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## (Anti)-Anti-Intellectualism and the Sufficiency Thesis

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*Abstract:* Anti-intellectualists about knowledge-how insist that, when an agent  $S$  knows how to  $\varphi$ , it is in virtue of some ability, rather than in virtue of any propositional attitudes,  $S$  has. Recently, a popular strategy for attacking the anti-intellectualist position proceeds by appealing to cases where an agent is claimed to possess a reliable ability to  $\varphi$  while nonetheless intuitively lacking knowledge-how to  $\varphi$ . John Bengson & Marc Moffett (2009; 2011a; 2011b) and Carlotta Pavese (2015a; 2015b) have embraced precisely this strategy and have thus claimed, for different reasons, that anti-intellectualism is defective on the grounds that possessing the ability to  $\varphi$  is not sufficient for knowing how to  $\varphi$ . We investigate this strategy of argument-by-counterexample to the anti-intellectualist's sufficiency thesis and show that, at the end of the day, anti-intellectualism remains unscathed.

### 1. INTRODUCTION

In virtue of what does one know how to do something, when one does? One prominent view, *intellectualism*, maintains that what grounds one's knowledge how to  $\varphi$  is at least always in part one's propositional attitudes; thus, on this picture, when you know how to ride a bike, this will be in virtue of certain propositional attitudes you have. Anti-intellectualists insist that when you know how to ride a bike, it is in virtue of your possessing certain abilities or dispositions, and not in virtue of any propositions you believe or know.

Whilst anti-intellectualism has been the received view in the epistemological landscape since Ryle (1945; 1949), the tide has shifting. Most famously, this has been due

to the emergence of linguistic arguments for intellectualism, most notably by Stanley and Williamson (2001)<sup>1</sup>. However, another important recent expression of ‘anti-anti-intellectualist’ thinking has come by way of counterexamples aimed at revealing the old Rylean view to be untenable. Two notable expressions of this shift are found in recent work by John Bengson & Marc Moffett (2007; 2011a, 2011b)<sup>2</sup>, and Carlotta Pavese (e.g., 2015a), who take issue with the material adequacy of the core anti-intellectualist insight, but for different reasons.

Bengson & Moffett contend, by way of several athletic-themed counterexamples, that possessing the ability to  $\varphi$  is neither necessary *nor* sufficient for knowing-how to  $\varphi$ . Moreover, they suggest that the counterexamples they’ve adduced to this end reveal a *structural flaw* in the anti-intellectualist position that is ultimately intractable<sup>3</sup>. Pavese, by contrast, challenges the anti-intellectualist’s sufficiency thesis by way of a sophisticated example involving rule following.

We think the conclusion that anti-intellectualism can be dismissed on the basis of such examples is at best premature. While we have reservations about Bengson and Moffett’s cases against the necessity leg of the anti-intellectualist’s thesis<sup>4</sup>, our focus in this paper will be on Bengson & Moffett’s and Pavese’s purported counterexamples to the *sufficiency* leg of the thesis. We examine carefully their alleged arguments-by-counterexample and show them to be unpersuasive. While we are not, in what follows, setting out to establish the correctness of anti-intellectualism, what we hope to show is that the view cannot so easily be dismissed by way of ‘knock-down’ counterexamples as its critics have supposed.

## 2. THREE CASES: SALCHOW, KYTOON AND SWIMMER

### 2.1. *Salchows and the ability condition*

According to anti-intellectualists, having the ability to  $\varphi$  is widely taken to be not merely necessary for knowing how to  $\varphi$ . But, importantly for what follows, it is also regarded a *sufficient* condition for knowing how to do so, though this point needs a quick adjustment. It is obviously false that, were Tim to possess an unreliable ability to pick a lock (suppose for instance Tim’s lock picking success rate is .001) that he thereby counts as knowing how to pick a lock. Accordingly, and following Bengson & Moffett, we can restrict the anti-intellectualist’s claim about the sufficiency of ability for know-how as follows:

<sup>1</sup>For some other notable defences of this strategy, see Stanley (2011a, 2011b); Brogaard (2008, 2009, 2011); Bengson & Moffett (2011b); Pavese (2015b).

<sup>2</sup>See also Bengson, Moffett & Wright (2009)

<sup>3</sup>See here Bengson & Moffett (2011b, 174) for an explicit statement of this charge.

<sup>4</sup>See, most notably, Bengson & Moffett’s (2011b) example of ‘Pat’ the ski coach.

*Anti-intellectualism (Sufficiency)* [AI-S] Being reliably able to  $\varphi$  is sufficient for knowing how to  $\varphi$ .

Consider though the following example, offered by Bengson & Moffett (henceforth B&M):

SALCHOW. Irina, who is a novice figure skater, decides to try a complex jump called the salchow. When one performs a salchow, one takes off from the back inside edge of one skate and lands on the back outside edge of the opposite skate after one or more rotations in the air. Irina, however, is seriously mistaken about how to perform a salchow. She believes incorrectly that the way to perform a salchow is to take off from the front outside edge of one skate, jump in the air, spin, and land on the front inside edge of the other skate. However, Irina has a severe neurological abnormality that makes her act in ways that differ dramatically from how she actually thinks she is acting. So despite the fact that she is seriously mistaken about how to perform a salchow, whenever she actually attempts to do a salchow (in accordance with her misconceptions), the abnormality causes Irina to unknowingly perform the correct sequence of moves, and so she ends up successfully performing a salchow. Although what she is doing and what she thinks she is doing come apart, she fails to notice the mismatch.

Let us begin by clarifying B&M's rationale for thinking that SALCHOW counts against AI-S. As they see it, 'In this case, it is clear that Irina is reliably able to do a salchow. However, because of her confusions regarding how to execute the move, she cannot be said to know how to do a salchow' (Bengson & Moffett 2011b, 172). There are two elements to B&M's diagnosis, each mapping on to a separate issue: the first pertains to the issue of whether Irina fails to know how to do a salchow, given her confusion<sup>5</sup>; their second pertains to the matter of whether Irina has the reliable ability to do a salchow.

At least, *prima facie*, both of these elements of the diagnosis look to be on safe ground. For one thing, surely the confusion Irina is claimed to exhibit is enough to prevent her from plausibly knowing how to do a salchow. At any rate, we won't be challenging this first element of their diagnosis<sup>6</sup>. Moreover, to their credit, given that

<sup>5</sup>Although we bracket the issue for the purposes of our discussion, B&M's case of neurological disorder may be contested on empirical grounds. As we have been advised, it is highly unlikely that any remotely similar condition has ever been experimentally diagnosed.

<sup>6</sup>This is not to say that this element of the diagnosis is not entirely free from potential criticism. For example, on a particularly permissive conception of ability possession operant in an account of know-

‘whenever she actually attempts to do a salchow (in accordance with her misconceptions), the abnormality causes Irina to unknowingly perform the correct sequence of moves’, it looks on first blush like Irina’s possessing a reliable *ability* to perform the salchow is uncontroversial. It is no wonder B&M have relied on this case on multiple occasions to make their argument.

