

# Knowledge-How, True Indexical Belief, and Action\*

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\* Although the main idea developed in this paper basically occurred to me during the discussion of Yuri Cath's paper "The Ability Hypothesis and the New Knowledge-how" at the 3<sup>rd</sup> Arché Graduate Conference back in 2006, the progress of the paper itself has been rather slow (reference to it can be found for example in Stanley [2011a], p. 235, n. 5). Earlier versions of the paper's material have been presented in 2007 at the UCLA Epistemology Workshop, at 6<sup>th</sup> German-Italian Meeting in Analytic Philosophy (University of Parma), where Tobias Rosefeldt gave a valuable response, at the Arché Knowledge and Language Seminar (University of St Andrews) and at the Joint Session of the Aristotelian Society and the Mind Association (University of Bristol); in 2008, at the 22<sup>nd</sup> World Congress of Philosophy *Rethinking Philosophy Today* (Seoul National University); in 2009, at 17<sup>th</sup> ESPP Meeting in Budapest (Central European University) and at the Philosophy and Linguistics Workshop *Questions in Discourse and Action* in Ann Arbor (University of Michigan), where Barbara Abbott and Ivan Mayerhofer gave other valuable responses. I'd like to thank all these audiences for very stimulating comments and discussions. Special thanks go to Stewart Cohen, Ophelia Deroy, Mikkel Gerken, Andreas Kemmerling, Ernest LePore, Carlotta Pavese, Nikolaj Pedersen, Jonathan Shaheen, Richmond Thomason, Timothy Williamson, Crispin Wright and to several anonymous referees. I owe a special debt to Jason Stanley, whose encouragement and feed-back on my knowledge-how work throughout the years have been invaluable. In writing the paper, I have benefitted, at different stages, from a RIP Jacobsen Fellowship and an AHRC Postdoctoral Research Fellowship, as well as from partial funds from the project FFI2008-06153 of the Spanish Ministry of Science and Innovation on *Vagueness and Physics, Metaphysics, and Metametaphysics*, from the project CONSOLIDER-INGENIO 2010 CSD2009-00056 of the Spanish Ministry of Science and Innovation on *Philosophy of Perspectival Thoughts and Facts* (PERSP) and from the European Commission's 7<sup>th</sup> Framework Programme FP7/2007-2013 under grant FP7-238128 for the European Philosophy Network on *Perspectival Thoughts and Facts* (PETAF).

## Abstract

Intellectualism is the doctrine that knowing how to do something consists in knowing that something is the case. Drawing on contemporary linguistic theories of indirect interrogatives, Jason Stanley and Timothy Williamson have recently revived intellectualism, proposing to interpret a sentence of the form ‘DP know how to VP’ as ascribing to DP knowledge of a certain way  $w$  of VPing that they could VP in  $w$ . In order to preserve knowledge-how’s connection to action and thus avoid an overgeneration problem, they add that this knowledge must be had under a “practical” mode of presentation of  $w$ . I argue that there can be non-knowledgeable true beliefs under a practical mode of presentation and that some such beliefs would nevertheless be sufficient to establish knowledge-how’s characteristic connection to action, and thus count as knowledge-how. If so, Stanley & Williamson’s account is faced with a serious undergeneration problem. Moreover, the structural features on which the argument relies make it likely to present a quite general challenge for intellectualist strategies.

## 1. Introduction and Overview

Suppose that unhandy Helen is told everything which *is the case* concerning guitars. She is even told everything which is the case concerning *how one can* play a guitar. Soon

afterwards, Helen is given a guitar for the first time in her life. Would Helen then be in a position intelligently to produce a coherent melody, simply on the basis of the knowledge just imparted to her? It would seem that she won't, as nothing would seem to guarantee that unhandy Helen will thereby be able to keep the guitar in the appropriate position, pluck the strings in the right way, coordinate the movements of the left hand with those of the right hand etc.; in short, her body of knowledge still needs to be *put into action* and it seems that nothing Helen can simply be told can put her in a position to do just that. Intuitively, she might still not *know how to* play the guitar.<sup>1</sup>

Taking his cue from this and other considerations, Gilbert Ryle famously argued for the *anti-intellectualist* claim that *knowing how to do something* does not consist in *knowing that something is the case* (see Ryle [1949]; [1971]). Ryle's specific arguments to this effect are certainly debatable, but the core anti-intellectualist idea that 'know how'-ascriptions like the one just discussed concerning Helen<sup>2</sup> target a capacity tied to

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<sup>1</sup> Some authors think that 'know how'-ascriptions are *context dependent* in the sense that, for example, 'Helen knows how to play the guitar' can be uttered truly in a context where we are looking for someone to play by the bonfire and can be uttered falsely in a context where we are looking for someone to play at Carnegie Hall (see e.g. Sgaravatti & Zardini [2008], pp. 257–261). To fix ideas for these authors, throughout I'll be presupposing a bonfire-like context (thanks to an anonymous referee here).

