Scaffolded Practical Knowledge – A Problem for Intellectualism

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Abstract

Roughly speaking, intellectualists contend that practical knowledge is always a matter of having the right kind of propositional knowledge. This article argues that intellectualism faces a serious explanatory challenge when practical knowledge crucially relies on ecological information, i.e. when know-how is scaffolded. More precisely, intellectualists struggle to provide a satisfactory explanation of seeming know-how contrasts in structurally similar cases of scaffolded ability manifestation. In contrast, even if anti-intellectualism is similarly challenged, at least some varieties of anti-intellectualism seemingly hold resources to account for the relevant contrasts.

1. Introduction

The main purposes of this article are twofold: First, to articulate a significant explanatory challenge for philosophical accounts of practical knowledge (know-how\(^1\)). Secondly, to demonstrate why extant intellectualist accounts of practical knowledge have problems overcoming this challenge. Intellectualists characteristically maintain that having know-how is always simply a matter of having the right propositional knowledge under the right circumstances (for discussion, see e.g. Hawley 2003; Snowdon 2004; Bengson and Moffett 2007, 2012; Bengson, Moffett and Wright 2009; Brogaard 2008, 2011; Stanley 2011; Glick 2011, 2012; Dickie 2012; Carter and Pritchard 2015; Habgood-Coote 2018; Stanley and Williamson 2001, 2017; Pavese 2016a, 2016b, 2017). The intellectualist framework has several theoretical virtues. Not least, it elegantly accounts for the

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\(^1\) Note that here know-how does not comprise all knowledge ascribed by way of the “know how” expression. E.g. to know how Julius Caesar died does not constitute know-how in the practical sense relevant here (Rumfitt 2003: 166).
relationship between know-how and propositional knowledge (Stanley 2011: 111-130; Stanley and Williamson 2001: 440-441). Yet, we argue, the framework finds itself stuck between a rock and a hard place in some scenarios where know-how crucially relies on taking proper advantage of ecological information, i.e. when know-how is scaffolded. The problem reveals itself when comparing structurally similar cases of informationally scaffolded ability manifestation. In some of those cases, understandably intellectualists have shown explicit reluctance to ascribe know-how (Bengson and Moffett 2012: 172-173). Yet other cases seem clearly to afford know-how ascriptions. We argue that seemingly intellectualists have no attractive way of explaining this contrast. This presents a significant problem for the intellectualist program.

Our argument proceeds as follows: In §2 we present three paradigmatic cases of scaffolded skill manifestation. We then point to seeming differences with respect to the correctness of know-how ascriptions in those cases relative to typical ascription contexts. §3 provides an initial account of the dialectical situation theorists find themselves in, when aiming convincingly to diagnose the source of the contrasts from §2. Four initially tempting responses are set aside in §4. In §§5-§7, we proceed to investigate paradigmatic intellectualist approaches to the challenge. §5 considers and finds unsatisfactory the explanation provided by Bengson and Moffett (2012) that the relevant contrasts are merely due to differences in information states. For the sake of argument, we concede to Bengson and Moffett that a manifestation of knowledge how to $\phi$ must be guided by an accurate and complete conception of a way to $\phi$ (Bengson and Moffett 2012: 192). We also concede that this idea satisfactorily explains some important know-how contrasts. Still, it does not constitute substantial explanatory progress with respect to the contrasts presented in §2. §6 considers whether intellectualists may satisfactorily tackle the challenge head-on by appeal to contrasts in propositional knowledge. We find this approach wanting. Even a resort to “skill-based
intellectualism” (Stanley and Williamson 2016; cf. Habgood-Coote 2018: 14) offers insufficient resources to deal with the problem. §7 then probes whether intellectualists could explain the relevant contrasts by adding to their account a suitably tailored sensitivity constraint on scaffolded know-how. We argue that such a constraint is difficult properly to motivate and articulate. §8 then investigates, in brief outline, how anti-intellectualism could hope to overcome the explanatory challenge. Finally, §9 concludes that, even if our argument offers no decisive argument in favor of anti-intellectualism, at least it offers motivation for further exploring certain versions thereof.

2. Scaffolding skill manifestation and know-how.

As Kim Sterelny has aptly put it, environmental resources are often central to human intelligence (Sterelny 2010: 466). Such resources are “importantly, robustly, reliably or persistently supportive of decision making” (ibid.). Sterelny appropriately harnesses the evolutionary-biological metaphors of a scaffolded environment of cognition and the construction of ecological niches: agents’ cognitive competences often are deeply dependent on intentionally responding to extra-somatic resources provided by other agents (ibid.). The following stock examples are paradigmatic of this phenomenon:

Chris, the kytoon-builder: Chris wants to build a kytoon – a model airship. However, she desires accurate information about how to build a kytoon before she is ready to start her project. Still, she knows that information of the desired kind is available through a specific website, which she proceeds to access. Executing the steps described there, with modest
effort over a few days she builds a fully functional kytoon (adapted from Bengson and Moffett 2012: 172-173)

*Berta, the BMW mechanic*: Berta is a highly trained BMW mechanic, the best in the business. Yet, even to Berta, modern BMW cars are incredibly complicated marvels of modern engineering. Thus, she cannot perform satisfactory motor maintenance work on such a car without reliance on advanced diagnostic tools as well as tokens of the company’s repair manuals and blueprints. And even then, it requires of her some concentration and modest effort. Yet, using those props she very reliably performs motor maintenance work on modern BMW cars.

