

How to Over-Intellectualize Action

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Abstract. Recent accounts of know-how aim to ‘intellectualize’ know-how—to articulate what makes it a cognitive–epistemic phenomenon—without ‘over-intellectualizing’ it. This paper shows that this worry about over-intellectualizing know-how is misapplied. It is the result of conflating what it is to *know how to φ* and what it is to *φ intelligently*. I extricate know-how from intelligent action and show that we have no reason to worry about over-intellectualizing know-how. What we should instead worry about over-intellectualizing is what it means to *φ intelligently*.

Keywords: knowledge-how, intellectualism, intelligence, intelligent action, propositional knowledge

I. Introduction

A good barista knows how to make a macchiato, a good batter knows how to hit, and a good birder knows how to tell a grackle from a starling. Parties to the debate about know-how aim to characterize whatever it is we ascribe when we say things like this, that ‘S knows how to φ ’. What do we ascribe when we ascribe know-how? As the debate is typically understood, there are two candidate answers. According to intellectualism, S knows how to φ in virtue of being in an epistemic state that relates S to φ . According to anti-intellectualism, S knows how to φ in virtue of having an ability or disposition to φ . Anti-intellectualists tend to charge intellectualists with over-intellectualizing knowing how, and intellectualists tend to charge anti-intellectualists with failing to characterize the cognitive or epistemic nature of knowing how.

Recently, a novel aim has emerged in the debate: avoid the pitfalls of the traditional views about know-how by simply *intellectualizing* know-how without *over-intellectualizing* it (see esp. Elzinga 2021, Löwenstein 2017, 2021, Habgood-Coote 2019). Roughly, the idea is to articulate how ‘knowing how’ requires or incorporates intelligence instead of defending an extant view in an entrenched debate.

Naturally, no one agrees on when a view crosses into *over*-intellectualizing its target phenomenon,¹ but we have some options. As Bengson, Moffett, and Wright (2009) see it, an account of know-how is over-intellectualized if it conflicts with widespread judgments about knowing how. Benjamin Elzinga (2021) argues that an account of know-how is over-intellectualized if it fails to include cases of non-human animal know-how (as, e.g., Löwenstein’s 2017 account does). David Löwenstein (2021) argues that an account of know-how is over-intellectualized if it *reduces* knowing-how to knowing-that (as, e.g., Stanley’s and Williamson’s 2001 account does). And Joshua Habgood-Coote (2019) argues that the whole over-intellectualization worry is overblown. None of these options is quite right. I argue that there can be no good account of what it is to over-intellectualize know-how, and I identify what we should worry about over-intellectualizing instead. The reason that we worry about over-intellectualizing know-how is that we’ve confused the aims of an account of know-how with the aims of an account of intelligent action. These are distinct phenomena, and we can’t properly evaluate any accounts of either until we’ve extricated one from the other. So, I extricate know-how from intelligent action and show that, if anything is at risk of being over-intellectualized, it’s intelligent action, or what it is to *implement* know-how, and not know-how itself.

Understanding the confusion about know-how and intelligent action has at least these two consequences for the debate about know-how. First, as it turns out, there’s no reason to reject ‘intellectualist’ accounts of know-how on the basis that they over-intellectualize know-how. Second, and surprisingly, a very recent kind of ‘anti-intellectualist’ view actually risks over-intellectualizing its target. But this is because the view isn’t what it seems—it’s an account of intelligent action and not *what it means to know how to ϕ* .

¹ A note about phrasing here and throughout. By ‘over-intellectualizing the phenomenon’, I mean that the *phenomenon* is made out to be more ‘intellectual’ than it is (details to be filled in). I will also refer to *accounts* that are allegedly guilty of this as ‘over-intellectualized’.

In the following section I survey the ways of understanding the over-intellectualization worry, and I argue that none captures a legitimate way in which an account of know-how might construe knowing how as ‘too intellectual’, or ‘not practical enough’. In section III, I suggest that the origin of the over-intellectualization worry is Gilbert Ryle’s (1946, 1949) argument against intellectualism. This allows me to determine the proper application of the worry, and I show that its proper application is to accounts of intelligent action. In section IV, I argue that there is no risk of over-intellectualizing *what it means to know how to ϕ* as such. And in section V, I introduce a final twist: some anti-intellectualist accounts run the risk of over-intellectualizing their target phenomenon.

II. Survey

In this section, I survey ways to characterize the worry about over-intellectualizing know-how, which I call ‘The Worry’. It turns out that none captures a way in which philosophers are at risk of over-intellectualizing their accounts of what it means to know how to ϕ , for any activity ϕ .

First, here is the bird’s-eye view of the debate about know-how. It’s comprised of two mutually exclusive views, and the views are roughly these:

Intellectualism. S knows how to ϕ in virtue of knowing the right propositions about ϕ -ing (in the right way).

Anti-Intellectualism. S knows how to ϕ in virtue of having an ability to ϕ .

The Worry seems to be a mark against intellectualism, since, intuitively, if anyone over-intellectualizes know-how, it’d be the intellectualist. If this much is right, it’s a reason to prefer an anti-intellectualist view: because intellectualism over-intellectualizes know-how, knowing how must consist in something besides knowing the right propositions in the right way. Typically, following Ryle (1946, 1949), this ‘something else’ is a kind of ability or disposition. For my purposes, the details won’t matter. The

point here is that in aiming to understand what it means to over-intellectualize know-how, I'm aiming to understand a common objection to intellectualism and a common motivation for anti-intellectualism. Because, in the end, I find that there is no such thing as 'over-intellectualizing know-how', my argument undercuts a motivation for anti-intellectualism and absolves intellectualism of a persistent objection.

So how should we understand this charge against intellectualism, that it over-intellectualizes know-how? I know of four proposals. The first, and most detailed, is from John Bengson, Marc Moffett, and Jennifer Wright (2009; hereafter, BMW), in their response to Alva Noë's (2005) charge that "intellectualism over-intellectualizes the mind" (286). As BMW understand the charge, it is that "intellectualism fails to do justice to the allegedly non-cognitive nature of know-how" (389). Here is what this amounts to:

Insofar as intellectualism and/or anti-praxism² are considered guilty of over-intellectualization, they are seen as conflicting with ordinary judgments about know-how. Whereas intellectualism and anti-praxism entail that some cognitively demanding state, namely, a certain sort of propositional knowledge, is necessary and/or sufficient for know-how, ordinary judgments about know-how are not sensitive to the presence of and/or absence of such a state. (389)

On the view BMW describe, the proponent of The Worry predicts that ordinary judgments are sensitive to the presence or absence of some "less 'intellectual' state, namely, ability" (390) in know-how ascriptions. So, we can understand BMW as suggesting that intellectualism over-intellectualizes know-how if it is out of touch with folk judgments about know-how. Specifically, it must be out of touch in a particular way: it must fail to account for whatever it is that's 'non-cognitive' about know-how. So let this be the first pass at what it means to over-intellectualize know-how:

² As BMW define 'anti-praxism', it's the necessity-claim counterpart to intellectualism's sufficiency claim. Intellectualism: S knows how to φ if S possesses a certain sort of propositional knowledge regarding φ ; anti-praxism: S knows how to φ only if S possesses a certain sort of propositional knowledge regarding φ (388).