That said, there are a number of lurking problems waiting in the wings. To bring one such initial problem to the fore, consider Plantinga’s (1993) famous ‘brain lesion’ case. In Plantinga’s brain lesion case, we are to imagine that our hero, ‘Al’, has a strange brain lesion that reliably causes him to believe that he has a brain lesion—though Al has no other item of evidence that supports this conclusion.

One of the lessons in the literature on early reliabilist epistemology is that it’s bad news if (on one’s view) Al counts as knowing he has a brain lesion<sup>7</sup>, even though the brain lesion reliably causes Al to believe correctly on the point. A popular explanation that can be offered for why Al fails to know that he has a brain lesion proceeds as follows: firstly, knowledge requires that a belief’s correctness be (in some suitably articulated sense) attributable to the agent’s exercise of *cognitive ability*<sup>8</sup>; secondly—and what is most relevant to our purposes—Al’s believing the truth does *not* seem to be grounded in any ability to which we can credit Al (Greco 2010, 151)<sup>9</sup>.

We’ll consider shortly the implications of this way of thinking about Al’s situation has for B&M’s diagnosis of SALCHOW. But first, let’s move from the brain lesion case to an even more radical case in the reliabilist literature: Lehrer’s (1990) case of ‘TrueTemp’ who has (unbeknownst to him) a temperature-detecting device implanted in his head that regularly causes him to proclaim accurate beliefs about the ambient temperature<sup>10</sup>. Temp, we are told, is never wrong about the ambient temperature (though he can’t tell you why).

Of course, there are a number of things one might be tempted to say when criticising Temp’s epistemic standing. But at least one natural reaction will be to deny that Temp’s correctness is down to any of Temp’s own *abilities*, for much the same reason

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how—where the kind of ability at issue is no different from the kind a glass has to shatter—then one might be tempted to challenge this element of B&M’s diagnosis and insist that the confusion caused by the abnormality is irrelevant to whether Irina knows how to do the salchow. While we recognize that such a line is available, we will not be pursuing it here (as motivating an objection to B&M), though we do engage with the related issue such an objection intimates in some detail later in the paper.

<sup>7</sup>For some representative statements of this point, see, along with Plantinga (1993), Goldman (2011) and Greco (2010).

<sup>8</sup>For defences of an ability condition on knowledge, see Greco (2010), Sosa (1993; 2007; 2009), Pritchard (2012), and Carter (2013).

<sup>9</sup>Greco (2010), drawing from Feinberg (1970) remarks that ‘we do not consider an action to be appropriately his unless it is appropriately grounded in *psychologically normal* and *healthy* character (Greco 2010, 151). We articulate this suggestion further later in this section.

<sup>10</sup>This paraphrasing of the case is taken from Goldman (2011).

we are inclined to not credit Al's correctness about his brain lesion to some ability he has. After all, despite TrueTemp's reliability, his correctness is (like in the case with Al) nonetheless not a production of *his* own efforts or faculties, but rather, the production of a cause *external* to his cognitive agency<sup>11</sup>.

The implications of these insights about Al and Temp for B&M's diagnosis of Irina now take shape. Just consider that, to the extent that we should resist, following orthodoxy in the brain lesion and TrueTemp cases, the attribution of Al's and TrueTemp's correctness to Al's and TrueTemp's 'abilities', we have located a precedent for refraining from attributing to an individual a ability to do something *even when* she reliably can do the thing in question successfully. The precedent revealed in the brain lesion and TrueTemp cases, and which has been given expression in a number of works by John Greco (e.g. 2008; 2010; 2013) as well as Duncan Pritchard (2010<sup>12</sup>) is, in short, that it is appropriate to credit to an agent an ability to perform a given intelligent action only if that ability it is grounded in dispositions that are *integrated* in—and so, like in Alvin's and Temp's cases, not *disintegrated from*—the agent's cognitive psychology. Such integration requires, as Greco notes, *stability*, in a sense that will not be satisfied by fleeting processes, such Al's brain lesion or, say, temporary but perfectly reliable echolocation. Though, even if we were to assume that Irina's condition were one she had since birth (and as such is not merely fleeting or temporary) one's ability is not appropriately integrated in one's cognitive psychology—or, as Greco puts it, one's cognitive *character*—unless there is a kind of basic coherence condition is satisfied. Jonathan Kvanvig, (2003a) suggests such a condition is not met in brain-lesion-style cases where the reliable process is disintegrated from one's cognitive psychology. As Kvanvig remarks:

What goes wrong is [...] a matter of lack of coherence between the understanding a person has of the reliability of various ways of forming and holding beliefs and how the beliefs are formed in these cases (2003a, 454).

Such *lack* of coherence is present not only in the brain lesion and TrueTemp cases, but moreover, when Irina's 'severe neurological abnormalities' cause a mismatch between what Irina does and what she thinks she is doing.

There is thus an established rationale for thinking that we should, and contrary to what B&M suggest in leveraging their attempted counterexample, *not* attribute the successful salchow to any ability to which we can credit *Irina* any more than we should (and as Greco thinks we should not) attribute Al's correct brain lesion belief to an ability of Al's (or for that matter credit TrueTemp's correct temperature belief to some

<sup>11</sup>On this point, see Pritchard (2010) and Beebe (2004).

<sup>12</sup>Pritchard (2010), in particular, focuses in the relevance of cognitive integration to cognitive ability.

ability TrueTemp has himself). In each of the three cases, the brain lesion case, the TrueTemp case, and in the case of Irina, we have instances in which what causes the relevant success is not appropriately integrated in the agent's cognitive psychology to warrant an attribution of the success in question to the agent's own ability<sup>13</sup> If this line of thinking is right, then we have a principled reason to reject one leg of B&M's diagnosis of SALCHOW: namely, that Irina has the *ability* to reliably perform the salchow<sup>14</sup>.

Granted, some prominent anti-intellectualists, for instance, Noë (2005) and Hornsby (2012), do not *explicitly* insist that a Greco-style integration condition must be satisfied with respect to the kinds of abilities that ground anti-intellectualist know-how. One might be tempted to insist on this basis that whatever kind of integration into one's cognitive character is required in order to rightly ascribe to an agent a *cognitive* ability, of the sort Greco and virtue epistemologists are interested in, shouldn't *also* be thought to be demanded of agential abilities more generally that are not *manifestly* cognitive. And thus, as this line of thinking might go, the fact that Irina's abnormality is connected with her successful performance in a way that is relevantly similar to Al and Temp, should not lead us to, on this basis, withhold attributing to Irina an ability to do the salchow, *even if* we follow Greco (and more generally virtue epistemologists) and deny attributing in the respective cases cognitive abilities (*vis-à-vis* the relevant successes) to Al and Temp.