*Will, the Elizabethan actor*: Will is a member of a theatre troupe in Elizabethan England. Just as his colleagues, Will regularly performs in many different plays, playing very many different characters. In order to pull this off, he heavily relies on on-stage cues provided by props, costumes, and dialogue construction. E.g. Will is celebrated for his breath-taking performance as Ophelia in Shakespeare’s tragedy *Hamlet*. Yet, he would literally be clueless about how to play this role, were it not for the many cues provided by fellow actors and stagehands during each performance (adapted from Tribble 2005; Sutton 2010; Sutton and Tribble 2011. For discussion see Sterelny 2010: 477)

In each case, an agent ultimately manifests ability in a way scaffolded by her environment. Yet, the following ascriptions seem justified:
1. Before Chris starts building her kytoon, she does not know how to build a kytoon.

2. Before Berta begins work on a specific recent BMW car, she already knows how to perform motor maintenance work on recent BMW cars.

3. Before Will and his fellow actors begin a specific performance of *Hamlet*, Will already knows how to play the role of Ophelia.

Unsurprisingly, our verdict on kytoon-building Chris coincides with that of Bengson and Moffett (2012: 173). And notice how odd it would be to trust Berta with an expensive BMW car, or Will with a key role in a staging of *Hamlet* before a discerning audience, if they do not know how to go about their business.

The challenge is to explain in an appealing way, why Chris seems to lack know-how, while Berta and Will don’t. As shall turn out below, this is harder than it may initially seem.

3. The explanatory challenge – a first diagnosis.

Denying that there seems to be a contrast in know-how between Chris and Berta/Will is no serious option. Either we must offer an error-theory or acknowledge the contrast as actual and satisfactorily explain it. The error-theoretic approach would have it that the contrast is not real, yet at least many of us are somehow psychologically fooled into thinking that it is. We are deeply unsure how a plausible psychological explanation would go here. Yet, its first conjunct would already bring an error-theory into serious trouble: If the contrast is not real, either Chris already
knows how to build a kytoon before accessing the instructions, or Berta does not know how to maintain recent BMW motors.

This opens an unappetizing dilemma: If Chris already has know-how, it would seem very weird and irrational that she would feel a need to learn how to build kytoons. And *mutatis mutandis* we would have to ascribe know-how to anybody of anything they know how to find suitable instructions for; a monstrous practical-cognitive bloat, since with modern smart phone technology literally most of us have millions of instructions at our fingertips most of the time (Farkas 2016: 14-15). In that case, practical knowledge would hardly be the achievement, which intuitively it is (Bengson and Moffett 2012: 2; Carter and Pritchard 2015). For typical agents, accessing a functional smart phone would do for getting to know how to do very many complex things. This is not to deny, as observed by Kathrine Hawley, that much practical knowledge is “*widespread and relatively useless*” (Hawley 2003: 29). She exemplifies this point with the case of Shula, who knows “*how to speak-Russian-after-five-years-in-Moscow*”, simply in virtue of knowing a little about Russian and knowing herself to have average language learning skills (ibid.). Following Hawley, similarly and in a somewhat Pickwickian sense we may perhaps ascribe to Chris knowledge of how-to-be-a-competent-kytoon-builder-after-having-followed-reliable-kytoon-building-instructions. But this does not make it the case that already she also knows how to build a kytoon.\(^2\)

\(^2\) As Kathrine Hawley has also pointed out, at least for some skills which abilities warrant their ascription varies by context. E.g. in a British context a driver needs to be able to handle a stick transmission for her to be skilled at driving, whereas this is not the case in all American contexts (Hawley 2003: 5-8). More generally, Erasmus of Rotterdam’s famous dictum seems relevant: *In regione caecorum rex est luscus* (literally “In the region of the blind the sighted man is king” but traditionally rendered in English as: “In the land of the blind, the one-eyed man is king” (Knowles ed. 1999: 301)). E.g. the lament is typically heard from older people that the range of abilities needed to count as skillful or practically knowledgeable at some traditional task is not as broad as it used to be or as difficult to manifest.
The other horn of the dilemma is hardly inviting either. It would seem hard for any human to know how to maintain the motors, if expertly Berta doesn’t know how to maintain them. Instead of a know-how bloat, we are afflicted with an equally absurd case of know-how drain. Notice that fine-graining know-how states is not a promising recipe against this problem. Fine-graining would allow an error-theorist a chance to say the following: Chris does not know how to build kytoons in general, even if due to her instructions she knows how to build the specific type of kytoon she proceeds to build. Likewise, Berta does not know how to maintain BMW motors in general, even if she knows how to maintain each specific motor she is trusted with. This obliterates the perceived know-how contrast between them. This verdict on Berta is deeply puzzling, however. Berta is a trusted mechanic due to her know-how. For each car motor she is trusted with, its owners rely on her knowing how to maintain it. If this trust is warranted, it seems highly strange to deny that generally she knows how to maintain the relevant type of motor.

To conclude this section: It holds little appeal to deny an actual contrast in know-how between Chris on the one side, and Berta/Will on the other. The pertinent question is how to explain this contrast.

4. Four non-starters.

A tempting response at this stage is to acknowledge the contrast, while rejecting our assumption that it poses any significant explanatory challenge to philosophical accounts of know-how. Seemingly any such account must postulate some threshold, such that falling above or below that threshold determines whether one has know-how. All we need to acknowledge now is that Chris
falls below the relevant threshold, whatever it is, whereas Berta and Will are above it. This acknowledgement is obviously consistent with an entire panoply of philosophical accounts and should not significantly constrain our level of commitment to any particular type of account.