An account of know-how over-intellectualizes know-how if it fails to match folk judgments by failing to characterize the non-cognitive aspect of knowing how.

Let this be *Worry 1*, or *W1*. BMW devise a test for determining whether ordinary judgments about know-how are sensitive to the presence or absence of propositional knowledge in candidate cases of know-how. If they *are* sensitive to the presence/absence of propositional knowledge, then the intellectualist can rest assured: intellectualism (and/or ‘anti-praxism’) does not over-intellectualize know-how. BMW test 138 people on a set of cases and find that a significant portion of their collective judgments (~70%–80%, depending on the case) are what intellectualism predicts. The majority of folk intuitions are sensitive to the presence/absence of propositional knowledge; it follows that they’re not troubled by any failure to capture a non-cognitive aspect of knowing-how.

For my purposes, I’m happy to take BMW’s results at face value.³ Assuming their results are representative, it turns out that intellectualism is *not* out of touch with folk judgments about know-how. However, BMW have not captured The Worry, so the intellectualist cannot yet rest assured. To see why, consider what it would mean if their results were otherwise. Say that folks overwhelmingly judge that something ‘non-cognitive’ is missing from the candidate cases of know-how. This signals that intellectualism is inadequate, that it fails to capture something ‘non-cognitive’ we expect when we ascribe know-how. Even so, it isn’t *in virtue of* failing to track folk judgments that intellectualism is inadequate, or that it counts as overly intellectual. It’s in virtue of failing to capture the so-called ‘non-cognitive’ aspect of knowing how, and it’s this, the cause of any would-be over-intellectualizing, that *W1* doesn’t describe.⁴ So the trouble with *W1* is that it mistakes a signal of over-intellectualization

³ For critical response, see Mizumoto (2021).

⁴ To be fair, BMW don’t characterize this because their survey results seem to absolve them of the responsibility. Since they find that folks are satisfied with the intellectualization of know-how they don’t need to characterize whatever it *would* be that caused the over-intellectualization *if* folk judgments had been otherwise.

(folk judgments) for the source of over-intellectualization (missing aspect of knowing how), and it's the source that we want to discover. Let's press on for a better characterization of The Worry.

In his account of know-how, Benjamin Elzinga (2021) states that his goal is to “intellectualize know-how without over-intellectualizing it” (1741). He is inspired by Löwenstein (2017), who develops an account of know-how that aims to address what Elzinga calls the ‘intelligence problem’. Elzinga doesn't describe the problem, but, as I understand it, it is this challenge to views of know-how as ability: characterize the ability such that it's an *intelligent*, or ‘epistemically significant’ ability (his phrase—see p. 1742). The idea is that knowing how to ϕ can't be a *mere* ability to ϕ . It must be something worth calling *knowledge* how.⁵ Elzinga alleges that, in responding to the intelligence problem, Löwenstein over-intellectualizes know-how (1746). Although Elzinga doesn't say what it means to over-intellectualize know-how, we can infer what this charge amounts to from the core of his dispute with Löwenstein. Elzinga's account differs from Löwenstein's (both self-described ‘Rylean’ accounts) insofar as Elzinga's doesn't require propositionally structured judgments or representations for knowing how. Here's how Elzinga must understand The Worry, then:

An account of know-how over-intellectualizes know-how if it requires propositionally structured judgments or representations for knowing how.

Call this *Worry 2*, or *W2*, and allow me to explain ‘propositionally structured judgments’ before I make a case for *W2*. Here's how a view like Löwenstein's would describe an outfielder's know-how in action: a skilled outfielder will judge *that* the ball is following *this* trajectory, and she'll judge *that* she should reach for the ball *here*. The outfielder who knows how to catch then acts in light of these judgments. It's judgments like these that Löwenstein claims must be ‘propositionally structured’: “*the very form and content* of [these judgments] is already propositional” (188, *emphases original*). For Löwenstein, this is

⁵ For a brief argument for this *desideratum*, see Bengson and Moffett (2011b, p. 165).

so even though the outfielder likely forms and responds to such judgments ‘under the radar’, or so quickly or automatically that she doesn’t notice *that* she’s judging. So, on Löwenstein’s account, knowing how to ϕ , for any activity ϕ , requires having and deploying propositional attitudes when ϕ -ing. It’s this that Elzinga worries over-intellectualizes knowing how.

Now, why take $W2$ seriously? The problem as Elzinga sees it is that requiring propositionally structured judgments for knowing how rules out a swath of cases of knowing how. Elzinga argues that honeybees and rats, for example, exhibit “intelligent and flexible behavior in navigating their respective environments” (1746), so honeybees and rats *know how* to navigate.⁶ But because we don’t have reason to think that honeybees or rats form propositionally structured judgments, or represent anything propositionally, an account of know-how that requires propositionally structured judgments will rule out honeybee and rat know-how.⁷ The idea is that a view of know-how that requires these judgments sets the ‘intellectual bar’ too high. Honeybees and rats fall under it, as do other non-human animals and some humans. So, one might think such an account over-intellectualizes know-how.⁸

$W2$ is not The Worry. This is because, as I’ll argue, it fails to capture any over-intellectualizing views. In outline, my argument is this: $W2$ depends on an assumption about the nature of propositional judgments, or attitudes. The assumption is substantive, and no view of know-how is strapped with it. Any view of know-how is better off without the assumption (otherwise it unnecessarily rules out cases of its target phenomenon). So, $W2$ fails to capture a way in which any plausible view of know-how over-intellectualizes know-how.

Here is the assumption implicit in $W2$: whatever is *propositional* is in some sense *intellectual*. Specifically, having or deploying a propositional attitude is being in an intellectual state, or exercising

⁶ Consider also other intuitive cases of non-human animal know-how: crows know how to count, scrub jays know how to cache food in secret, captive octopuses know how to stage elaborate escapes, and my cat knows how to get me out of bed to feed her breakfast.

⁷ I endorse this claim for the sake of argument, but I have my doubts. See Melis and Monsó (2023).

