will call any view that claims that know-how is a kind of ability a 'Mere Ability View' (MAV) of knowledge-how (for defenses of MAVs, see, e.g., Noë 2005, Glick 2012, and Markie 2015).¹⁷

One style of argument for MAVs is to show that propositional attitudes are not *necessary* for knowing how because all kinds of intelligent actions are possible without propositional knowledge or,

¹⁷ To be clear, I do not think that Ryle held a MAV, though this kind of view is often attributed to him. I am convinced by Kremer's (2017) argument that Ryle was not an anti-intellectualist.

as far as we can tell, the propositional attitudes we might think relevant to successful performance. This style of argument may begin by noticing that we ascribe know-how to non-human animals. Alva Noë (2005) argues that Stanley-and-Williamson-style intellectualists cannot account for the intuition that his dog, Pip, *knows how* to catch a frisbee even though it is unlikely that Pip has any propositional representations of ways to catch a frisbee. What Pip has is an ability and *probably not* propositional knowledge. However, this argument need not rely on intuitions about non-human animal know-how. For a classic if contentious example, chicken sexers can tell the sex of day-old chicks with astounding reliability, but, by their own admission, they do not know the criteria for telling the difference (Williams 2008). There are also some standard empirical observations available to this line of argument. Glick (2011) runs through these, including the two following. One is that certain kinds of experts tend to have *false* beliefs about the methods they use in their fields (e.g., methods for medical diagnoses), even though they clearly have the requisite reliable ability. Another is that people who suffer from severe anterograde amnesia can learn to solve puzzles that they have no memory of having learned to solve; they acquire ability *without* corresponding belief. Finally, it seems that plenty of the time we manage to ϕ successfully *despite* (and not because of) our propositional attitudes. An outfielder who makes successful catches might believe that the way to catch a ball is to keep their eye on it, but the way to catch a ball is to track its trajectory with saccades (Brownstein 2016). As the anti-intellectualist argues, the reason we may ascribe knowledge-how in cases like these is that the knower has the right kind of ability or disposition; propositional attitudes about the relevant action type are beside the point.

If the anti-intellectualist is right, then in cases and patterns of successful intentional action, ascribing know-how is appropriate even though ascribing propositional knowledge—or a propositional attitude about a way or method—is not. And if *this* is right, then knowing-how just is what makes successful intentional action—or, *intelligent action*—possible.

So, MAVs vindicate *Possibility*. But they do not fare very well at all with respect to *Probability*. Although having a reliable ability to ϕ corresponds to a kind of know-how ascription that can tell us *that* we can expect someone to successfully ϕ , the fact that they know *how* (in the MAV sense of knowing how) cannot explain *why* they are likely enough to ϕ successfully. Here is one more way to make the point. A reliable track record of ϕ -ing might be a good indication of what we may expect them to pull off, but this effectively assumes that there *is* some explanation for the likelihood of success, without saying *what* does the explaining. So, it looks like the anti-intellectualist who argues for MAV loses the possibility of explaining *why* I might be likely enough to ϕ successfully if I try to ϕ .

In case this seems too swift an indictment of MAVs, take a view that might have the resources to explain why I might be likely enough to ϕ successfully if I try. Ephraim Glick (2012) argues for such a view. He begins with two intellectualist theses:

- A. Each kind of knowledge how to ϕ is a kind of knowledge-that.
- B. No kind of knowledge how to ϕ is the ability to ϕ . (122)

Glick will deny B. He allows that there may be more than one kind of know-how (e.g., a propositional kind of know-how), but at least one kind of know-how is the ability to ϕ .¹⁸ His argument begins by noticing there is a kind of *learning* that requires the acquisition of an appropriate ability (124). Consider two ways of reading the statement *Alice learned to ski*. One is deontic, which is apparent when we fill out the context like this: Alice tends to get bored while reading about how to ski, so she took up skiing to quell her boredom. Skiing has helped Alice feel active and engaged. So, we might say *Alice learned to ski* to mean *Alice learned that she should ski to keep from getting bored*. The other reading is the one Glick needs, and it becomes apparent by saying *Alice learned to ski by hiring a coach*. On this reading of *Alice learned to ski*, it would be quite odd to say *Alice learned to ski but was never able to do it*. So, it looks like this kind of learning requires the acquisition of an appropriate ability—in this case, the ability to ski.

Now, unless we want to divorce *learning* and *acquiring knowledge*—which Glick trusts we will not—it follows that there is a kind of *knowing* that requires the acquisition of an appropriate ability. Glick calls this a kind of *practical knowing* and reasons that the English locution for this is ‘knowing how to’. Although it seems that Glick *could* conclude that knowing-how is a kind of knowledge that *requires* ability (a possibility I return to later), he does not. He instead argues that what the English ‘knowing how to’ locution picks out *just is* an ability “of a certain sort” (128).