Arguably, this response misses the target. Given that a contrast in know-how is sufficiently clear and theoretically important (see §3), our default assumption must be that the contrasting cases are juxtaposed on opposite sides of the relevant threshold. If this assumption stands undefeated, surely a desideratum for an illuminating account of know-how must be to offer at least some hope of explaining why the cases are juxtaposed thus. On the other hand, *prima facie* such an explanation need not pronounce on the exact nature of the threshold or its exact location. So, the objection that our explanatory challenge equals an unreasonable demand for such a specification of the relevant threshold will not bite. We shall proceed on the assumption that this desideratum remains in force. We now consider three attempts at easily satisfying it, which we deem unsuccessful, even if they hold some initial attraction.

First, one could appeal to a contrast in learning history between the cases: E.g., Berta has already learnt how to maintain BMW motors (using the manuals and all), while Chris is yet to learn how to build a kytoon. On the most naïve reading, however, this difference in learning history is merely a difference in practical knowledge by another name: Since neither kytoon-building nor motor maintenance knowledge is innate, not having learnt how to build a kytoon equates to not knowing how to build it, while having learnt how to maintain BMW motors equates to knowing how to maintain them. Any blunt explanation of the know-how contrast in terms of learning history

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3 We owe this response to Mona Simion in conversation.
would be circular, since both phenomena stand in need of exactly the same kind of explanation. Still, there seems to be some important link between skill-acquisition and training. We would rarely, if ever, call a performance skillful if its trajectory has not been influenced by relevant prior training (see e.g. Hawley 2010: 401). And skillfulness seems intimately related to know-how (see §6 below). Yet again, arguably an explanation in such terms would beg the question. Clearly, Chris is not without skills related to her trajectory towards kytoon-building success, e.g. she is skillful in accessing and following the relevant kinds of instructions, and presumably those skills have been honed by her previous self-training in the search and use of information. The problem remains why Chris has not thereby acquired kytoon-building know-how.

Secondly, an appeal to contrasts in previous hands-on experience will not help either. It does not matter, all else being equal, that Berta has successfully maintained BMW motors before, while Chris is building her first ever kytoon. Chris could have built kytoons sometime before yet have completely forgotten again how to build them. And Berta could be maintaining her first ever BMW motor after having recently acquired her relevant skills through a technical course. As Hawley observes, “it is unlikely that there is a sharp distinction between knowledge how which does and that which does not require practice on the part of the learner before it is acquired...Some people only need to be shown once, while others never get the hang of things” (Hawley 2010: 401).

Thirdly, at least on an immediate understanding there need be no contrast in reliable skill manifestation between the cases, such as to explain the know-how contrast (see also Bengson and Moffett (2012: 173) referring to Chris as a clear case of “reliable [practical] ignorance”). In each case, we may assume, skill manifestation is highly safe in the following sense: Experts as they are,
and highly dependable as are their relevant informational scaffoldings, Berta and Will could not easily have failed to manifest their skills in successful performance. But the same could be said for Chris, without affecting her initial lack of know-how: she knows where to find accurate kytoon-building instructions and her access to those instructions and her understanding of them is highly dependable. Thus, she could not easily have failed to access accurate instructions. Moreover, she does not fail to follow the instructions, nor could she easily have failed to follow them.

In contrast to the non-starters above, the nature of the relationship between the skill-manifesting agent and her informational scaffolding still seems of utmost explanatory importance. At least initially, Chris lacks some salient relationship to her scaffolding, which obtains between Berta and the repair manual tokens and between Will and the *Hamlet* on-stage cues respectively. But which type of relationship could this be? In the following sections, we investigate the prospects of prominent intellectualist contenders.

5. Guidance by accurate and complete conceptions.

John Bengson and Marc Moffett have offered several fine examples to motivate their claim that a genuine manifestation of knowledge how to \( \phi \) must be guided by an accurate and complete conception of some way to \( \phi \). Apart from kytoon-building Chris, their central examples are:

*Salchow:* A figure skater named Irina can execute what outwardly appears to be a Salchow; a complex type of jump. However, Irina is seriously mistaken about how to perform a Salchow. Thus, her attempts at Salchows invariably are guided by a highly inaccurate conception of how properly to execute a Salchow (e.g. she is mistaken...
about the proper position of the landing skate). It just happens to be that her brain is so wired that her inaccurate conception reliably leads her body through the correct Salchow motions (adapted from 2012: 171).

Swimmer: Making correct backstroke motions is a way competently to escape being buried in a snow avalanche. A swimmer, trained in the tropics, is an expert in backstroke motions. She always executes those motions correctly, guided by a highly accurate conception of them. However, she has no notion of snow or avalanches whatsoever (adapted from (2012: 185-186)).

Bengson and Moffett conclude:

Examples like Swimmer show that one fails to know how to φ if one lacks a conception of a way of φ-ing. Another route to a failure of knowledge how to φ is to have an incorrect conception of way of φ-ing. Recall Irina in Salchow. She is mistaken about the way to do a salchow (she conceives of a certain sequence of movements as constituting a way of doing a salchow when they do not) and hence does not know how to do one. (2012: 186)

Now, however, they advance a similar explanation why kytoon-building Chris lacks know-how:

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4 Examples in this style hark not least from Carr 1979. Carr memorably uses the example of a dancer, who is highly competent at performing a particular dance routine, which unbeknownst to him also constitutes a semaphoric rendition of Thomas Gray’s famous Elegy Written in a Country Churchyard (1979: 407). See also Fantl 2008: §2.
Yet a third route to a failure of knowledge how to $\phi$ is to have an *incomplete* conception of a way of $\phi$-ing. Recall Chris in *Kytoon*. She lacks sufficient information about the way to build a kytoon (this is why she performs a Google search) and hence does not know how to build one. Irina’s conception is incorrect; Chris’s conception is incomplete. (2012: 186)