⁸ Cf. Noë’s dog Pip (Noë 2005), as well as studies about anterograde amnesia and puzzle-solving (Glick 2011).

the intellect. Intuitive as this assumption might seem, it's not innocent. It depends on a substantive view about the nature of propositions, and about how intelligent creatures relate to them. To see this, consider a way to think about propositional attitudes that is evidently *not* the target way to think about propositional attitudes. The way is inspired by Quine (1956), when he observes that "we may treat a mouse's fear of a cat as his fearing true a certain English sentence" (186). Quine finds this "unnatural without being therefore wrong. It is a little like describing a prehistoric ocean current as clockwise." The point is that, in being afraid of a cat, a mouse may very well be afraid *that the cat will pounce*. So, there is a sense in which we may describe a mouse as related to something with semantic value—a proposition about a cat.

I suspect, though, that ascribing this relation to a proposition seems apt only if the ascription is *not* about how the mouse experiences or represents the object of his fear. It's one thing to say the mouse is afraid *that the cat will pounce*, and another to give the mouse a thought cloud with the English sentence "That cat is going to pounce!" The propositional-attitude ascription becomes contentious as soon as we think it means that the mouse represents his fear propositionally. Whatever it means to represent propositions in one's thinking, it's precisely *that* that we wouldn't want to ascribe to the mouse. Nonetheless, there is something about the mouse's behaviour that grounds the aptness of ascribing him the fear that the mouse will pounce. So, insofar as creatures like mice are related to propositions, it's in this sense: S has a propositional attitude if S is in a state such that it is apt to describe S's state with a 'that' clause. Of course, this is not the view of propositions Elzinga has in mind when he claims that requiring propositional attitudes for knowing how rules out non-human animal know-how.

Why consider this view that doesn't 'intellectualize' propositional attitudes? The point is to draw attention to a substantive commitment. If an account over-intellectualizes know-how by requiring that one have propositional attitudes in order to count as knowing how, then the account has a certain

substantive view of propositions. What amounts to the same: if by requiring propositional attitudes an account of know-how sets the intellectual bar too high (and so rules out non-human animal know-how), it's because the account takes propositional attitudes to be such that only humans with the requisite cognitive capacities have them. Fair enough. The trouble for *W2* is that intellectualists since Carl Ginet (1975) have tended to disavow precisely this view of what it is to have a propositional attitude. Consider how Ginet responds to Ryle⁹:

The exercise (or manifestation) of one's knowledge of how to do a certain sort of thing need not, and often does not, involve any separate mental operation of considering propositions and inferring from them instructions to oneself... I exercise (or manifest) my knowledge *that* one can get the door open by turning the knob and pushing it (as well as my knowledge *that* there is a door there) by performing that operation quite automatically as I leave the room; and I may do this, of course, without formulating (in my mind or out loud) that proposition or any other relevant proposition. (1975, 7)

Ginet knows how to open a door. And he has some relevant propositional attitudes: *that* there is a door there, *that* one can open it by turning the knob, etc. The obvious and yet crucial point is that he does not formulate—aloud or in his mind—any such proposition in doing what he knows how to do. He need not represent features of his environment propositionally in order to have propositional knowledge that's relevant to (or comprises) what he knows how to do in that environment. I don't think Ginet is exceptional in this way. Ginet's know-how—as well as ours—is relevantly similar to how we describe the mouse's fear: the mouse need not represent his fear propositionally in order to be afraid of the cat. I submit that Ginet knows *that* there's a door *there* in the same sense that the mouse knows *that* there's a cat *there*.¹⁰ This looks a lot like the uncontroversial kind of propositional attitude ascription.

⁹ To be fair to Ryle: what Ginet says here is not the objection to Ryle's view that Ginet thinks it is. What Ginet describes is, in fact, precisely the point of Ryle's argument against 'the dogma of the Ghost in the Machine'. See especially the second chapter of *The Concept of Mind*.

¹⁰ One might think there is nonetheless a relevant difference between Ginet and the mouse: Ginet *could* represent relevant propositions to himself; the mouse can't. And one might think the ability to represent propositions is a prerequisite for

The passage from Ginet has been important to intellectualists about know-how who want to show that having and deploying propositional attitudes doesn't require formulating them in thought. Jason Stanley (2011), for example, appeals to this passage to distinguish what he calls 'unreasonable intellectualism'—the intellectualism Ginet rejects—from the intellectualism he (Stanley) endorses. The point is that if *W2* is The Worry, it captures what's wrong only with a view like 'unreasonable intellectualism'. And because no one endorses unreasonable intellectualism, *W2* fails to capture anything worth worrying about.¹¹ So we should press on for yet another characterization of The Worry. First, however, it's worth noticing that *even if* some view of know-how *is* or *would be* in trouble by *W2*, it would be in trouble for taking a certain view about propositions on board. So, if *W2* captures a legitimate worry about over-intellectualizing *something*, it's about over-intellectualizing propositional attitudes—or what it means to have them—not know-how itself. For any view of *know-how* to be in trouble by *W2*, it would have to *essentially involve* an over-intellectualizing view of propositions.

So here is the next way to think about over-intellectualization. Löwenstein (2021) argues that one over-intellectualizes know-how if one identifies knowing how with having propositional knowledge.

An account of know-how over-intellectualizes know-how if it identifies knowing how with having propositional knowledge.¹²

Call this *Worry no. 3*, or *W3*. Löwenstein leaves his argument for *W3* implicit, but I believe his motivation is just the idea—inspired by Ryle—that intellectualism over-intellectualizes know-how.

exercising intelligent abilities *without* representing anything propositionally. The idea is Aristotelian in spirit, that actuality is prior to potentiality. The trouble with this line of objection is that it seems to get the order of explanation backwards. It is not because we could first represent features of our environment propositionally that we can now interact with it intelligently; it's because we could first interact with our environment intelligently that we can represent features of it propositionally. For an argument along these lines, see Ryle (1949, p. 30: "Efficient practice precedes the theory of it").

¹¹ Cf. Stanley and Krakauer (2013) and Stanley and Williamson (2017). To be fair, Elzinga objects to Löwenstein's view in particular, and Löwenstein seems to accept the view of propositions that Elzinga attributes to him. At least, Löwenstein does not reject the substantive view of propositions I've pointed to here. I'll say more about Elzinga v. Löwenstein in my concluding remarks.

¹² As far as I can tell, Löwenstein thinks of identifying knowing how with having propositional knowledge as a sufficient *and* necessary condition for over-intellectualizing know-how. I won't deal with the necessity claim in this paper, however.