Assume that Glick’s argument is sound. What it accomplishes over and above the MAV reasoning I’ve sketched is showing that knowing how to ϕ must be a kind of *knowledge*.¹⁹ So, Glick’s view seems better suited to vindicate *Probability* than other MAVs. Unfortunately, although Glick can show that *the thing that satisfies Possibility is a kind of knowledge*, he does not thereby provide a way of vindicating *Probability*—he does not establish the sense in which knowing how *is* a kind of knowledge. Consider a pastry chef who can and *does* make perfect canelés *because* they know how to, and an outfielder who successfully catches the ball often enough *because* they know how to. Because, on views like Glick’s,

¹⁸ It looks like his view will also commit him to denying A, but there is conceptual space for a view that says knowledge how is an ability, where this ability also constitutes a kind of knowledge-that.

¹⁹ Noë (2005) offers another argument for this claim.

the kind of knowledge that know-how is just is *ability*, any attempt to explain likelihood of success by appeal to know-how will be vacuous. The pastry chef can make a perfect canelé because they have the ability. The outfielder can catch the ball because they have the ability. This is reason to think that know-how ascriptions are about more than mere ability and, at the very least, it shows that the MAV route to vindicating *Possibility* comes at the cost of vindicating *Probability*. If we ascribe know-how to explain success, we should not be satisfied with any MAV. It is in virtue of its vindication of *Possibility* that a MAV cannot vindicate *both Possibility and Probability*.

To be fair, Glick's view (like any MAV) does not actually *aim* to vindicate *Probability*, so *that* it fails is not a mark against it. However, this only makes it more surprising that MAVs neither *aim* to vindicate *Probability* nor account for the sense in which knowledge-how is distinctively practical by their lights. Vindicating *Possibility* is only an implicit aim of Glick's view and, as far as I can tell, MAVs generally. Since anti-intellectualism represents the set of views that is known for getting the practical side of know-how right, one would expect any anti-intellectualist view to have a working theory or principle of what makes know-how *practical*. This is not the case.

IV. Concluding Remarks

I can think of two ways someone might still try to vindicate both versions of the *Practical Thesis*. One would be to offer a two-part account of know-how, where know-how essentially involves propositional knowledge *and* ability but neither of these essential aspects of know-how *entails* the other. This would avoid the pitfalls of starting *from* either one of these theses and working toward vindicating the other. Ideally, then, it would turn out that both aspects of know-how fill their respective explanatory roles. I will just point out that two-part accounts end up committing to polysemy about knowledge-how. They concede—and they might be right—that we use 'know-how' to pick out mere ability when we want to talk about what makes the difference between Ryle's chess players—one knows how while the other does not—and we use 'know-how' to pick out something else when we talk about pastry chefs and outfielders—they have knowledge that informs the way they'll try to make canelés or catch fly balls when they do. Polysemy might be a way of acknowledging that we toggle between the two senses in which know-how may be practical, then. Even if it is right to think that we toggle between two notions of know-how, it still turns out that no *one* account of know-how (intellectualist or anti-intellectualist) can vindicate both practical theses.

The other way to try to vindicate both practical theses would be to bolster a MAV. One might think that what's missing from a MAV that tries to vindicate *Probability* is a characterization of the

knowledgeable agent's cognitive state such that we can rely on them to successfully ϕ when they mean to (to some contextually appropriate degree of success). I do not know of any MAV that *does* characterize a knowledgeable agent's cognitive state, but in the course of his objection to Stanley and Williamson (2001), Noë (2005) suggests a way we might think of the missing cognitive dimension of know-how on a MAV. The "brain-basis of...practical knowledge" may just be a matter of the cortical reorganization we undergo when learning any activity through practice (283). This is the way we are like machine learners (or that machine learners are like us). Whenever the use of a particular neural pathway leads to success, and that success is somehow signaled to the learner, that neural pathway gets reinforced, so it will be used more frequently when a learner aims at success, while other neural pathways will be used less frequently and so will weaken. There is, then, a structural/mechanical basis (and, in our case, biological) for the likelihood of our succeeding at an activity we have learned how to perform.

I'm skeptical of this route to vindicating *Probability*. But even if this is a way to show that one view *can* vindicate both practical theses, it's implausible that this same view will be able to vindicate the *other* thesis that an account of know-how is expected to vindicate: that knowledge-how is a kind of cognitive or epistemic achievement.²⁰ That learning how is undergoing cortical reorganization—and *knowing* how is *having undergone* cortical reorganization—is an unsatisfying conception of what makes knowing-how a cognitive achievement. We would end up with an account that doesn't discriminate between persons and computers.

In case this sounds like a run-of-the-mill argument against anti-intellectualism—that it's not *intellectual enough*—I don't think it is. I've shown that anti-intellectualism aims to vindicate *Possibility*. Because anti-intellectualism aims to vindicate *Possibility*, it is at odds with the aim of the know-how literature, which is to vindicate both the *Practical* and *Cognitive–Epistemic* theses. If this is right, then instead of objecting to anti-intellectualism because it fails to vindicate *Probability* and the *Cognitive–Epistemic Thesis*, we should think of anti-intellectualism as having an altogether different explanatory purpose.

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²⁰ All parties aim to vindicate this thesis. Dreyfus is the only exception I know of.

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