We find this explanation unsatisfying. E.g., in what sense is Chris’s conception of how to build a kytoon incomplete, while Will’s conception of how to play Ophelia isn’t? Surely Chris’s predicament is strongly disanalogous to that of either Irina or Swimmer: Unlike Irina, she is not mistaken about the method she employs towards kytoon-building. And unlike Swimmer, she clearly conceives of what she is doing as aimed towards the relevant kind of success, in her case: building a kytoon. In an earlier passage, Bengson and Moffett have offered as an *explanans* for Chris’s initial practical ignorance simply that “the information Chris possesses at the time of her initial decision to seek further information is, by itself, inadequate to build a kytoon” (2012: 173). But first, this explanation seems too sketchy. It does not specify in any way which information Chris would have needed to possess in order already to have known how to build the kytoon. So, it remains highly unclear in what relevant way Chris’s initial informational state is “inadequate” or “incomplete”\(^5\). Secondly, practically knowledgeable agents like Will and Berta must also rely on a flexible informational scaffolding on their way to manifesting their skills. Since that scaffolding must provide crucial relevant information along the way at relevant occasions, they do not already

\(^5\) Here we do not want to commit to the controversial thesis that all explanations must be contrastive (famous sources of this thesis are Van Fraassen (1980) and Garfinkel (1981)). Rather, we simply maintain that when the explanatory value of an *explanans* crucially turns on the otherwise unexplained “inadequacy” of some variable value, only a contrast could satisfactorily account for the explanatory force of this inadequacy.
possess all this information when they initiate their tasks, nor would they have any obvious use for it at that time. So Bengson and Moffett say too little to explain why Chris lacks know-how, while Berta and Will don’t. Surely, they also stipulate that Chris may well be “anxious” that she will get proper kytoon-building instructions (2012: 173). But this observation does not seem to cut out any relevant contrast: Probably, since he is a typical actor, Will is also anxious that he will get proper stage cues to pull off his celebrated performance. Still, he knows how to perform.

To wrap up this section: Bengson and Moffett seem right that genuine know-how must somehow be backed by proper conceptions. But it remains too unclear how this insight could satisfactorily explain the relevant contrast between ignorant Chris on the one side and knowledgeable Berta and Will on the other.


Bengson and Moffett’s explanation aside, perhaps the most tempting intellectualist strategy is to face the problem head on: Perhaps, whereas Berta and Will know enough propositions already to know how to do what they are about to do, Chris doesn’t.

Here intellectualists face a problem of avoiding *ad hoc* suppositions, however. In order to make their explanation stand out as a serious contender, they must specify, to some satisfactory degree, which propositional ignorance accounts for Chris’s practical ignorance. And they must motivate this account in a principled way that does not commit them to undermining practical knowledge.
ascriptions in cases such as Berta’s and Will’s. This is no easy task. There are many elements in the kyttoon-building process she is about to undertake, such that Chris does not know in advance that those particular elements shall be required. But mutatis mutandis the same could be said for Will or Berta: To manifest their skills, also they must appropriately respond to their informational scaffolding in ways whose exact nature they could not plausibly predict. E.g. Berta hardly knows in advance for every BMW motor blueprint to which she must appropriately respond, that the exact way she must respond to this particular blueprint is the correct way for her to respond en route to successful BMW motor maintenance.

Of course, in some salient sense, Berta and Will have more comprehensive and accurate preconceptions of their upcoming task as compared to Chris. But the relevant notions of comprehensibility and accuracy are graded phenomena. Thus, a mere appeal to such phenomena will hardly suffice to explain any clear-cut contrast in know-how⁶: it is not enough to be told simply that, unlike Berta and Will, Chris does not understand her upcoming task accurately and comprehensively enough for her to know how to do it. Such an explanation would be no more illuminating than submitting that a heap of sand constitutes a heap, because there are enough grains of sand in it. We need to understand why Chris falls below the relevant threshold, while Berta and Will clear it.

Arguably, the problem is not eliminated by offering what Joshua Habgood-Coote has aptly termed a “skill-based intellectualism” (2018: 14). According to this version of intellectualism, all skills are

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⁶ Of course, it does not follow from there being clear-cut contrasts in know-how that know-how is never gradable. Very plausibly, most types of know-how are indeed gradable (Pavese 2017).
essentially capacities to acquire some relevant body of propositional knowledge. Thus, skill-based intellectualists will say that Chris’ practical ignorance comes down to her having not yet acquired the relevant kytoon-building skill. But such intellectualists do not thereby commit to this lack of skill ultimately coming down to the lack of an ability or indeed anything apart from Chris’s failure to manifest relevant propositional knowledge states at relevant occasions. This seems attractive.

A paradigmatic version of skill-based intellectualism has recently been forwarded by Jason Stanley and Timothy Williamson, here writing of a proficient ball player:

> On our view...skills are dispositions to acquire knowledge-wh, skilled action depends on fluid acquisition of reasons for action (which are knowledge states). But it also provides a standing state that constitutes the skill—simply being disposed to know facts relevant to guiding actions of scoring. Such standing states explain why some people receive high salaries to play professional sports. (Stanley and Williamson 2017: 718)

Stanley and Williamson’s skill-based intellectualism has already come under fire elsewhere. Not least the position is explicitly motivated by the alleged need to accommodate the thesis that “strength, speed, and stamina are not themselves skills” (ibid.: 721). In fact, more precisely, Stanley and Williamson seem to defend the following thesis: All else being equal, differences in strength, speed and stamina (such as would be needed for certain abilities), do not constitute differences in skill. This is clear from their examples. E.g. they argue that two weightlifters who can bench-press very different maximum weights while using the same techniques are in fact equally
skilled at bench-pressing (ibid.). A similar point allegedly could apply to two runners with different records on the same distance (ibid.).