Briefly, here is the context. Whereas Ryle argued that ‘knowing how’ cannot be reduced to ‘knowing that’, the intellectualist argues that knowing how *just is* knowing that (see, e.g., Stanley and Williamson 2001, Snowdon 2004). And although Ryle never says that the problem with intellectualism is that it ‘over-intellectualizes’, it’s plausible enough that Ryle’s objection to intellectualism amounts to a claim like the one Löwenstein has in mind: intellectualism over-intellectualizes know-how because it identifies knowing how with having propositional knowledge (or, *reduces* knowing how to having propositional knowledge).¹³ If Löwenstein is right, then as long as an account avoids intellectualism, it avoids over-intellectualizing know-how.¹⁴

The trouble with *W3* is that it pushes the question back. Now we must ask, *In what way does intellectualism over-intellectualize know-how?* Or, why does ‘reducing’ knowing how to knowing that over-intellectualize knowing how? Joshua Habgood-Coote (2019) suggests an answer: “Much of the worry about over-intellectualisation arises from the idea that propositional knowledge is associated with various epistemic properties that knowledge-how does not possess, such as conscious access, linguistic expressibility, and an associated true belief” (101). Perhaps the way to understand Löwenstein’s idea is this, then: identifying know-how with propositional knowledge over-intellectualizes knowing how because it predicts instances of know-how will be consciously accessible, linguistically expressible, or come with an associated true belief (or some combination of these). So consider this an improvement on *W3*:

An account of know-how over-intellectualizes know-how if it identifies knowing how with having propositional knowledge and thereby predicts that knowing how is consciously accessible, linguistically expressible, or requires an associated true belief.

¹³ I don’t think Ryle is best understood as objecting to the intellectualism that Löwenstein objects to (I’ll argue for this in section III; cf. Kremer 2017), but philosophers working on know-how have a history of understanding Ryle this way. Hence ‘plausible enough’.

¹⁴ There is one additional complication here. Despite appearances, no intellectualist view of know-how actually reduces knowing how to knowing that. This is because even the intellectualist about know-how accepts that there’s something distinctively practical about ‘knowing how’, a way in which knowing how is distinct from mere knowing that (see, e.g., Bengson and Moffett 2011b, p. 165, and consider Stanley’s and Williamson’s notion of practical modes of presentation in their 2001).

Let this be *Worry no. 4*, or *W4*. It's plausible enough that Löwenstein has something like this in mind, since he defends his own view of knowing how by showing that it does *not* entail that knowing how has these features. Why think *W4* captures a way that know-how might be over-intellectualized? One might think that because plenty of incontrovertible cases of knowing how just don't exhibit the predicted features, an account that predicts them over-intellectualizes know-how. Let this be reason enough to think *W4* is about over-intellectualizing.

W4 runs into the same kind of trouble as *W2*. Roughly, the trouble is that it depends on a substantive view of propositional knowledge, which the intellectualist about know-how should simply reject. Here is the more complicated picture: *if* we regard any of these predicted features as over-intellectualizing what it means to know how to φ , we should regard them as over-intellectualizing what it means to know that *P*, too. So, the intellectualist can simply deny that either knowing that or knowing how has the over-intellectualizing features.

Consider the first feature first. We can know how to do things even when we have no consciously accessible action plan. For example, I can't recall how to play Debussy's *Clair de Lune*, but if there were a piano in front of me, I'd remember how it goes. This doesn't change the fact that, even while I'm sitting at my desk and not a piano, I know how to play *Clair de Lune*.¹⁵ There is good reason to think that propositional knowledge isn't always consciously accessible, either. For example, I know the name of the intersection where you can find the best pie in Chicago, even when I can't recall it. If I think about it for a minute, though, I'll remember.¹⁶ We might also think of cases of self-deception as cases

¹⁵ This tracks something like the distinction between general and specific abilities (see, e.g., Mele 2003, Whittle 2010, and Mandelkern, forthcoming). The point here is that one can know how even without the opportunity to implement their know-how.

¹⁶ It's California and Augusta, and the shop is Spinning J. This style of case thanks to Sandy, who knows when his grandmother's birthday is but can't recall the date just now.

of propositional knowledge not consciously accessible (e.g., S knows that S has been betrayed by a close friend even though they can't entertain the thought of it).

As for linguistic expressibility, we often know how to do things that we don't know how to *describe* how to do. A saucier knows how to make a sauce without breaking it, though not necessarily how to describe what it takes to make a sauce without breaking it. Chicken sexers know how to sort day-old chicks by sex, though not necessarily how to describe the difference between male and female chicks (see Williams 2008). And a wit knows how to get people to laugh, though not necessarily how to “cite the maxims, or canons, by which he constructs and appreciates jokes” (Ryle 1949, p. 30). So, whatever it is to know how to φ , it is sometimes inexpressible. But ordinary propositional knowledge can be like this, too. James Hoffmann can articulate the flavor profile of an espresso, but I often find it difficult to describe what a flavor is like—I know that this espresso tastes like *this*, but I can't quite say what ‘this’ is. Feelings generally seem to be like this. It can be difficult to describe emotions, or to describe symptoms to a physician, but this inexpressibility doesn't count against a person's knowing that they feel like *this*.

Now, one might think the fact that there's a ‘this’ that refers to what one knows means that what one knows *is* linguistically expressible in a relevant sense.¹⁷ It's just not articulable in a fine-grained way, perhaps. Fair enough. This may be how we should think of the expressibility of propositional knowledge, but, if so, the point applies to know-how just as well. A saucier who can't articulate the way to make a sauce without breaking it can nonetheless demonstrate: “the way to make a sauce without breaking it is *this*.” Similarly, a chicken sexer who can't articulate their method of sorting chicks can sort chicks by sex like *this*. It's plausible enough that whatever one knows how to do, one

¹⁷ But see Farkas (2017).

can describe or demonstrate how to do it.¹⁸ The point is that if propositional knowledge is expressible, so is know-how.¹⁹

Finally, consider true belief. I won't try to argue that propositional knowledge doesn't require associated true belief.²⁰ I'll show instead that it's plausible enough that knowing how to ϕ requires a true belief about how to ϕ . And, if knowing how requires true belief, it behooves the proponent of *W4* to show that a true belief requirement suffices to over-intellectualize know-how. I don't see a way to do this without over-intellectualizing belief itself. A few observations. First, it's not obvious how we should specify the true belief that knowing how requires. Stanley and Williamson (2001), of course, argue that S must truly believe, of some way w , that w is a way for them to ϕ . But this need not be the belief that knowing how requires. It might instead require a set of true beliefs about the activity, ϕ , or about methods of ϕ -ing, say. Whatever belief(s) we think necessary for knowing how to ϕ , there are two things to notice. First, the belief(s) need not be occurrent to S when (if) S ϕ s. This was the point of Ginet and the door. Knowing how to ϕ (and knowingly ϕ -ing) does not require thinking about anything in particular. (I know how to make coffee, and when I make coffee, I'm often thinking about anything but making coffee.) Second, there's a very ordinary way in which true belief—even if not occurrent—*does* help us do what we know how to do (for argument, see, e.g., Stanley and Krakauer 2013). Here are some beliefs one might ascribe to me when I make coffee: *that's* a Chemex, *these* are coffee beans, *this* water is boiling, and so on. Why? Well, if I didn't believe the water was boiling water,

¹⁸ Joshua Habgood-Coote's (2019) account of know-how as knowing the answer to a question develops this line of reasoning.