<sup>2</sup> Throughout, the phrase "'know how'-ascriptions' will be used exclusively to refer to such ascriptions. In this sense, not every ascription of the form 'DP know how IP' is a 'know how'-ascription (think for example of 'Rudolf knows how the exam went'). Indeed, in this sense, it is not even clear that every ascription of the form 'DP know how to VP' is a 'know how'-ascription (think for example of 'Rudolf knows how to prove the completeness of first-order logic'). I shall maintain neutrality on this issue.

action<sup>3</sup> which is not reducible to a state of knowing-that is *prima facie* plausible and has traditionally been received with almost universal approval, so much so as to become a piece of philosophical orthodoxy. Jason Stanley and Timothy Williamson have recently challenged this traditional wisdom, offering an intellectualist reduction of ‘know how’-ascriptions to attributions of knowledge-that (see Stanley & Williamson [2001]; the view is further developed in Stanley [2011a]; [2011b]). I shall argue that their proposal faces a serious problem of stability between overgeneration and undergeneration, submitting that the structure of the problem emerged is general enough as to be likely to beset a wide range of intellectualist strategies.

The rest of the paper is organized as follows. Section 2 presents Stanley & Williamson’s reduction in the relevant details. Section 3 introduces an overgeneration problem for their reduction and expounds their reply to it. Section 4 argues that the materials introduced by their own reply give rise to a converse undergeneration problem. Section 5 critically discusses possible attempts at getting around the problem. Section 6 submits that the structure of the problem emerged is general enough as to be likely to beset a wide range of intellectualist strategies, and partially substantiates this claim with the consideration of two further case studies. Section 7 draws the conclusion that follows for Stanley & Williamson’s particular intellectualist account and for intellectualist strategies more generally.

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<sup>3</sup> Throughout, I’ll use ‘action’ in a suitably broad way, so as to encompass, roughly, any property which is under a subject’s control to exemplify. This is in order to do justice to ‘know how’-ascriptions like ‘Helen knows how to look beautiful’ and contrasts with the usual, stricter understanding of ‘action’ in philosophy of action.

## 2. An Intellectualist Reduction

Stanley & Williamson have attacked anti-intellectualism claiming that it is in tension with contemporary linguistic theory. They first note that, from a *syntactic* standpoint, ‘know how’-ascriptions simply seem to belong to the much wider class of ‘wh’-ascriptions of the form ‘DP V wh IP’, like:

- (1) Rudolf reveals where he is

where V is any verb able to take as complement an indirect interrogative and ‘wh’ is an interrogative pro-form (like ‘who’, ‘where’, ‘how’ etc.). More specifically, they note that ‘know how’-ascriptions simply seem to belong to the wider class of *non-finite* ‘wh’-ascriptions of the form ‘DP V wh to VP’, like:

- (2) Rudolf reveals where to be

Encouraged by the syntactic similarity of ‘know how’-ascriptions with other ‘wh’-ascriptions containing indirect interrogatives, Stanley & Williamson proceed then to apply to ‘know how’-ascriptions the main features of contemporary *semantic* accounts of indirect interrogatives.<sup>4</sup> According to such accounts, a ‘wh’-ascription of the form ‘DP V

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<sup>4</sup> For simplicity and concreteness, I follow Stanley & Williamson in assuming some of the specifics of Karttunen’s [1977] well-known theory of indirect interrogatives. As they note, nothing important for our

wh IP' is true iff, for every (some) correct answer  $P^5$  to question as to wh IP, DP stand in the V-relation to the proposition that  $P$ . Thus, for example:

(3) Rudolf reveals who was at the party

is true iff, for every (some) correct answer  $P$  to question as to who was at the party, Rudolf reveals that  $P$ , while:

(4) Rudolf knows who was at the party

is true iff, for every (some) correct answer  $P$  to question as to who was at the party, Rudolf knows that  $P$ .<sup>6</sup> Stanley & Williamson's application has it then that a 'know how'-ascription like:

(5) Helen knows how to play the guitar

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discussion hinges on the details of this choice. I also ignore some features of their proposal not relevant to our discussion.