We submit two kinds of response to such a line of thinking, the first an observation and the second, a kind of 'dilemma' we raise to a proponent of the kind of line just sketched. Firstly, the observation is that even if anti-intellectualists don't often insist, explicitly, on an integration condition, as such, this should not be entirely surprising because the literature on ability and integration has its origin in mainstream epistemology, where specifically cognitive abilities have been the salient point of focus, and not in the theory of action. Put another way: it has been, specifically, *epistemological* problems (e.g. objections to reliabilist theories of knowledge and epistemic justification) which originally generated a *need* to clarify why the attribution *to an agent* of certain abilities should be withheld in certain cases even when that agent performs certain tasks reliably successfully. This need in fact is (arguably) a central explanation for the contemporary shift over the past two decades from standard process reliabilism to virtue reliabilism in mainstream epistemology. Thus, then, from the fact that some anti-intellectualists whose approach to knowledge-how is philosophically rooted in (in the case of Noë and Hornsby) the philosophy of cognitive science and action the-

<sup>13</sup>For a potential reply on behalf of B&M, see §2.3. Thanks to an anonymous referee at *Pacific Philosophical Quarterly* for stimulating the discussion in that section.

<sup>14</sup>A separate issue is the extent to which it matters that she *can* do a salchow reliably, despite lacking an ability to do so that we are willing to attribute to her. We take up this issue in §2.2.

ory, respectively, don't already advert explicitly to integrationist language needn't be a strike against the suggestion that such a condition is plausible. Moreover, recent developments in the philosophy of action, and in particular works by Mayr (2011) and Stout (2006) whose focus is in part on so-called deviant causal chains, suggest, despite lack of straightforward equivalence, that this integrationist approach is on the right track.

The second response to the line of 'disanalogy' objection we outlined above is to raise a dilemma. In doing so, we want to first note that we grant, without reservation, that there are certain kinds of ability attributions which are felicitous in English and which nonetheless don't plausibly involve attributing (anything in the neighbourhood of) know-how. Consider, to this end, firstly a (significantly) attenuated variety of ability attribution that, *unlike* the case of typical agential abilities, requires nothing more than *doing* the thing in question. In particular, it will be helpful to highlight J.L. Austin's case of the golfer who holes a difficult golf shot, we may suppose, through a shaky stroke, perhaps caused by a spasm, and an unlikely bounce off a tree. As Austin (1956, 218) remarks:

'it follows merely from the premise that he does it, that he has the ability to do it, according to ordinary English' (Austin 1956, 218).

What we want to stress is that the fact that ordinary English permits some very lax attributions of abilities, where fluky success is all that's required, does not go very far to suggest that the kind of ability anti-intellectualists have in mind, when insisting that knowledge-how is grounded in abilities, is nothing more than what we can say of Austin's golfer. Maier (2014) comments on this case: 'On the other hand, there seems also to be a sense in which abilities are somewhat more *demanding* than this. This is the sense in which fluky success, as in the case of the golfer, is *not* sufficient for ability.' Thus there are clearly multiple senses of abilities, and challenging anti-intellectualism (along the sufficiency dimension) must involve cases where knowledge-how is not present while what *is* present is the kind of ability that is more demanding than some of the laxest cases of ability attributions (e.g. Austin's case) which seem felicitous.

Just as Austin's golfer is an example of a *strongly* attenuated instance of an ability attribution that is felicitous in English and yet which clearly fails to capture the kind of ability that any plausible construal of anti-intellectualism is adverting to, we should note that there is also a *moderately* attenuated variety of ability attribution, also felicitous in English, but also which applies to cases where know-how can't very plausibly be present. For example, we might say "the glass is able to withstand the pressure of the child's grip". In this case "is able to" is really just shorthand to "is disposed to." On a simple subjunctive conditional analysis of dispositions, an object *o* is disposed to act *A* in condition *C* if and only if *o would A* if *C* were the case. (Choi & Fara 2012;

Lewis 1997). And, according to standard semantics for subjunctive conditionals,  $\circ$  would A if C were the case provided  $\circ$  As in all close C-worlds (Alfano 2014). But of course an individual might, with reference to this analysis, be *disposed* to do something that is entirely unconnected to her agency. For example, one might be disposed, as in a religious ceremony, to speak *glossolalia*, but in a way that is *self-consciously* disconnected from one's agency.

For example, 17<sup>th</sup> century Quaker Edward Burrough describes speaking glossolalia as if, from his perspective, *compelled* by God to do the speaking, or more accurately, as if God was speaking through them. As he put it: "We spoke with new tongues, *as the Lord gave us utterance*, and His Spirit led us"<sup>15</sup>. The gap between Burrough's disposition to speak glossolalia in certain religious contexts (in virtue of which an attenuated ability attribution might be felicitous, e.g. as when using Burroughs as a contrast case *vis-à-vis* others parishoners in the church who spoke nothing) and what would be Burrough's *knowing how to speak glossolalia* seems to a be a gap in place precisely because, in speaking glossolalia, one is *compulsed* or compelled to do so in a way where the disposition to perform glossolalia is not appropriately integrated within the individual's agency and psychology. (Perhaps, this is precisely why Burroughs said 'as the Lord *gave us utterance*.'

The dilemma for the proponent of the line envisioned, then, is that one can attempt to draw a principled disanalogy between the kind of integration conditions on ability that, in mainstream epistemology, are regarded to be failed by AI and Temp, and the kind of integrations that must be satisfied in the case of (non-distinctly cognitive) agential abilities, only if one is prepared to (uncharitably, and implausibly) attribute to the anti-intellectualist a view according to which the kind of disposition that aligns with attenuated ability attributions (e.g. those secured *simply* by disposition possession) is taken to be the essence of knowledge how. And, as we've suggested, this strikes us as an implausible characterization of the *kind* of ability any plausible formulation of anti-intellectualism will advert to<sup>16</sup>.

<sup>15</sup>Burrough, Edward (1831) [1659]. "Epistle to the Reader" in G. Fox *The Great Mystery of the Great Whore Unfolded; and Antichrist's Kingdom Revealed unto Destruction. The Works of George Fox*. Our italics.

<sup>16</sup>Obviously, if anti-intellectualists really did want to say that (say) Austin's golfer knows how to make the shot (because there is one reading in English on which an ability attribution to him is felicitous) and Burroughs knows how to speak glossolalia (because there is a kind of ability attribution that tracks being disposed to do something, and Burroughs is disposed to speak glossolalia in certain circumstances, despite it's being utterly disconnected with his agency), then anti-intellectualism would be a wildly implausible account of knowledge-how.



## 2.2. Salchows and cognitive character: a closer look

Another line of reply to the foregoing is to press further an alleged disanalogy between Irina's neurological condition in SALCHOW with the objectionable kinds of cases we've considered where we are inclined not to attribute the relevant ability to the agent in question. Put another way: *why* is Irina's cognitive abnormality in this case sufficiently problematic from the perspective of crediting to her an ability to do the jump? On this point it will be helpful to investigate more carefully Irina's situation.