However, as plausible as those examples may be, other examples make the general thesis seem much less plausible. In response to Stanley and Williamson, e.g. Natalia Waights Hickman has noted that plausibly a pianist who can play through a difficult piece at full speed without missing a note is more skilled than someone who can only play it slowly. And this difference comes down to differences in abilities, not least muscle memory and honed fine motor abilities, which are not easily seen as mere capacities to respond to reasons in the form of propositional knowledge states (Hickman 2018: 6). Disregarding such general problems, here we shall focus on skill-based intellectualism’s explanatory power with respect to our salient know-how contrasts. To take advantage of their framework, such intellectualists must offer a difference in the sort of standing state described by Stanley and Williamson as their explanation why Chris is practically ignorant, while Berta and Will are not.

First, we should notice that skill-based intellectualists have strong reasons to accommodate cases of know-how where the relevant skill needs heavy scaffolding to manifest itself. As noted by Habgood-Coote “a skilled swimmer still knows how to swim when she is lying on the sofa, recovering from a tough morning session” (2018: 15). Thus, the propositional knowledge involved in typical skills such as swimming must be situation-specific and transient in nature. If, in virtue of her skills, a skilled swimmer motorically responds with her left arm to an unusual wave based on her propositional knowledge of the appropriate way to respond to this kind of wave given her exact momentary body position, surely her disposition for being rationally guided by this exact
piece of knowledge must strongly depend on her ecological information for its fleeting (sic!) manifestation.

Now, the problem is that Stanley and Williamson say very little about how the relevant disposition to be guided by propositional knowledge could strongly depend on ecological scaffolding for its manifestation, while still counting as a standing skill. And it is not obvious how they could offer an illuminating account here. Their claim that “Our account of skill may be regarded as entailing the generic claim that skill in ϕ-ing is knowing at the time of action facts appropriate to guiding ϕ-ing” (Stanley and Williamson 2017: 717) does not seem very helpful. Ignorant Chris seems to satisfy this condition perfectly, as soon as her kytoon-building project gets under way. And the claim that a “standing state” must explain the differences between professional ball players of high and low market value (2017: 718) surely provides reason for thinking of valuable skills as standing states, but hardly for thinking of them merely as standing dispositions for acquiring propositional knowledge. Finally, without independent reason for thinking of such standing states as simply dispositions of this kind, we seem to lack any substantial reasons for thinking that “an action exhibits a skill if and only if it is guided by the knowledge states that are direct manifestations of that skill” (2017: 717). In fact, this claim seems rather counter-intuitive. Plausibly enough, a practical expert’s dispositions fruitfully to be guided by propositional knowledge has typically been honed by her training to such an extent that they have become second nature to her. But if she is put in a deceptive interactive simulator taking advantage of those deep-seated dispositions such as to fool and frustrate her, in which normal sense does her futile and increasingly frustrated attempts at making sense of the situation then “exhibit” her expert skills? Suppose, e.g., that each time Berta’s dispositions let her act on her knowledge that a certain tool is appropriate for a repair
task, the simulator ensures that this tool is either missing or broken. It would seem natural to say that such circumstances conceal rather than exhibit her skillfulness, since she achieves no success whatsoever, even if her propositional guidance dispositions work at full power.

Very recently, Habgood-Coote has offered an alternative to Stanley and Williamson’s skill-based intellectualism, which he calls “The Interrogative Capacity View”:

The Interrogative Capacity View. For any context c, subject S, and activity V, an utterance of ‘S knows how to V’ (in its practical-knowledge ascribing sense) is true in c iff c has associated with it a set of practically relevant situations {F1, F2, ...}, and, for all (or at least most) Fi that are members of {F1, F2, ...}, S has the capacity to activate knowledge of a fine-grained answer to the question, how to V in Fi?, in the process of V-ing. (Habgood-Coote 2019: 92)

This position is still “weakly intellectualist because it claims that knowledge-how is a relation to the set of propositions that answer how to V?” (ibid.). Can it help out intellectualism here? If so, the position must explain how Chris lacks the relevant kind of capacity, while Berta and Will have it. Habgood-Coote’s view departs from Stanley and Williamson’s primarily in his conception of the ways propositional knowledge could relate to skill manifestation. On the one hand, he is more restrictive and concessive to anti-intellectualism: While Stanley and Williamson see skill as a standing cognitive state, which could well survive physical disability, Habgood-Coote insists that the skillful agent must be able to apply her propositional knowledge in action (2019: 92). In other respects, he is more permissive than Stanley and Williamson, entertaining a very liberal
conception of what it means to answer a question: “I want to suggest that we think of intentionally V-ing as involving answering the question of how to V” (2019: 96). In the limiting case, then, one is sufficiently intellectually engaged in a bodily process for it to count as skillful, simply by engaging in it intentionally, even if all propositional knowledge involved here is “transient, demonstrative, and never consciously articulated” (2019: 93).