<sup>5</sup> Throughout, I assume answers to be propositions and take ' $P$ ' to range over these.

<sup>6</sup> The psychological reality of knowledge-wh (i.e. knowledge expressed by 'know' when taking an indirect interrogative as complement) is thus reduced to that of knowledge-that (see Schaffer [2007] for an interesting criticism of this reductionist strategy in the specific case of 'know whether'-ascriptions and Sgaravatti & Zardini [2008], pp. 252–254 for a more general criticism concerning any kind of 'know wh'-ascriptions).

is true iff, for some correct answer  $P$  to the question as to how to play the guitar, Helen knows that  $P$  (they note that for ‘know how’-ascriptions the ‘some’-reading is very plausible). But what does Helen know when she knows any such  $P$ ?

Stanley & Williamson assume that the LFs of non-finite ‘wh’-ascriptions like (2) and (5) are something along the lines of:

(2<sup>LF</sup>) [<sub>IP</sub>Rudolf [<sub>VP</sub>reveals [<sub>CP</sub>where<sub>*i*</sub> [<sub>IP</sub>PRO to [<sub>VP</sub>be [<sub>AdvP</sub>*t<sub>i</sub>*]]]]]]]]

(5<sup>LF</sup>) [<sub>IP</sub>Helen [<sub>VP</sub>knows [<sub>CP</sub>how<sub>*i*</sub> [<sub>IP</sub>PRO to [<sub>VP</sub>[<sub>VP</sub>play [<sub>DP</sub>the guitar]] [<sub>AdvP</sub>*t<sub>i</sub>*]]]]]]]]

where ‘PRO’ is an unpronounced pronoun and ‘ $t_i$ ’ the trace left by the movement of the  $i$ -indexed interrogative pro-form. With regard to this, they observe that, for ‘know how’-ascriptions, ‘PRO’ is most naturally interpreted in a subject-control configuration as being co-referential with the subject of ‘know’ and the modality expressed by the non-finite ‘to’-verb as being possibility-like. Thus, they claim that a ‘know how’-ascription like (5) is truth-conditionally equivalent to:

(5<sup>SW</sup>) Helen knows how she could play the guitar

Moreover, they also assume that, roughly, just as one knows a correct answer to the question as to who was at the party iff, for some person  $p$ , one knows that  $p$  was at the party, so one knows a correct answer to the question as to how one could play the guitar iff, for some way  $w$ , one knows that one could play the guitar in  $w$ . Under these

assumptions, Stanley & Williamson's application of the main features of contemporary semantic accounts of indirect interrogatives to 'know how'-ascriptions has it that (5) is true, iff, for some way  $w$ , Helen knows that she could play the guitar in  $w$ . Knowledge-how would thus be revealed as simply being a species of knowledge-that.<sup>7,8</sup>

### **3. Knowledge-How and Action: Indexical and Practical Modes of Presentation**

As it stands (and as Stanley & Williamson themselves acknowledge), such an account would seem to *overgenerate* vastly. For Helen could presumably acquire knowledge of a certain way that she could play the guitar in that way and still not know how to play the guitar. For example, she could attentively attend a concert given by Segovia: sitting in the first row and distinctively perceiving every subtle movement of the famous guitarist, she could acquire knowledge of the way exemplified by him that she could play the guitar in that way. Sadly, however, such a trick would not guarantee that Helen overcomes her situation as described in section 1 and comes to know how to play the guitar. I'm here

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<sup>7</sup> At least, assuming that the truth-conditional equivalence signalled by 'iff' is strong enough as to warrant a reduction of one side of the equivalence to the other. In the following, I'll set aside this complication, as my dialectic targets the stability of the equivalence itself.

<sup>8</sup> In spite of the considerations adduced in the text, on closer inspection there are arguably significant syntactic and semantic differences between 'know how'-ascriptions and other 'know wh'-ascriptions which make the linguistic argument in favour of intellectualism very problematic (see Sgaravatti & Zardini [2008], pp. 225–235; Zardini [2011]). I shall not go into this aspect of the debate here.



assuming that attentively attending the concert is sufficient to provide Helen with the relevant item of the kind of *de re knowledge* required by ascriptions of the form ‘For some  $x$ , DP know that ...  $x$  ...’. This seems quite intuitive and in any event hard to resist: in the same situation, were Segovia to enter the stage with a distinctive gait, it would be extremely plausible to say that, for some way  $w$ , Helen knows that  $w$  is a way in which Segovia walks; and if attentively attending the concert is sufficient to yield *de re* knowledge of the way in which Segovia walks, it would also seem sufficient to yield *de re* knowledge of the way in which Segovia plays the guitar—a way which would in turn seem a jolly good way in which Helen too could play the guitar. More generally, it seems that the strategy of blocking all such counterexamples by claiming that the relevant attribution of *de re* knowledge is in fact false will, at least without supplementation, be hopelessly *ad hoc*, and will anyways run against some quite solid intuitions we have with regard to attributions of *de re* knowledge.