Interestingly, we think B&M's example lends itself to at least two interpretations *vis-à-vis* the matter of *how the abnormality is connected to the successful performance*. On one interpretation, when 'the abnormality *causes* Irina to unknowingly perform the correct sequence of moves' (Bengson & Moffett 2011b, 172, our italics), it results in something like Irina's compulsively performing a salchow. And this strikes us as a clear case of *disintegration* of one's cognitive character; indeed, this is precisely the kind of disintegration one finds with AI and TrueTemp, and we've explained our diagnosis of the case on this reading.

However, it is possible to conceive of Irina's abnormality in a different way: as a peculiar instance of mere *dissociation* of her *doxastic failures* from her *manual successes*, where those successes and failures are, nevertheless, appropriately integrated in some way into her cognitive character. Call this the *dissociative* interpretation of the case. On the dissociative interpretation, the abnormality doesn't *cause* Irina's successful performance, *per se*. Instead (i) the abnormality prevents Irina from ever forming a true (meta)-belief that her belief that some *w* is a way to perform a salchow is false, even though (ii) it has no impact whatsoever on her successful performance.

Now, one might argue as follows: SALCHOW isn't successful as a counterexample against AI-S on a *disintegration* reading; but the explanation for why this is so on a disintegration reading doesn't apply, *mutatis mutandis*, on the dissociative reading. And further, the dissociative reading is (perhaps) even more faithful to B&M's own presentation of the case. Thus, the reasons for rejecting that SALCHOW succeeds against AI-S on the basis of claimed similarities between Irina, AI and Temp would no longer be compelling were we to interpret Irina's case along dissociative lines.

Is this general strategy plausible? We think not. To see why, consider that, on the dissociative reading, there are *two* dimensions of Irina's cognitive character which are relevant: *doxastic* and *manual*. A relevant question thus becomes: can we credit Irina an ability to perform a salchow with reference to *either of these dissociated dimensions* of her cognitive character? As we'll see, the prospects do not look very good, though for different reasons.

Firstly, with respect to the doxastic dimension, it's clear that Irina is a dysfunctional agent. Presumably, many if not all of her beliefs about how to perform a salchow are false. Surely, were Irina stipulated to have the ability to do a salchow, it wouldn't

be *in virtue* of her confused beliefs, but rather *despite* them. So the doxastic dimension of Irina's character doesn't look promising as undergirding an explanation for why we should credit to her an ability to perform a salchow.

*Manually*, however, Irina is perfectly fine, i.e. Irina's performances of salchows bear no *symptoms* of her (abundant) cognitive deficit. But if the manual dimension of her cognitive character is all that's at issue (and thus, if the doxastic dimension is ignored), then the fact that Irina happens to believe incorrectly that some *w* is the way to perform the salchow becomes *irrelevant*—given that her performance bears no symptoms of this cognitive error. But if we focus on just the manual dimension of Irina's cognitive character at the exclusion of the doxastic dimension, it becomes hard to see how Irina would not only count as having an ability to do a salchow, but further, to *know* how to do a salchow—a result that conflicts with a key (and plausible) element of B&M's diagnosis of the case.

Now, we envision that on the dissociative interpretation, B&M might (again, by redirecting attention to Irina's false belief) encourage us to nonetheless deny that Irina knows how to perform a salchow. But this move should strike one as problematic. To consider why, by example, just imagine a parallel kind of dissociation case: one that is just a minor modification of a paradigmatic case of know how—*viz.*, that of attributing to Chopin know-how *vis-à-vis* the performance of the Minute Waltz. Let Chopin\* be just like Chopin, though Chopin\* has a belief, which has no bearing on his performance of the piece, that some note *n* should be an 'A' rather than an 'E'. When performing the Minute Waltz, Chopin\* *does not attend to this belief*—nor reflect on it, in any way, and nor is his performance in any respect guided by this false belief. We think it would be at best controversial to attribute know how to Chopin but not Chopin\*, and by parity of reasoning, to deny know-how to Irina *on the dissociative reading*, where her situation is structurally similar to Chopin\*. Thus, B&M would not be in a position to embrace the dissociative reading in the service of demonstrating that SALCHOW is a counterexample to AI-S anymore than they can embrace the *disintegrative* reading. This, at any rate, is the line we want to advance.

We want to briefly consider now two potential objections with this last move, in which we appeal to the Chopin analogy to suggest why a dissociative reading of SALCHOW isn't going to help B&M appeal to this case as a counterexample to AI-S. The first worry is that mistaking a single note in the Minute Waltz is not really on a par with Irina's mistake about the way to perform a salchow. A second worry is that, at least in B&M's (2007) presentation of the SALCHOW case, they envision Irina's false belief as in fact playing a role in her behavior, contrary to the dissociative reading of their case.

Regarding the first issue, the analogy as presented strikes us as close enough in the relevant respect that, in each respective example case, there is some false belief about how to perform the action in question that (*ex hypothesi*) is nonetheless not attended

to in the course of the successful performance. The only difference is that in the piano case, the false belief seems *proportionately* less significant to the total performance. Though, we think this difference is not a significant one once it is emphasized that a successful performance of the Minute Waltz involves notes played in a particular order. However, even if we were to grant that the disanalogy were problematically significant, we could then simply run a variation on the Chopin case in which, say, the mistaken beliefs (that played no role in guiding the performance) concerned *three or four* notes out of sequence. This at any rate would seem to bring the case closer to the SALCHOW case for anyone dissatisfied by the analogy on the basis of the considered objection.

Regarding the second issue. Note that we are not *attributing* the dissociative reading of the case to B&M. Rather, we are exploring this as (along with the disintegrative reading) one of two very natural ways to think about the mismatch between Irina's belief and her successful performance, on the basis of which B&M argued SALCHOW to be a counterexample to AI-S. We then suggested that neither interpretation of the mismatch B&M advert to will ultimately support a diagnosis of SALCHOW as a successful counterexample. Thus the examination of the dissociative reading of the case (and the relevance of our considering this case for our argument) does not depend on B&M actually endorsing this reading.

### 2.3. *Objections and Discussion*

It will be instructive to consider a potential reply, at this juncture, on behalf of B&M concerning the point about ability and integration. Once it becomes clear that, as our anti-intellectualist insists, know-how is best understood as identified not just with an ability, but with an ability which is sufficiently integrated with one's cognitive psychology, then it looks increasingly as though such an ability is to be grounded on some cognitive states (such as understanding, according to B&M's view).

This line of reply is interesting because it raises the worry that, for the anti-intellectualist at least, adverting to the cognitive integration move we've advanced (in response to B&M's proposed counterexample) provides in effect a kind of 'double-edged sword', in that the reply lends itself to an interpretation on which it looks like it supports B&M's own idiosyncratic variety of non-propositional *intellectualism*. After all, on B&M's (2011a) version of (non-propositional) intellectualism, 'to know how to  $\phi$  is to stand in an objectual understanding relation to a way of  $\phi$ -ing' (2011a, 189). While this envisioned line of response—viz., according to which the cognitive integration line ultimately plays into B&M's hand—is a clever one, we think it doesn't stick.