Habgood-Coote’s framework has two knobs to turn in addressing our explanatory challenge. He might try to explain the contrast between Chris and Berta/Will by appeal to their respective sets of practically relevant situations, or he might appeal to the degree to which their potentially known answers are fine-grained.

The latter option seems unappealing. Habgood-Coote does not define “fine-grained answer”, except by offering as an example of a “coarse-grained proposition” the proposition that I can swim by splashing about in the water, while a corresponding “fine-grained” proposition must “specify an exact technique for swimming in a particular situation” (2019: 90). So, presumably, a fine-grained answer is a fine-grained proposition, and a relevant fine-grained proposition is a proposition specifying a technique in a highly detailed manner. But surely, when Chris is engaged in successful kytoon-building she must know many such fine-grained answers to questions about how to use her building materials. E.g., often during the building process, she must know exactly which pieces to glue together. And in any case, it is not easy to see how we could compare Chris with Berta and Will in this regard such as to shed much light on their epistemic differences: In which sense, e.g., are Chris’ techniques more “exact” as compared to Will’s? Prima facie the former option seems more promising then. To take advantage of this explanatory strategy Habgood-Coote would need
to argue (1) that there are sufficiently many practically relevant situations associated with our normal ascription contexts, such that a practically knowledgeable kytoon-builder could activate relevant propositional knowledge in them, but Chris cannot. (2) While there are sufficiently many practically relevant situations associated with our normal ascription contexts, such that Will and Berta can activate relevant propositional knowledge in them, a practically ignorant mechanic or actor could not.

But what, to begin with, are we to understand by a “practically relevant situation” associated with a practical knowledge ascription? In unfolding this notion, Habgood-Coote appeals to a general “flexibility” intuition: “knowing-how involves an ability to react intelligently to a wide range of situations” (2019: 94). Endorsing this idea, he then states that “we can also explain the flexibility of knowledge-how by appealing to the fact that, in complex cases, a capacity to answer questions on the fly will produce different answers to meet the needs of the situation” (2019: 96).

“Answering a question on the fly”, in turn is defined thus: “an ability to answer questions on the fly is an ability to activate fine-grained knowledge of the answers to a question in a contextually supplied set of practical situations, where one activates this knowledge by doing the relevant kind of activity” (2019: 92). This latter formulation is then endorsed as a less technical formulation of The Interrogative Capacity View as presented above.

Unfortunately, this means that Habgood-Coote moves in an explanatory circle. Ultimately, one’s question-answering capacities are flexible enough for know-how, simply if one possesses the relevant know-how. We are left without an independent standard or conception of flexibility such as to determine, with any confidence, whether an ascribee’s question-answering capacities are
flexible enough for know-how ascription. So, we seem left without much hope of better understanding the contrast between Chris and Berta/Will.

Still, Habgood-Coote’s framework seems to point us in a promising direction. Indeed, there is something limited and rigid about Chris’s ability to build a kytoon. Not least, there are easily imaginable counterfactual situations where she would be led astray and ultimately fail to manifest any kind of kytoon-building competence. We shall now explore whether this idea could support an adequate intellectualist explanation of why she lacks know-how, while Will and Berta have it.

7. Scaffolding Sensitivity.

As was noted in §4 above, Chris plausibly lacks know-how, even when following her kytoon-building instructions could not easily have led to anything but her ultimate successful manifestation of kytoon-building ability. Safety concerns thus seem impotent in cutting out a crucial difference between the know-how contrast cases. But what of that other traditional modal-epistemic notion: sensitivity (cf. Nozick 1981: 167-185)? Even if the instructions could not easily have misled Chris, if counterfactually they had been somewhat misleading, would not Chris still have followed them, thus failing ultimately to manifest kytoon-building ability? And would not this be the case exactly because Chris is a novice, who is yet to acquire knowledge of how to build a kytoon? Suppose e.g. that there was a misprint in Chris’s copy of the building instructions, such that following this version would introduce a fatal structural flaw, ensuring that ultimately no kytoon is built. E.g. two pieces of balsa wood must be firmly glued together early in the building process, yet the flawed instructions prescribe far too little glue for the structure ultimately to
become sufficiently rigid. Surely Chris, having no preconception of the structural role of this adjoin- ing in the finished kytoon and relying sheepishly on her instructions, would have followed such flawed instructions, and hence could not have manifested kytoon building skill through reliance on her scaffolding under those counterfactual circumstances. Perhaps then, Habgood-Coote’s flexibility intuition could be reframed as a sensitivity intuition.

Consider again Berta and Will. Neither agent rely unreflectively on his or her cognitive scaffolding, even if each crucially depend on it for her or his ultimate success. Due to their expertise, when entering a required trusting relationship to a token scaffolding in their respective settings, even if by default they must trust it to achieve success, they are much less blind to the difference between infirm and sturdy scaffoldings as compared to Chris. At the very least, if their scaffoldings had been strongly misleading, they would no longer have trusted them to a similar degree. To exemplify: If by mistake Berta had gotten hand of a maintenance manual for a BMW diesel motor instead of a petrol motor, due to her mechanical expertise, she would have noticed immediately and would not have followed that manual when probing a petrol motor. And if, as a prank, Will’s rival in the theatre troupe had cued him in on Juliet’s balcony monologue from *Romeo & Juliet* instead of Ophelia’s madness monologue in *Hamlet*, due to his acting expertise, Will would not have taken this bait but would have tried to hold up appearances and play through the scene as best as he could under the circumstances.