¹⁹ One might think that the case of know-how without ability is a counterexample to this claim. I can think of two reasons not to worry about this, however. First, cases that seem to be cases of know-how without ability tend to be cases in which what one knows how to do is articulable (e.g., because one can teach what one knows how to do—consider the ski instructor or pianist from Stanley and Williamson 2001, for example). Second, there is good reason to believe that know-how *in the relevant sense* entails ability (for arguments, see, e.g., Barker forthcoming, Boylan forthcoming).

²⁰ See Hyman (1999, 2015), Kern (2017), and Kremer (2017) for accounts of knowledge that at least seem to obviate a true-belief requirement on knowledge. See also Farkas (2017), where Farkas argues that one can know the answer to a question even when the proposition one knows is 'not available'. One could take this argument to show that one can know without having an associated true belief, even though Farkas doesn't seem to have this upshot in mind.

I wouldn't begin pouring the water over the grounds, say. And if I didn't believe that *these* are coffee beans, I wouldn't have put them through the grinder. It's plausible that belief is necessary for knowing how to φ , even if we disagree about how to specify the contents of the necessary belief(s).²¹

As for the necessity of *true* belief, consider Irina, who has a false belief about how to do a salchow but reliably salchows correctly because of a neurological condition. BMW (2009) find that 86% of their survey participants judge that Irina is able to do a salchow but doesn't know how to do a salchow. That false belief counts against ascribing Irina know-how suggests that true belief is necessary for knowing how.

So *W4*, like the iterations before it, fails to capture any real or present risk of over-intellectualizing know-how. I've exhausted the ways that The Worry appears in the literature. However, it's still too soon to agree with Habgood-Coote, that the over-intellectualization worry is generally overblown. The Worry comes from somewhere, and discovering where it comes from is a way of discovering what, if anything, it applies to. I submit that it comes from Ryle (1946, 1949). We have a few good reasons to think this. First, Ryle's regress is taken to be the most significant challenge to intellectualism, and it's natural enough to think that, if Ryle's regress is sound, it shows that intellectualism over-intellectualizes its target, even if Ryle never quite puts it this way.²² Second, the philosophers who *have* worried about over-intellectualizing know-how (BMW, Kremer, Elzinga, Löwenstein, Worthmann) are responding to Ryle. BMW, for example, defend intellectualism from Noë (2005), and it's Noë who, in his defense of Ryle's view of knowing how, claims that "intellectualism over-intellectualizes the

²¹ Alternatively, it might be that a disposition to believe is necessary for knowing how to φ (see Audi 1994).

²² Stanley and Williamson (2001), for example, defend their intellectualist view of know-how from their reconstruction of Ryle's regress. Bengson and Moffett (2011a) reconstruct the regress and suggest a line of argument on behalf of the intellectualist. But Yuri Cath (2013) notices that, in fact, none of the extant reconstructions of Ryle's regress actually amounts to a challenge to contemporary intellectualism (cf. Snowdon 2004). So, one might think (with good reason!), that this most significant challenge to intellectualism isn't such a challenge after all. My point here is untroubled, though: intellectualists about know-how have taken Ryle's regress to be a challenge to their view. So it's natural to understand the regress as purporting to show that intellectualism over-intellectualizes know-how.

mind” (286). And two of the main proponents of *The Worry*, Elzinga and Löwenstein, develop Rylean views of know-how and defend their views as *just intellectual enough*.

I’m going to pursue this Rylean line of inquiry and treat *The Worry* as inspired by Ryle’s regress. But there will be a catch: while Ryle’s regress shows there is an ‘intellectualism’ that over-intellectualizes its target, this intellectualism isn’t the familiar form of intellectualism from the debate about know-how. A Rylean characterization of *The Worry*, then, still won’t give us reason to think any account of know-how runs the risk of over-intellectualizing its target. So I argue in the next section.

III. Ryle and the intellect

So far, I’ve shown there is no successful characterization of what it means to over-intellectualize know-how in the contemporary literature. In this section I treat Ryle’s regress as the origin of *The Worry* and find that the view that risks over-intellectualizing its target—what Ryle calls ‘the doctrine’, or ‘intellectualist legend’—is not a view about the nature of knowing-how, but about the nature of mind, or intelligence. Later, I show that *The Worry* does not *also* apply to views about know-how, and I conclude that accounts of know-how as such do not risk over-intellectualizing their target phenomenon.

For now, allow me to introduce the target of Ryle’s regress as just what Ryle says it is. Later, I will settle its connection to know-how. In his address to the Aristotelian Society, Ryle takes aim at a certain ‘prevailing doctrine’. As Ryle presents it, this doctrine has two tenets:

- (1) that Intelligence is a special faculty, the exercises of which are those specific internal acts which are called acts of thinking, namely, the operations of considering propositions;
- (2) that practical activities merit their titles ‘intelligent’, ‘clever’, and the rest only because they are accompanied by some such internal acts of considering propositions (and particularly ‘regulative’ propositions). (1946, 1)

This is the ‘intellectualist’ view Ryle responds to (more on this shortly), but I recommend we follow Ryle and refer to it as ‘the doctrine’ to avoid conflating two ‘intellectualisms’: one about know-how and one about how practical activities merit intelligence epithets, when they do. Ryle argues that the doctrine results in vicious regress. For my purposes, I focus on how Ryle argues that tenet (2) results in regress. Here’s where this is headed: if (2) does result in regress, then the doctrine fails to explain what makes our activities intelligent or purposeful, when they are. I’ll show that this failure is the result of over-intellectualizing intelligence itself.²³

Ryle illustrates the problem of regress instead of articulating it formally. I’ll work with just one of Ryle’s illustrating cases.²⁴ Consider two chess players: one plays chess quite well, the other poorly. What makes the former player’s moves intelligent while the other’s are not? According to the doctrine, the clever player’s moves (i.e., practical activities) are intelligent in virtue of their being accompanied by ‘internal acts of considering propositions’, or *thinking*.²⁵ More carefully, the clever player’s moves are intelligent because the player is, at any point in the game, thinking about some maxim at that point (e.g., “given *this* state of the board at *this* point in the game, one should employ strategy X...”). Another way to make the point: the clever player’s moves are intelligent *in virtue of* what the clever player knows *and thinks about* while playing. Assume, for *reductio*, this is right. If this thinking that accompanies the clever player’s moves explains the intelligence of those moves, then this ‘thinking’ must be what the not-so-clever player is failing to do. Ryle argues that whatever the clever player knows and thinks about during the game doesn’t suffice to explain the intelligence of their moves. The reason is that we

²³ Again, *if* it’s a failure. My arguments don’t hang on whether Ryle’s regress successfully shows that the doctrine over-intellectualizes anything.