It is also instructive to pause for a moment and ask what grounds the intuitively correct judgement about Helen’s lack of knowledge-how in this case. It seems clear that what grounds such a judgement is the fact that, were Helen given a guitar just after Segovia’s performance, she could still not intelligently produce any coherent melody. Now, as Carl Ginet first pointed out (see Ginet [1975], pp. 8–9), much care is needed when considering any putative connection between knowing how to  $F$  and being disposed to  $F$  (or even being able to  $F$ ): Segovia himself may know how to play the guitar without being disposed to play it, maybe because he has most firmly decided never to play it again, or maybe because, being affected by an unusual condition, every time he touches a

guitar, he falls asleep (in the latter case, it would even seem right to say that he *cannot* play the guitar, even though he *knows how* to play it).

Yet, it seems that, however complex and mediated it may be in view of Ginet-like cases, some such connection between knowledge-how and disposition to action must exist, on pains of jeopardizing what seem to be our best grounds for attributing and withholding knowledge-how. Being the product of a knowledge-how state, and hence of a *knowledge* state, such action must be *successful*. And being the product of a knowledge-how state, and hence of a *cognitive* state, such action must be *intelligent*. Indeed, just as in the case of knowledge-that the belief is true because—under normal external conditions—formed in a justified way, in the case of knowledge-how the action must be successful *because*—under normal external conditions—performed in an intelligent way. Taking our inspiration from Ernest Sosa’s insightful analysis of performance normativity (see Sosa [2007], pp. 22–43), we can say that the action must be *apt* (i.e. successful because—under normal external conditions—performed intelligently).<sup>9</sup> We can then lay down what should be the uncontroversial core of the connection between knowledge-how and disposition to action:

(KHA)      Necessarily, one knows how to *F* iff, under suitable conditions, one is disposed aptly to *F*

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<sup>9</sup> I don’t claim to be using exactly the same concept of aptness as Sosa’s. Sosa’s concept is such that an action is apt iff it is “accurate” because “adroit”. While it is clear that accuracy (as understood by Sosa) just is the same thing as successfulness (as understood by me), it is much less clear that this is so also for adroitness (as understood by Sosa) and intelligence (as understood by me).

where, in view of the above examples concerning a recalcitrant or sleepy Segovia, ‘under suitable conditions’ is a promissory place-holder which does need to be specified by a complete account of knowledge-how, even though the details of such a specification need not concern us here.<sup>10</sup>

In order to account for (left-to-right) (KHA), Stanley & Williamson appeal to allegedly similar cases of so-called ‘*indexical beliefs*’ (roughly, beliefs which are most faithfully expressed by sentences containing indexical expressions). Notoriously, I can believe of myself that I have burning pants without taking appropriate action if I am not given to myself under a “*first-personal*” mode of presentation (roughly, a mode of presentation that makes it the case that the relevant belief is most faithfully expressed by the subject that has that belief by using a sentence containing ‘I’).<sup>11</sup> This can be the case if, for example, I believe that the man in the mirror has burning pants without realizing that *I myself* am that man (and so without believing that I myself have burning pants),

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<sup>10</sup> Drawing on Hawley [2003], p. 27, Bengson & Moffett & Wright [2009], pp. 395–398 offer cases where, basically, one is disposed successfully to do something because of some deviant chain proceeding from one’s intelligence. For example, Irina, a skater, might have a severe misconception of what a Salchow jump involves, but nevertheless be disposed successfully (and reliably) to perform such a jump because some neurological abnormality causes her to jump in the right way whenever she attempts to jump according to her misconception. Such cases pose no problem for (right-to-left) (KHA), since, on the intended sense of ‘because’, they are not cases where the action is successful because—under normal external conditions—performed intelligently, and hence they are not cases where one is disposed aptly to do something (see also Stanley [2011a], pp. 216–218; [2011b], pp. 177–178 for a similar take on such cases).