Explaining the contrast between Chris and Berta by appeal to a sensitivity constraint, then, has some intuitive promise. Clearly novices like Chris are very often novices in part because of their lack of sensitivity to misleading informational scaffolding. In colloquial terms, they simply know
too little about what they are doing, in order fully to know how to do what they are doing. In turn, experts like Berta and Will are experts in part because of their fine-tuned sensitivity to misleading scaffolding. We would expect nothing less from such experts than being able smoothly and reliably to correct for other agents’ mistakes. Now, perhaps this sensitivity contrast could come down to contrasts in propositional knowledge or dispositions to acquire such knowledge.

Yet, we argue, appeals to sensitivity contrasts will not provide intellectualists with a superior way of explaining the salient know-how contrasts. Chris is not totally insensitive to her scaffolding. Plausibly, she knows enough about what a finished kytoon looks like for her to appreciate very grave instruction errors. Otherwise, it would be unclear that she was even aiming toward building a kytoon to begin with. In contrast, Berta and Will are not hypersensitive superhumans. Even experts such as they may be misled by suitably subtle errors in the scaffoldings they rely on. Intellectualists then must locate a threshold of sensitivity to erroneous information in the scaffoldings required to φ, if not exactly, then at least exactly enough to explain why our test cases are juxtaposed on either side of it. We see no way this could be done in a way that would not be unsatisfactorily vague and irredeemably ad hoc: apart from the general vagueness problems haunting standard possible-world semantic interpretations of counterfactual conditionals (see, not least, Lewis 1979), its unavoidable reliance on notions such as “subtle error” and “grave error” seems enough to undermine any purported sensitivity explanation’s claim on explaining any very clear know-how contrast. And even if charitably we ignore such vagueness issues, nothing seems ultimately to justify any particular sensitivity threshold constraint on practical knowledge, except from making intellectualist sense of contrasts like those between Chris and Berta. Also, taking on board a sensitivity constraint further complicates the intellectualist account. If simplicity is a
theoretical virtue, intellectualists should not build a sensitivity constraint into their account of practical knowledge, since it offers no decisive explanatory advantage.

8. An anti-intellectualist solution?

Anti-intellectualists characteristically deny that practical knowledge is always constituted by propositional knowledge. *Prima facie* this should offer such theorists more elbow room in accounting for know-how contrasts in cases of informationally scaffolded ability manifestation. This is not to say, however, that a convincing anti-intellectualist explanation is easily forthcoming. Ideally, we would want such an explanation to make explicit an independently motivated contrast between Chris and Berta/Will, such that this contrast accounts for the salient know-how contrast between them. Above, we have spent considerable space demonstrating that current intellectualist conceptions of know-how struggle to do this. Due to space restrictions, we can evaluate anti-intellectualist approaches only tentatively, realizing full well that even *pro tanto* therefore our over-all argument constitutes at most a weak reason for preferring anti-intellectualism over intellectualism. Still, in this section we hope at least tentatively to present considerations offering some glimmer of hope that a satisfactory anti-intellectualist explanation could be established.

First, an anti-intellectualist could exploit the obvious contrast in the *naturalness of skill-ascription* between the cases: As already noted above, whereas it seems unnatural to ascribe kytoon-building skills to Chris before she starts building her kytoon, skill-ascriptions come naturally in cases such as Berta and Will. Now, unlike skill-based intellectualists, anti-intellectualists are under
no theoretical commitment to make sense of skills in terms of propositional knowledge, which is
generally considered a robustly objective phenomenon within the extant intellectualist tradition.
So, anti-intellectualists seem free to adopt a subjective nominalist\(^7\) theory of skillfulness and
explain the salient know-how contrast in terms of correct skill-ascription: to know how to \(\phi\) is
simply to be correctly conceived of as skillful at \(\phi\)-ing, where the standard of correct conception is
independent of any inherent traits of the skillful subjects\(^8\).

However, many would probably feel that such a nominalist approach puts the cart before the
horse: The standard of correct skill-ascription can be nothing except the inherent skillfulness of
the ascribees. If so, the anti-intellectualist needs a more considered approach. One anti-
intellectualist line worth pursuing could be this: As convincingly argued by David Carr (1979), one
can manifest an ability to \(\phi\) in ways far too accidental for establishing knowledge of how to \(\phi\). In a
broad sense, one can be counted able to \(\phi\) simply by \(\phi\)-ing due to sheer luck, or by doing
something which counts as \(\phi\)-ing even if one is entirely unaware of this. Clearly, such abilities do
not constitute knowledge of how to \(\phi\) (see also Fantl 2008: §2). Above, we considered Bengson &
Moffett’s 2012 intellectualist explanation of this in terms of the accuracy and completeness of the
agent’s conception of her \(\phi\)-ing. We concluded that this intellectualist account does not
sufficiently explain the contrast between Chris and Berta/Will. Carr’s idea is different, however.
In short, he argues that success only manifests know-how when suitably intentional. Actions, he

\(^7\) We use the term “subjective nominalism” in accordance with the usage established by D.M. Armstrong (1978:
 Chapters 2-3), where conceptualists and traditional predicate nominalists equally count as subjective nominalists.

\(^8\) Note that this is not the kind of error-theory we deemed inappropriate in section 3. The subjective nominalist
recognizes the contrast in know-how between Chris and Berta/Will but prefers to account for this contrast in
subjectivist terms: we ascribers are the measure of the contrast, not the inherent traits of the ascribees. We are
grateful to an anonymous referee for this journal for urging us to point this out.
submits, must be understood as “bits of behaviour characterised by their intentionality or
purposefulness” (1979: 408).