²⁴ The other I have in mind is his discussion of the student learning logic, who fails to *see* that a valid argument’s conclusion follows from its premises. This is Ryle’s version of Lewis Carroll’s puzzle in “What the Tortoise Said to Achilles.”

²⁵ What Ryle means by ‘internal acts of considering propositions’ is a certain kind of thinking. In his *A Rational Animal*, he distinguishes this kind of thinking, ‘academic thinking’, or ratiocinating or reflecting, from the kind of thinking that a tennis player is doing while playing. The ‘thinking’ of the doctrine is the kind that, if practiced on court, would require the tennis player to pause their playing to reflect, etc., etc. (see p. 12). Part of the idea, then, is that the doctrine gets ‘thinking’ wrong. (As for what it is to get thinking right—this is the question that Ryle, towards the end of his career, felt was most important. I’m not sure he found an answer that satisfied him. See his *On Thinking*.)

can suppose the not-so-clever player knows all of the same rules and maxims of chess as the clever player. We can further suppose that the not-so-clever player is *thinking* about the right maxim at the right moment of the game. The point is that these suppositions do not entail that the player's move will be intelligently executed: "For he might not see that it was the appropriate maxim or if he did, he might not see how to apply it" (6). If he makes the right move, it might nonetheless be due to luck instead of intelligence. So 'thinking' isn't what makes the difference between an intelligent and non-intelligent move in a game of chess.

Here's how to see the regress. The proponent of the doctrine will want to respond by pointing out some truths—so far hidden from our analysis—that the clever player knows (and thinks about) and that the not-so-clever player doesn't. As their response goes, it's knowing *when* to apply the maxims that makes the difference between the clever player and their opponent. So what the not-so-clever player fails to know is *when to apply the maxims*. If this is right, Ryle's argument only illustrates the importance of knowing 'bridge truths', or truths about when to apply first-order truths. This move to bridge truths brings out the regress: an intelligent action, to be intelligent, requires the contemplation and application of some maxim (some 'regulative proposition'). But *applying* that maxim can go better or worse, so applying that maxim—in order to *be* intelligent and so *confer* intelligence—will require knowing, or considering, a maxim or regulative proposition for its application. But now we have another, next-order maxim to apply. Because applying *this* maxim can go better or worse, it will require its own maxim... and so the regress begins.²⁶

²⁶ One may have legitimate doubts about whether this regress is as vicious as Ryle claims. It depends on whether something must have the property of intelligence in order to *confer* the property of intelligence. If the proponent of the doctrine can resist this commitment, they may be able to resist regress. But resisting this commitment looks a lot like allowing that action can inherit its claim to intelligence from stupid thinking. Regardless, for my purposes, it's just as well that the regress doesn't turn out to be vicious.

Ryle tells us that the proponent's mistake was failing to notice that *thinking itself* can be more or less intelligent and so requires the same explanation that so-called 'practical', or observable activities do:

The crucial objection to the intellectualist legend is this. The consideration of propositions is itself an operation the execution of which can be more or less intelligent, less or more stupid. But if, for any operation to be intelligently executed, a prior theoretical operation had first to be performed and performed intelligently, it would be a logical impossibility for anyone ever to break into the circle. (1949, 30)

This, then, is the core of the regress. The intellectualist legend (the doctrine) offers an account of intelligent action by appeal to another kind of (contingently) intelligent action (i.e., thinking). But this action, because it is only contingently intelligent, requires an explanation as well, and the proponent of the doctrine can offer only another appeal to the same kind of contingently intelligent action (thinking).

If Ryle's regress inspires a worry about a view that over-intellectualizes its target, how might we characterize that worry? I recommend we understand the worry to be this:

An account of intelligent action over-intellectualizes intelligent action if it's always and only in virtue of *thinking* ('considering regulative propositions') that one ϕ s intelligently.

To keep track, let this be *Worry 5*, or *W5*. Why think that *W5* captures a problem of over-intellectualizing? Well, the doctrine appeals to the nature of the intellect, or 'Intelligence', in order to explain what it purports to explain. And if Ryle is right, this appeal fails to do its (explanatory) job. If it fails to do its job, it's an unnecessary appeal to intellect. It seems that any appeal to intellect that turns out to be unnecessary to the explanation it is meant for makes its target phenomenon out to be more intellectual than it is. It over-intellectualizes its target. So, we can understand *W5* to be a worry about over-intellectualizing.

The know-how literature has inherited *W5* from Ryle and applied it to accounts of know-how. However, at this point, two claims I've defended make odd companions: (1) Ryle's regress inspires The Worry about over-intellectualizing know-how (the last claim of section II); (2) *W5* is about over-intellectualizing intelligent action. If Ryle's regress is supposed to help us understand The Worry, which is about over-intellectualizing know-how, it would seem that Ryle's regress should have something to do with the phenomenon we call 'knowing how'. Yet, neither my exposition of Ryle's regress nor *W5* ever mentions 'knowing how'. Strange as this might seem, it is no mistake. I mean to claim both that Ryle's regress is the source of The Worry about over-intellectualizing know-how, and Ryle's regress is *not about know-how*. The idea is that folks working on know-how have been mistaken about what Ryle's regress shows.²⁷ The reason for this is that they've conflated two phenomena: *knowing how* and *acting intelligently*. I will explain the implicit reasoning behind the conflation in the next section. For now, allow me to respond to the reader wondering whether Ryle's regress counts against intellectualism about know-how anyway.

Here's why one might think Ryle's regress is still about knowing how, even granting my exposition so far. It might be that *acting intelligently* and *knowing how* are related in such a way that an objection that counts against an intellectualist view of the former *also* counts against an intellectualist view of the latter. In fact, as we will see, plenty of accounts of know-how are also accounts of intelligent action—they try to say, for any activity φ , both *what it is to know how to φ* and *what it is to φ intelligently*.²⁸ So why not think that Ryle's regress counts against the intellectualist answers to both questions, or both 'intellectualisms'?

²⁷ Will Small (2017) compellingly argues that Stanley (2011) got this wrong.