To appreciate why, consider closely B&M's rationale for identifying their position as a version of intellectualism in the first place. This is, they write, 'because an understanding of a way, while not reducible to or a species of propositional attitude, is

partially grounded in propositional attitudes (*Ibid.*, 188).’ Here is, as we see it, the crux of the matter: if insisting, as we have, that the kind of abilities a plausible version of anti-intellectualism will identify with know-how must be integrated within one’s cognitive psychology (in the way we’ve described in the foregoing) *carries with it* a commitment to a further metaphysical grounding claim to the effect that the abilities must be *grounded* in states such as propositional attitudes, then the double-edge sword charge sticks. However, the cognitive integration line we’ve advanced needn’t carry with it such a further metaphysical grounding claim. Consider, as Greco (2010) puts it, that ‘cognitive integration is a function of *cooperation and interaction*, or cooperative interaction with other aspects of the cognitive system’ (2010, 152, our italics). Evidently, facts about whether certain things interact and cooperate in certain ways—*viz.*, the facts that are of primary relevance to whether the kind of integration condition is satisfied are met—don’t *themselves* entail facts about metaphysical grounding. And again, only if they did entail such facts, would adverting to the cognitive integration move, in the way we have, play into the hand of B&M; the line we’ve advanced is, in short, perfectly compatible with a denial of B&M’s idiosyncratic brand of intellectualism.

In response to this point, the proponent of the reply envisioned on behalf of B&M might suggest that the dialectical burden at this juncture is on the anti-intellectualist to show how (cognitively integrated) abilities cannot themselves be explained in terms of knowledge or other cognitive states. While we think this way of thinking about the dialectical burden loads the cards unfairly against us (given our defensive aim in this paper), we nonetheless have a further line to press here, one which one of the present authors (Carter, with Pritchard 2015a; cf., Carter, with Poston forthcoming) has defended in more detail elsewhere, when engaging specifically with B&M’s non-propositional intellectualism. The worry is that, at least on several popular ways of thinking about what objectual understanding involves (e.g. Kvanvig 2003b; Riggs 2009; Hills 2009; Grimm 2014; Carter and Gordon 2014), objectual understanding is, itself, explained in terms of cognitive *abilities*, *viz.*, as Kvanvig puts it, to grasp relevant explanatory or coherence-making relationships. While we don’t have the space here to defend such a view of objectual understanding in detail, it should suffice to note that this is a popular position in the contemporary literature and, to the extent that it is right, there is reason to doubt that Bengson & Moffett’s own view is (as they claim) a *bona fide* version of intellectualism.

The upshot of this final point is that we might, as it were, turn the tables and suggest that *even if* the cognitive integration line we’ve defended in the foregoing were a fillip to Bengson & Moffett’s own idiosyncratic, understanding-driven variety of self-described intellectualism (a point we’ve already cast doubt upon), there is a precedent in contemporary thinking about objectual understanding with reference to which it’s not at all clear why we should think of their position as, at the end of the day, intellec-

tualist, rather than anti-intellectualist. We don't however, regard ourselves as relying on this final point in order to meet the line of reply.

It is important to note that we do not regard our cognitive-integrationist counter-reply to B&M's salchow counterexample to be an all-things-considered vindication of the sufficiency leg of the anti-intellectualist's thesis. A thorough defence of the thesis (or of a particular formulation of it) is beyond what we've attempted to do here. Admittedly, there are a plethora of arguments present in the literature to keep any anti-intellectualist awake, whether virtue or otherwise.<sup>17</sup> Instead, in line with our previous arguments we hold that B&M's (original or adopted) arguments rest on assumptions which—when brought to light from a broadly integrationist perspective—(i) do not look particularly damaging to an anti-intellectualist who more or less explicitly embraces that perspective; and—as the dissociative reading suggests—(ii) ultimately turn against rather than support B&M's vision of intellectualism.

Nonetheless, at this point it will be helpful to consider, albeit briefly, another scenario discussed by B&M entitled "SWIMMER"<sup>18</sup>.

SWIMMER. Sally, who is an inexperienced hiker with extremely poor vision, decides to go snow shoeing through the mountains in February. As she is hiking along, an avalanche suddenly starts and a rush of snow sweeps down the mountain and over Sally. Sally, however, mistakenly takes the snow to be a body of water (she believes incorrectly that a nearby damn has broken) and so she responds by making rapid swimming motions. Sally aims to swim through the water towards the surface. Though Sally has never heard of this fact before, making swimming motions is a way to escape avalanches. As a result of her lucky mistake, Sally is able to escape from the avalanche. (Bengson, Moffett, & Wright, 2008, pp. 395–396)

In short, the protagonist of SwimmeR, Sally, is making motions characteristic enough of swimming for one to call these, without hesitation, "swimming motions". Moreover, she successfully employs these motions in trying to escape an avalanche.

<sup>17</sup>There are many strands to the sufficiency plot. B&M's salchow argument presupposes a deviant causal-chains scheme. Other influential challenges advert to the *de re/de dicto* distinction and opacity (e.g. Steel 1974; Carr 1981) and to the fineness vs. coarseness of grain of knowledge-how against ability ascriptions (e.g. Snowdon 2004). Note that the sufficiency problem is often already restricted to certain selected contexts of ascriptions. In some of the most prominent proposals, this fact is reflected by weak (Glick 2011, Fridland 2012; see also Setiya (2012) for an interesting discussion of "basic knowledge") or disjunctive (Lihoreau 2008) approaches to knowledge-how *vis-à-vis* ability ascriptions. These views may be broadly labelled, after Wiggins (2009), bifurcationist.

<sup>18</sup>Cf., Bengson & Moffett, (2012a), pp. 185–186, 188, 191 for a slightly altered interpretation which does not affect our discussion of the case; see also Hawley (2003) who is the author of this example.

B&M insist that an anti-intellectualist will incorrectly diagnose this case. Although Sally is able to make the relevant motions, she doesn't thereby know how to escape an avalanche.

We raise this example because, even though it cannot be dispelled along disintegrative or dissociative lines (should it be accommodated by the cognitive integrationist), the pattern of (i) and (ii) still applies.<sup>19</sup>

First, in relation to (i), the anti-intellectualist who wishes to straightforwardly maintain the sufficiency of the ability condition is not deprived of resources to reasonably respond to the case. For instance, drawing on Ernest Sosa's (2015) recent distinction between three competence factors—*seat, shape, and situation* (triple S)—a deeper interpretation of the SWIMMER becomes viable.<sup>20</sup>

Assuming that Sally is in the right sort of shape (e.g., not intoxicated, though note that her poor vision may arouse suspicion), what remains to be examined is the seat *vis-à-vis* her situation. Specifically, the question of primary importance here is whether Sally's ability—appropriate to swimming situations—is seated within Sally as its bearer in a manner that makes that ability appropriate to the situation that is avalanche-escaping.