On a first blush, this idea seems to make little progress. After all, just as Chris intends successfully
to complete a kytoon by reliance on her scaffolding, Berta intends successfully to complete a
BMW motor maintenance session by reliance on her scaffolding. In neither case is the agent’s
success due to sheer luck or characterized in a way alien to the content of the agent’s guiding
intentions. And, to return to Habgood-Coote’s intellectualist account considered above, both Chris
and Berta seem in practice to offer at least one kind of answer to the question of how to go about
their respective tasks.

However, perhaps the right way to think of the “purposefulness” of action in this explanatory
context is not by way of intentions considered as contentful conative states. In his famous
refutation of ascriptivism, P.T. Geach defined his opponent’s position thus: “Ascriptivists hold that
to say an action x was voluntary on the part of an agent A is not to describe the act x as caused in a
certain way, but to ascribe it to A, to hold A responsible for it” (1960: 221). Now, even if ultimately
ascriptivism offers a flawed conception of intentional action⁹, it still harbors a promising idea in
the present context. For, as their cases were described, there certainly seems to be a valid sense in
which Chris is less responsible for her success as compared to Berta and Will: if Chris had failed
due to flaws in an apparently trustworthy kytoon-building manual, we would not consider her
blameworthy for this. As the case was set up, we cannot justifiably hold her responsible for such

⁹ See, however, D’Almeida 2016.
flaws\textsuperscript{10}. On the other hand, we probably do expect professional agents like Berta and Will to have their informational scaffolding in working order, even if they must heavily rely on it for their success. We would not entirely exonerate them, had they failed due to misleading instructions, since we standardly judge it to be the responsibility of such agents not to rely on misleading information. In Will’s case, perhaps Will himself is not appropriately blamed for the misleading cues of fellow actors, but at least blame would standardly befall the theatre troupe, of which Will is a member. They (including Will) should have rehearsed more, we would typically say. In any case, also Will’s situation is markedly different from Chris’s, where blame for failure due to misleading information seems out of place, no matter whether it is supposed to target Chris directly or indirectly.

Now, tentatively, we suggest that an anti-intellectualist could pursue the following line of argument: Know-how is the possession of appropriate skill. Cf. Carr, skill concerns the ability to perform actions, which are in a relevant sense purposeful, aimed at a characteristic form of success\textsuperscript{11}. At least in some cases, being aimed at the characteristic form of success requires the agent to be responsible for her success, or the lack thereof. At least in some cases of informationally scaffolded success, the agent is not responsible for her success, or the lack thereof, unless she is responsible, either directly or indirectly, for the ability of her scaffolding to support the relevant success.

\textsuperscript{10} This is not to say that holding Chris responsible is \textit{inconsistent} with the Chris vignette, only that, unlike the Berta and Will vignettes, the Chris vignette does not afford the ascription of responsibility in any clear way. We are grateful to an anonymous referee for this journal for urging us to make this clear.

\textsuperscript{11} Notice that an anti-intellectualist may insist on a close tie (relevant to a context) between a skill and a range of abilities without thereby committing to any specific theoretical account of this relation. But it seems tempting to employ Ernest Sosa’s influential conception of competence as “the disposition (ability) to succeed when one tries” (2015: 95) and then understand skill as the inner seat of such a competence, i.e. that state in virtue of which the agent will ably succeed given favorable external conditions (2010: 465).
All we need now is the observation from above that Chris does not seem responsible for the ability of her kytoon-building manual to support kytoon-building success, whereas Berta seems (in virtue of her professional role) responsible for the accuracy of the manuals she chooses to consult, and Will is at least indirectly, through his membership of his theatre troupe, responsible for the quality of the cues he is given. Since this contrast in responsibility does not seem to afford an analysis in terms of propositional knowledge, this is a \textit{bona fide} anti-intellectualist explanation. However, substantiating it and defending it in detail lies outside the scope of this paper. So is obviously any attempt significantly to support an anti-intellectualist conception of know-how by abductive inference from the salient know-how contrasts considered above. Here we have merely aimed to demonstrate that at least certain explanatory strategies seem open to anti-intellectualists, whereas intellectualists struggle even to offer the outline of a satisfactory explanation.

9. Conclusion.

We have pointed to a significant challenge facing philosophical accounts of practical knowledge: How to explain salient seeming contrasts in know-how between various cases of informationally scaffolded ability manifestation. We argued that an error-theory is no attractive option here: This will either commit us to an unacceptable know-how bloat or an equally unacceptable know-how drain. There is no obvious way to deflect or mollify the challenge. We then argued in some detail that no satisfactory intellectualist explanation seems forthcoming. Despite being rooted in relevant concerns, the explanation offered by “objectual intellectualists” Bengson and Moffett (2012) seems too sketchy. Whereas pointing to contrasts in previously acquired propositional knowledge, contrasting dispositions for propositional knowledge acquisition (“skill-based
intellectualism”), or contrasts in intellectually grounded sensitivity to misleading scaffolding each holds some intuitive promise, but ultimately offers only putative explanations too vague and *ad hoc*. In contrast, anti-intellectualists have access to certain explanatory strategies not open to the intellectualist: A nominalist or a deontological conception of the relevant contrasts in skillfulness.

Of course, we are in no position to argue that intellectualists have no convincing way out here. We cannot conclude that they could not offer a completely different kind of diagnosis, which we have overlooked or ignored. The debate over the nature of practical knowledge remains multifaceted and very much alive. Yet we hope that the present argument has contributed to making explicit the explanatory standards, to which competing accounts of this nature should be held as well as intellectualism’s inherent problems in meeting them.\(^{12}\)

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