²⁸ Cf. Mizumoto (2021, 2024). Mizumoto claims "the philosophical topic of knowledge-how was originally about the nature of *intelligence* exhibited in intelligent actions" (2024, 2). Mizumoto thinks that the current debate about know-how should be a debate about intelligent action instead. I think, on the contrary, that there are two legitimate debates here, and it's worth noticing how their subjects have converged in order to clarify the aims of each debate.

A full response to this question will span the rest of this section and the next. Consider first what Ryle's intellectualist would say about know-how. Ryle's intellectualist regards 'Intelligence' as a special faculty, the primary function of which is thinking, or considering propositions. So, insofar as Ryle's intellectualist has a view about know-how, it's that knowing how can be explained in terms of knowing propositions.²⁹ Of course, a significant part of the debate about know-how concerns whether knowing propositions suffices for knowing how. Set this matter aside, for now, and recall that what led to regress in the account of intelligent action was the intellectualist's appeal to a contingently intelligent activity (thinking, or 'considering propositions') to explain the source of intelligence for another contingently intelligent activity (φ -ing, for any practical activity φ). Ryle's point was that, since both activities are only contingently intelligent, there must be some *other* source of intelligence that grounds the intelligence of thinking and so φ -ing. But the intellectualist—if Ryle is right about intellectualism—has no other resources (i.e., nothing *essentially* intelligent) to appeal to to ground the intelligence of intelligent action. This is because, for the intellectualist, intelligence consists in the consideration of propositions, so it's to the consideration of propositions that the intellectualist must appeal again. This was how 'the doctrine', or intellectualism about intelligent action resulted in vicious regress. Compare the intellectualist's account of know-how. In the case of accounting for know-how, the intellectualist's task is to characterize what it is to know how to φ , not what grounds the intelligence of knowing how to φ . So, if they appeal to propositional knowledge, it's to characterize what it is to know how to φ , not to say what grounds the intelligence of an intelligent phenomenon. The crucial point is that there's no need for the kind of appeal that led to regress in their account of intelligent action. Because the

²⁹ I'm inferring this from Ryle's (1946) rejection of a certain claim in the course of his rejection of 'the doctrine', that knowledge-how can be defined in terms of knowledge-that (much the same as Stanley and Williamson infer this in their 2001 response to Ryle).

intellectualist doesn't need to appeal to anything as the grounds of intelligence of knowing how, they don't end up with a regress-initiating or over-intellectualizing appeal in their account of know-how.

None of this is to say that the intellectualist's account of know-how is a good account of know-how. Knowing propositions may not suffice for knowing how, and it may not be necessary (for arguments, see e.g., Snowdon 2004, Noë 2005, and Glick 2011, 2012). If it doesn't suffice, then the intellectualist account is inadequate because it's missing something necessary for knowing how (e.g., an ability, disposition, or other practical standing). If it's not necessary, then the intellectualist account is inadequate because it makes an accidental feature of knowing how (e.g., knowing propositions) into an essential one. If knowing propositions either does not suffice or is not necessary for knowing how, then perhaps the intellectualist's mistake is a matter of exaggerating the role of the intellect in knowing how. Is this over-intellectualizing? I think not, for two reasons. First, the conclusions we drew about $W2$ apply here. If appealing to propositions, or propositional attitudes, is a mistake, it's an over-intellectualizing one *only if* the intellectualist 'over-intellectualizes' what it is to know a proposition. The intellectualist doesn't need to do this, so they shouldn't. Second, even *if* knowing propositions is neither necessary nor sufficient for knowing how, it doesn't follow that appealing to propositions in an account of know-how results in an explanatory regress that over-intellectualizes what it is to know how to φ . In fact, it's plausible that knowing how to φ very often depends on knowing certain propositions (Stanley and Krakauer 2013).³⁰

For now, here is one more argument. Two peculiar features of the debate about know-how, placed side-by-side, suggest that the conclusion I'm advancing has been right under our noses. The first is this: intellectualists about know-how (e.g., Stanley and Williamson, Stanley, Bengson and Moffett, Yuri Cath) have both (1) taken Ryle's regress to be an objection to intellectualism *about know-how*, and (2)

³⁰ In fact, even Ryle seems to think that knowing how requires dealing with propositions: "The ability to do things in accordance with instructions necessitates understanding those instructions. So some propositional competence is a condition of acquiring any of these competences" (1949, p. 49).

found Ryle's regress to be a *bad* objection to intellectualism about know-how. In fact, they find it to be embarrassingly bad, since making Ryle's regress out to be about know-how makes a straw man of Ryle's target.³¹ The second is this: folks who take Ryle's regress to be a formidable objection to *something* show that it's a formidable objection to intellectualism *about intelligent action* (see, e.g., Bengson and Moffett 2011a, Tsai 2014, Löwenstein 2017, and Mizumoto 2024; cf. Noë's 2005 defense of Ryle's regress in response to SW 2001). For example, Cheng-Hung Tsai (2014) introduces Ryle's regress as a regress for intellectualism *about knowledge how*: "The regress argument against intellectualism about *knowledge-how* goes as follows. Assume that Hannah *φs* intelligently..." (543, emphasizes original). And he *concludes* that the regress is a problem for a view of intelligent action: "The fatal problem for intellectualism is that it explains intelligent action by intelligent action, leading to an explanatory fallacy" (543). Importantly, Tsai's understanding of the regress exemplifies a pattern: take the regress to be an objection to a view about knowledge-how; show that the regress is a good objection to a view about intelligent action.³²

What these two features of the literature together suggest is that Ryle's regress—and so The Worry—isn't about know-how, but what it is to perform an action intelligently. There's a reason that this conclusion has eluded folks working on know-how, though. It's that we haven't extricated the aims of our accounts of know-how from the aims of our accounts of intelligent action. I'll argue that we should.

³¹ This is why Michael Kremer (2017) puts Ryle's arguments in historical context—to show that Ryle was not objecting to any mere straw man.

³² Philosophers have a history of taking Ryle's arguments in his address (as well as in the second chapter of his *The Concept of Mind*) to be about the nature of knowledge-how. I think philosophers have been wrong but not unreasonable about this, since Ryle does say that he means to "turn the tables and to prove that knowledge-how cannot be defined in terms of knowledge-that and further, that knowledge-how is a concept logically prior to the concept of knowledge-that" (4–5). What's more, the title of his address *and* of the corresponding chapter in *The Concept of Mind* is 'Knowing How and Knowing That'.³² What makes this move (to thinking Ryle's regress is about know-how) all the more tempting is that knowing how and acting intelligently are very closely related phenomena.