Prompted by their objectualism<sup>21</sup>, B&M seem to impose on the anti-intellectualist a sort of rigid essentialist view of seat, whereby the anti-intellectualist should accept that the swimming-motion type of basis of ability when fitted into the avalanche type of situation yields an overall competence that (erroneously) amounts to knowledge-how to escape an avalanche.

However, it is available to the anti-intellectualist to reject such a rigid view of seat. In addressing cases akin to SWIMMER, the anti-intellectualist can begin by insisting instead on a more dynamic interplay between the seat and situation factors. Supposing that Sally's original ability was seated in her within pool-swimming situations, it isn't hard to imagine that the re-seating it would involve a radical shift of context from pool-swimming to avalanche-escaping and re-embedding it in the latter.<sup>22</sup>

<sup>19</sup>Thanks to an anonymous referee at *Pacific Philosophical Quarterly* for insisting that we clarify our discussion of the SWIMMER case.

<sup>20</sup>See especially, pp. 95-106. Importantly, employing this distinction does not commit the anti-intellectualist to Sosa's view. Sosa's framework has been chosen here primarily for heuristic purposes, leaving aside the question of how proponents of other approaches may fill in or change the relevant details. To this end one may seek solutions in the literature on knowledge-how (e.g., Carter and Pritchard 2015) or build analogies with other accounts on the market, e.g., Greco (2010, 2012). See Kallestrup & Pritchard (2016) for a recent discussion of differences between the Sosa's, Greco's and Pritchard's approaches; see also Navarro, (2015).

<sup>21</sup>As outlined earlier in this section. See Bengson & Moffett (2011a, 189).

<sup>22</sup>We leave open the extent to which re-seating amounts to re-integrating within another context. It is a subtle metaphysical matter of little interest for our general purposes whether new abilities derivative on well integrated ones are just re-seated and merely integrationally fine-tuned or re-seated and substan-

That, in turn, would require much more than simply “removing” one’s swimming motions from water and “inserting” these into snow—the kind of picture of re-seating that B&M’s view implies when the objectual knowledge condition is inspected more closely. Crucially, only once the swimming-motion ability—provided that it is already sufficiently *integrated* into Sally’s cognitive psychology—has become contextually relevant in this way, i.e., situationally re-seated, will it suffice for knowledge-how to escape an avalanche.

This leads to the second point as per (ii). Assume along with the description of SWIMMER that somehow Sally’s original ability is seated in a way that is *outright* appropriate to an avalanche-escaping situation (which, we think, would require a form of practical genius). Were that the case, a similar question arises as with the SALCHOW case: Why should it matter that Sally has false beliefs *vis-à-vis* the avalanche situation?

Accordingly, then, we maintain that the anti-intellectualist may easily resist the force of SWIMMER by constraining knowledge-how only to those abilities which are appropriately integrated and situationally seated.

#### 2.4. *The Kytoon Case*

If the foregoing is right, then even though SALCHOW fails as a counterexample to AI-S, one might still point out that the case remains a counterexample to a (much stronger) ‘brute reliabilist’ version of the sufficiency leg of the anti-intellectualist’s ability claim—formulated as:

*Anti-intellectualism (Sufficiency-Strong)* [AI-SW]: If one can reliably  $\varphi$  then one knows how to  $\varphi$ .

However, and in line with our remarks toward the end of §2.1, it doesn’t much matter that SALCHOW counts against this very strong version of the sufficiency leg of the anti-intellectualist thesis. This is because AI-SW is effectively a ‘mad-dog’ reliabilist construal of the sufficiency leg of the thesis, one which drops entirely any appeal to the notion of ability, and consequently, has very implausible consequences. Consider for example an extreme case, in which an individual has a rare and completely debilitating form of anencephaly and accordingly, though in possession of a brain stem, lacks a large portion of a normal human brain. Due to autonomic reflexes controlled by the brain stem, let’s suppose this individual reliably  $\varphi$ s. Though contemporary anti-intellectualists have not to our knowledge explicitly commented on such a case, we suspect that ruling-in such an individual as knowing how to  $\varphi$  would

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tially restructured and, hence, re-integrated. Either response seems plausible depending on the kind of scenario at play.

not be welcome. (After all, it's very plausible that, from a neurophysiological perspective, the agent lacks the kind of cognitive architecture that would be needed to support *any* knowledge<sup>23</sup>). Yet AI-SW rules such a case in, as the reliability condition is met. AI-SW, note, is as implausible in the arena of knowledge-how as 'mad-dog' reliabilism is often regarded. It is, in fact, a hallmark of anti-intellectualism that the mark of knowledge how is *ability* possession—something AI-S preserves, but AI-SW doesn't.

Since SALCHOW is not B&M's only case against AI-S, it is worth considering whether their other alleged counterexample might succeed where the former fails. Consider KYTOON:

KYTOON. Chris forms the desire to build a kytoon—a lighter-than-air kite that may, like a balloon, be filled with gas (e.g., hydrogen, hot air, or helium). She has never built a kite before, let alone a kytoon. But she is very good with her hands and thus is confident in her ability to make one. Seeking information about how to build a kytoon, information she currently lacks, Chris goes online and performs a Google search for "building a kytoon." She finds a Web site with instructions. The instructions are long, but she is able to understand and follow each step with a modest amount of effort. Over the course of the next few days, she succeeds in executing the steps. The result of her efforts is her own personal kytoon, which she then proceeds to learn to fly (Bengson & Moffett 2011b, pp. 172-173)<sup>24</sup>.

B&M's diagnosis of the KYTOON case is interesting. They write that although the information Chris has at the time of her decision to build the kytoon is inadequate to build a kytoon, 'there is a clear sense in which her situation is not hopeless. *Her current information state, coupled with the information she will encounter once she performs a Google search, will together be sufficient to reliably build a kytoon*' (*Ibid.*, p. 173, our italics). B&M reason from this observation to the conclusion that, consequently, 'Chris is, at the time of her decision, reliably able to build a kytoon' even though, at the time of her initial decision 'she does not know how to  $\phi$  (build a kytoon)' (*Ibid.*, p. 173).

<sup>23</sup>Of course, this is not to say that we might, in a lax conversational context, use the term 'knows-how' when describing such an individual, *vis-à-vis*,  $\phi$ . But note that such an attribution is 'honorific' in the sense that we are making an honorific attribution of knowledge-how to an elevator when saying that the elevator 'knows which floor we are on' or that the computer knows how to cool itself down. While such attributions are not uncommon, they are not picking out the kind of relation that is at issue between intellectualists and anti-intellectualists.