IV. Knowing how and acting intelligently

In this section, I argue that an account of know-how need not, for the sake of its explanatory adequacy, *also* be an account of intelligent action (or, how we *implement* know how). More carefully: an account that aims to characterize *what it is to know how to φ* need not (for its explanatory adequacy) *also* characterize *what it is to φ intelligently*. The point is to show that no account of know-how depends on intelligent action in such a way that we risk over-intellectualizing know-how if we over-intellectualize intelligent action.

Notice first that *knowing how to φ* and *φ -ing intelligently* are not the same phenomenon. Whereas knowing how to φ is being in a state (epistemic or otherwise) in virtue of which one is related some action type, φ , *φ -ing intelligently* is performing an action in such a way that it makes sense to apply an intelligence epithet to it—to say of that action that it was ‘clever’, ‘witty’, ‘silly’, or ‘stupid’. An account of know-how should characterize whatever it is about the *agent* that makes it appropriate to say they know how to φ (i.e., what makes know-how ascriptions true?). An account of intelligent action should characterize the difference between action and mere behavior. So the philosopher working on know-how and the philosopher working on intelligent action have different subject matters.

The philosopher working on intelligent action, though, might reasonably view these two phenomena as related in this way: acting intelligently is, or requires, *implementing* one’s know-how. It’s reasonable enough to think that it’s in virtue of my knowing how to hit a bullseye that my hitting a bullseye, when I do, counts as intelligent.³³ So perhaps it’s the state we call ‘knowing how’ that explains intelligent action. Fair enough. But if this is right, then it’s an account of intelligent action that requires the services of an account of know-how, not the other way around. So it can’t be in virtue of ‘including’

³³ I think there are very good reasons to find this implausible, but I’m trying to be generous to the position I’ll end up rejecting here.

an account of intelligent action (or what it is to implement know-how) that an account of know-how is susceptible The Worry—the relation is here hypothesized to be the other way around.

It also matters that the philosopher working on know-how cannot reasonably make the parallel claim, that knowing how to φ , for any activity φ , is or requires φ -ing intelligently. The reason for this is simple: it's possible for S to know how to φ even if S never does φ . So an account of know-how must capture the case of know-how that's never exercised just as it captures the cases of know-how we observe in action. This should be as non-controversial as any claim in philosophy can be. Why does it matter? It follows that an account of what it is to know how to φ does not constitutively depend on any claims about what it is to *implement* knowledge of how to φ .

Briefly, here's an objection. One might think there are certain activities one has to perform in order to know how to do them. It's difficult to believe, for example, that someone could know how to play the piano without ever actually playing the piano. Similarly, it seems knowing how to ride a bike or unicycle, knowing how to juggle, and so on, require having ridden a bike or unicycle, or having juggled. Two things to say here. First, a general point: performance may very often be the evidence that we observers have for ascribing know-how, but we shouldn't conflate our evidence with the fact of the matter of S's knowing how to φ .³⁴ Second, at best, it's true of only some activities that one must perform them to know how to do them. Consider, for example, knowing how to calculate the n th numeral in the decimal expansion of π (from Bengson and Moffett 2011b). One doesn't have to have calculated the n th numeral in the decimal expansion of π in order to know how to. Insofar as an account of know-how should be an account of what it is to know how to φ *for any activity* φ , it can't turn out that knowing how to φ requires φ -ing.

³⁴ About evidence for ascribing know-how, and about how ascribing know-how can go wrong, see Barker (2021) and Hawley (2011).

The point of this section is that no view *about know-how* depends on claims about the nature of intelligent action. *That* knowledge-how is important to how we exercise our agency, or to what it means to perform an action intelligently, may be a reason to articulate what it is to know how to φ , but whatever it is to know how to φ does not depend on how know-how informs intelligent action. So I recommend we accept the conclusion that's been right under our noses: Ryle's regress doesn't count against accounts of know-how as such. Since Ryle's regress doesn't count against know-how, we still have no reason to think The Worry applies to know-how, only intelligent action.

V. Concluding remarks

My arguments reveal a systematic confusion in the literature about know-how. We've conflated the aims of our accounts of intelligent action with the aims of our accounts of know-how. This is how we ended up worrying about over-intellectualizing know-how when what we risk over-intellectualizing is intelligent action. The consequence is that we've been formulating and evaluating accounts of know-how with a criterion that doesn't apply: that an account of know-how should make know-how out to be intellectual but not *too* intellectual. It follows that the corresponding objection to intellectualism—that it over-intellectualizes know-how—is illegitimate. It neither counts against intellectualism nor in favor of anti-intellectualism.

Allow me to conclude with a twist. Some recent accounts in the literature purport to be accounts of know-how, but they turn on *what it means to φ intelligently*. If my arguments in this paper are sound, this is a mistake. I have in mind two accounts in particular: Löwenstein's (2017, 2021) and Elzinga's (2021).³⁵ Recall that, on Elzinga's view, honeybees and rats know how to navigate. They count as knowing how to navigate because they “exhibit intelligent and flexible behavior in navigating their

³⁵ Cf. Worthmann (2021). I take Worthmann's view to be relevantly similar to Löwenstein's and Elzinga's.

respective environments” (1746). Elzinga ultimately argues that “know how is success through self-regulated ability, but abilities may be regulated consciously or unconsciously. So long as the organism in some way or other responds to novelty, they count as knowing how” (1753). If we take Elzinga at his word—that know-how *is success*—then his account of know-how can’t tell us anything about the case of know-how that’s never exercised. The more charitable understanding of Elzinga’s view, then, is that it’s a view of what it is to ϕ intelligently, where ϕ -ing intelligently requires success through ‘self-regulation’, which in turn requires responding to novelty. What Elzinga shows, then, is that honeybees and rats navigate intelligently. What’s more, we might think they navigate intelligently *because they know how to navigate*, but this isn’t to say what it is to know how. At best, Elzinga articulates a way that intelligent action depends on know-how.

Löwenstein (2021) argues that know-how is “a reliable ability to do something well *because* one is guided by an understanding of what it takes to do it well” (184). If we take Löwenstein at his word, then what it is to know how to ϕ depends on how one’s ϕ -ing goes. Specifically, it depends on whether one is guided by one’s understanding when one ϕ s. Löwenstein’s view, just like Elzinga’s, can’t capture the case of know-how that’s never exercised. The cause of this trouble for both Löwenstein and Elzinga, then, is that they make intelligent ϕ -ing into an essential feature of what it is to know how to ϕ . The final twist, then, is this: accounts that go by ‘anti-intellectualism about know-how’, insofar as they turn on what it is to ϕ intelligently, are susceptible to over-intellectualizing their target while—if my arguments in this paper are sound—intellectualism about know-how is not.

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