<sup>24</sup>Note that B&M appeal to KYTOON as a purported counterexample to a weaker and more restricted version of the sufficiency thesis, according to which reliably being able to *intentionally* do something is sufficient for knowing how to do that thing. For our purposes, we think KYTOON is problematic against both the standard and weaker versions of AI-S.



As with the SALCHOW case, KYTOON is one where we grant that the protagonist lacks know-how. However, we think there is a respect in which SALCHOW actually does better than KYTOON. In SALCHOW, Irina we saw lacked the *ability* to do a salchow despite being reliably able (in the sense that she *can reliably* do) a salchow. (This was why SALCHOW, though not effective against AI-S, was at least effective against the implausibly formulated AI-SW). In KYTOON, by contrast, we submit that, at least as the case is described, Chris not only lacks the ability to make a kytoon at  $t$  (the time of her decision) but moreover, it is problematic to say she reliably can do so, at  $t$ —at least, on the basis of the rationale B&M offer. B&M’s diagnosis of the case relies on a background assumption to the effect that: an agent  $A$  can reliably  $\varphi$  at some time  $\tau$  provided that the following two conditions hold:  $A$ ’s current information state at  $\tau$  coupled with the information that, at  $\tau$   $A$  will encounter, will be sufficient to reliably  $\varphi$ . But brief reflection shows this general principle to be lacking. Just consider the following case:

SPEECH: Wesley is supposed to recite, as part of a school production, a key paragraph from Winston Churchill’s famous ‘Iron Curtain’ speech. Wesley’s present information at  $t_1$  includes the line: ‘From Stettin in the Baltic to Trieste in the Adriatic an ‘Iron Curtain’ has descended across the continent.’ Wesley, due to a poor memory, can’t remember the rest. However, at  $t_1$ , given antecedent events and conditions in conjunction with laws of nature, Wesley will (at  $t_2$ ) acquire a piece of paper blowing in the wind, which contains the remainder of the speech.

Because Wesley is such that, at  $t_1$  his present information state plus the information he at  $t_1$  will acquire are sufficient for reliably reciting the ‘Iron Curtain’ speech<sup>25</sup>, the rationale B&M rely on in the KYTOON case imply that Wesley can reliably recite the Iron Curtain speech at  $t_1$ —though that is absurd. KYTOON is a case where the protagonist (at the time of the decision to make the kytoon) not only lacks an ability to do so, but moreover, it’s implausible that Chris *reliably can* build a kytoon at  $t$  given the explanation B&M advert to.

Of course, we leave it open that perhaps a better explanation could be formulated for why Chris is reliably able to build a kytoon at  $t_1$ . For instance, we might imagine the following adjustment: suppose that we hold fixed the information Chris already is said to have at  $t_1$  and then say that at  $t_2$  Chris will *non*-accidentally acquire information that at  $t_2$  will suffice for Chris to make the kytoon. Even with this caveat, it’s hard to see how KYTOON is going to count against AI-S as opposed to merely the (implausibly)

<sup>25</sup>Note that we are relying on something like causal determinism in interpreting our ‘will’ in a way that is no different than B&M rely on this idea in articulating why it is that Chris can reliably build a kytoon at the time of his initial decision.

inclusive version of the sufficiency thesis—*viz.*, that one knows how to  $\varphi$  provided one reliably *can*  $\varphi$ . But a case that counts against version of the thesis is, to reiterate, *not* thereby a case that counts against the reasonable articulation of the position in terms of ability possession.

### 3. PAVESE'S ARGUMENT FROM RULE FOLLOWING: THE 'BRAINIAC' CASE

In recent work, Carlotta Pavese (e.g., 2015a) has attempted to defend what she calls 'traditional intellectualism', according to which knowing how is propositional in character, over an increasingly popular rival position she terms 'non-propositional cognitivism', the view that 'know how is a cognitive state, but one with a *non*-propositional content' (2015, 165), for example, the state of *knowing a rule*. Pavese attempts to show that, as she puts it, 'rule-following abilities are blind and adrift in absence of a doxastic attitude that allows the subject to deploy those abilities relevantly and intentionally' (166).

For our purposes, what's relevant is that a kind of thought experiment Pavese appeals to in the service of distinguishing favourably her brand of intellectualism from non-propositional cognitivism also appears to count against more traditional forms of anti-intellectualism, specifically, by counting against the claim that being reliably able to  $\varphi$  is sufficient for knowing how to  $\varphi$ .

Pavese's example is very creative, and appeals to a fictional game, 'BRAINIAC'. The example can be appreciated in connection with chess, which is commonly analysed using algebraic notation, where the chessboard is represented by a list of binary codes which themselves represent chess positions and the pieces that are in those positions (175).

As Pavese notes, the rules of chess are translatable into functions that map binary codes into sets of binary codes, which 'correspond to a piece's possible movements given a certain position. In these analyses, numbers clearly are meant to stand for pieces and positions and the functions are meant to stand for the rules governing those positions' (175).

These points about chess in hand, Pavese's example involves two key components; Firstly, she envisions a fictional game, BRAINIAC, and secondly, she envisions a particular way in which this game might be played. Regarding the first component: Pavese tells us that BRAINIAC is a game that involves abstractly manipulating numbers and where 'those numbers are not thought to stand for anything in particular besides themselves'. As it turns out, though, there is a perfect isomorphism between BRAINIAC's rules and strategies and chess's algebraically formulated rules and strategies, despite these being different games<sup>26</sup>. Against this background, now imagine a

<sup>26</sup>See (2015a, 175) for Pavese's arguments for why these games are different.

special circumstance in which BRAINIAC is played:

BRAINIAC: Now imagine Miriam who, blind since birth and exceptionally gifted at mentally manipulating numbers, has always only played BRAINIAC in her life. She has never heard of ordinary chess and does not know such game even exists. So, she has absolutely no thoughts (whether *de dicto* or *de re*) about it. As it happens, Miriam regains her sight and once she runs into a chessboard. Miriam is not sure how to use that object and has absolutely no clue that the chessboard is used to play a game. But she soon conjectures and comes to believe that it might be a dadaist reenactment of a medieval battle. Spontaneously, however, she starts assigning positions and pieces on the chessboard with numbers and applying to those the rules of BRAINIAC. She says to herself: “I may as well use this dadaist reenactment to play BRAINIAC!” [...] Without thinking about other possible mappings and with a bit of luck, Miriam ends up mapping the rule and strategy of BRAINIAC onto a set of rules that happens to correspond to (Chess). She memorizes those rules perfectly well and mentally practices to move the pieces on the chessboard according to those rules. So, it is true now of Miriam that, if she were now to try to move the pieces on the chessboard according to those rules, she would end up correctly playing what is in fact chess. So, Miriam must now have the ability to follow the rules for playing chess on the chessboard. [...] [C]onsider Miriam [...] just before she starts playing BRAINIAC on the chessboard. Does Miriam know how to play chess<sup>27</sup>?

One might initially balk at this example because some rules of chess, including basic rules such as the ‘touch move rule<sup>28</sup>’ are in principle inapplicable in the case of BRAINIAC, which calls into doubt whether the rules of BRAINIAC could be perfectly isomorphic with the rules of chess. But let’s set this aside.

In Pavese’s example, it does seem as though Miriam is reliably able to play chess. She has, as Pavese claims:

‘the ability to follow the rules that happen to be the rules for chess. Hence, she knows the rules for chess. *Yet she cannot be correctly described as knowing how to play ordinary chess.* [...] rule-following abilities are *blind*

<sup>27</sup>Thanks to an anonymous referee at *Pacific Philosophical Quarterly* for drawing our attention to this case.

<sup>28</sup>The touch-move rule in chess specifies that, when it is a player’s turn to move, that player intentionally touches a piece on the board, then the player must move or capture that piece provided that it is legal to do so. <https://www.chess.com/article/view/the-touch-move-rule>

and *adrift* without a propositional attitude. In particular, a propositional attitude of belief is needed to *direct* the relevant rule-following abilities it is needed to bring to bear relevantly and intentionally to the practical situations at hands; it is needed for one to have the ability to *intentionally* execute the task (2015a, 179-80).

Of course, if this assessment of BRAINIAC is correct, and Miriam has the (reliable) ability to play chess despite not knowing how to play chess, then BRAINIAC seems to count straightforwardly against AI-S, independently of whatever further points the case can be used to make about rule-following.

Pavese quickly anticipates one natural line of response. Perhaps Miriam fails to know how to play chess *de dicto* in the situation described while nonetheless possessing knowledge-how to play chess *de re*. It might then be argued that provided Miriam possesses *de re* knowledge how to play chess, this is enough for the case to satisfy the anti-intellectualist's sufficiency thesis. Pavese's response, however, is to simply deny that Miriam actually does know how to play chess *de re*. This is because, 'she cannot have *de re* beliefs about chess, for she has neither encountered the game before nor seen it played. So, she cannot intend to play chess *de re*. But if she cannot intend to play chess, *de re*, she cannot intentionally play chess, *de re*, for intending to  $\phi$  is a necessary condition for  $\phi$ -ing intentionally'. And provided it is granted that one knows how to play chess only if one has the ability to intentionally play chess—a principle Pavese regards to be a plausible one—then Miriam thus does not know how to play chess *de re*.

We find Pavese's argument highly creative, though we think the case's anti-intellectualist import can be disarmed. Firstly, the reader might note that the principle Pavese appeals to—what she calls *New Principle*<sup>29</sup>—is one that the anti-intellectualist is not only free to adopt, but *must* adopt (provided the anti-intellectualist doesn't want to rule-in know-how in the case of non-intentional activities, such as digestion). The principle, states: One knows how to  $\phi$  just in case one has the ability to intentionally  $\phi$ . Pavese remarks that, at least for the purpose of her diagnosis of BRAINIAC, she is only relying on the left-to-right reading of the biconditional according to which knowing how to  $\phi$  is sufficient for the ability to intentionally  $\phi$ . This is tantamount to the anti-intellectualist's necessity thesis.

Of course, Pavese doesn't regard herself as conceding anything to the anti-intellectualist by embracing *New Principle*. This is because she thinks that intellectualism, as she's defending the view, can accommodate the principle (see 2015b, §5<sup>30</sup>). Given, though, that the anti-intellectualist also endorses the left-to-right reading of *New Principle*

<sup>29</sup>*Ibid.*, p. 174.

<sup>30</sup>See also Pavese (2015b), in which she offers her own account of practical senses.

which Pavese is appealing to, the anti-intellectualist is in a position to offer an anti-intellectualist-friendly diagnosis of BRAINIAC. We can agree with Pavese that Miriam cannot intend to play chess *de re* because Miriam cannot have *de re* beliefs about chess, having never encountered it. And we can further agree that she Miriam can't intend to play chess, *de re*, because intending to  $\phi$  is a necessary condition for  $\phi$ -ing intentionally. But from these observations, the anti-intellectualist is entitled to offer this diagnosis: BRAINIAC counts against the sufficiency thesis only if Miriam really does have the reliable ability to play chess while not knowing how to play chess. Any force the example has against the anti-intellectualist's sufficiency thesis dissolves if we have cause to deny Miriam such an ability. But as we've seen, Pavese offers us a rationale for denying Miriam such an ability: Miriam, the anti-intellectualist can say, lacks such an ability because she cannot intentionally play chess. BRAINIAC is thus compatible with Miriam's having the reliable ability to play chess—something she has only if she is able to intentionally play chess—being sufficient for knowing how to play chess.

At this point, however, the intellectualist has a potential counter-reply waiting in the wings<sup>31</sup>: the ability to execute intentions in action is either primitive or requires a further explanation in terms of something more basic. Here, though, the intellectualist may appear to have an advantage. As Pavese notes, the intellectualist provides an account of the ability to intentionally  $\phi$  that is independently motivated by several prominent views in action theory, in terms of a propositional attitude (2015a, 186). By contrast, the anti-intellectualist must either (i) take such an ability as a primitive—a move that has been defended by Setiya (2013)—(ii) invoke a propositional attitude in a way that can be defended as unobjectionable by anti-intellectualist lights, or (iii) explain an ability to execute intentions in actions in a way that does not invoke propositional attitudes. Which of the strategies the anti-intellectualist should embrace is not a matter that we'll take a stand on here. Even if the dialectical burden remains with the anti-intellectualist on this point, BRAINIAC is a decisive counterexample only if each of these options must be unworkable, something that the intellectualist has not shown. Equally, though, defending one such option compellingly remains required for the anti-intellectualist to disencumber herself from this precarious position<sup>32</sup>.

#### 4. CONCLUDING REMARKS

We've attempted here to disarm a recent strand of attack leveled against anti-intellectualist accounts of knowledge-how. In particular, we've shown that recent counterexamples to the claim that ability possession is sufficient for knowledge-how, ultimately provide

<sup>31</sup>Pavese (2015a, 186, fn. 26) anticipates a reply along these lines.

<sup>32</sup>Thanks to an anonymous referee at *Pacific Philosophical Quarterly* for helpful comments at this point in the dialectic.

no compelling reason to resist the anti-intellectualist's core thesis—that knowing how to do something is a matter of ability possession, rather than propositional attitudes. To be clear, the argument sketched here has not gone so far as to positively endorse the anti-intellectualist thesis. For all we've said here, both intellectualism and anti-intellectualism remain live options. More specifically, we hope to have shown is that anti-intellectualism cannot be dismissed so easily as B&M and Pavese's counterexamples would suggest. If one is to be an intellectualist at the end of the day, it should thus be for reasons other than that this particular commitment of the view—e.g. that possessing the relevant abilities suffices for knowledge-how—can be so easily dismissed by counterexample.

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