<sup>11</sup> The discussion can remain neutral as to the specifics of the underlying theory of attitudes and their objects (Fregean, Russellian, Lewisian-Stalnakerian etc.) as long as this recognizes something like modes of presentation.

thus standing peacefully inactive. But as soon as I realize that I myself have burning pants, I will certainly grab something in order to extinguish the fire. This and similar cases show how the first-personal mode of presentation has a privileged connection to action which other modes of presentation of oneself do not have (see Perry [1979]). Predictably enough, such a connection will be as complex and mediated as the one established by (KHA), Ginet-like cases for it being easily constructible (for example, it might be that, every time I realize that I myself am in danger, I cannot move, and so fail to act in a way appropriate to extinguish the fire on my pants).

*Similarly*, so claim Stanley & Williamson, there exist particular modes of presentation of ways to do something—“*practical*” modes of presentation (henceforth, ‘PMPs’)—that have a privileged connection to action which other modes of presentation of ways do not have. On their view, ‘know how’-ascriptions either semantically or pragmatically imply that the way in question is known to be a way for one to *F under a PMP*. Thus, to go back to the problematic example of Helen’s attending Segovia’s concert, although it is the case that, in that situation, for some way *w*, Helen knows that she could play the guitar in *w*, Stanley & Williamson claim that Helen does not know that under a PMP of *w*, and hence an utterance of (5) in such a situation would be false, or at least infelicitous.

#### **4. True Belief under a Practical Mode of Presentation**

In my view, Stanley & Williamson's analogy is flawed and does little to help to solve the problem of how intellectualism can account for (KHA). Since PMPs are simply particular modes of presenting ways, one would highly plausibly expect that:

(TK) It is possible *to believe truly*, for some way  $w$ , *under a PMP of  $w$* , that one could  $F$  in  $w$  without thereby *knowing*, for any way  $w'$ , that one could  $F$  in  $w'$

is true for a large variety of subjects and actions. However, it also seems highly plausible that:

(TA) If merely true belief under a PMP is possible, then, at least in some situations, it is *already sufficient* for generating, under suitable conditions, a disposition to apt action

is also true for a large variety of subjects and actions. Since the fact that, under suitable conditions, one is disposed to apt action in turn triggers (right-to-left) (KHA), we have the surprising result that the individually highly plausible (TK), (TA)<sup>12</sup> and (right-to-left) (KHA) are jointly inconsistent with Stanley & Williamson's account.

To elaborate with the example of the subject Helen and the action of playing the guitar, by a highly plausible instance of (TK) we have that it is possible that Helen truly believes, for some way  $w$ , under a PMP of  $w$ , that she could play the guitar in  $w$ , without

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<sup>12</sup> Possibly with some minor restrictions on their acceptable instances. In the following, I'll leave this qualification implicit.

thereby knowing, for any way  $w'$ , that she could play the guitar in  $w'$ . By a highly plausible instance of (TA), it follows that, at least in some situations, this merely true belief of hers is already sufficient for generating, under suitable conditions, a disposition aptly to play the guitar. Since the fact that, under suitable conditions, Helen is disposed aptly to play the guitar in turn triggers (right-to-left) (KHA), it follows that, at least in some situations, Helen knows how to play the guitar even though, for no way  $w$ , she knows that she could play the guitar in  $w$ . This plainly contradicts Stanley & Williamson's account.

To implement this abstract configuration, imagine a situation in which Helen has acquired the true belief, for some way  $w$ , under a PMP of  $w$ , that she could play the guitar in  $w$  from an extremely unreliable source that only got it right that time, and that the way in question allows her to play the guitar divinely (even better than Segovia!). If (TK), (TA) and (right-to-left) (KHA) are all true, such a situation would be an optimal candidate for a situation in which Helen only has a merely true belief under a PMP that is however already sufficient for generating a disposition aptly to play the guitar, with the latter in turn implying that she knows how to play the guitar—a situation in which Helen knows how to play the guitar although it is not the case that, for some way  $w$ , she knows that she could play the guitar in  $w$ .

Situations such as the one just described are situations in which a certain 'know how'-ascription that would count as false on Stanley & Williamson's semantics would nevertheless count as true not only by the lights of highly plausible *theoretical principles* (such as (TK), (TA) and (right-to-left) (KHA)), but also by the lights of *ordinary judgements*, as ordinary speakers would be inclined to assent to that ascription. Stanley &

Williamson's commitment to a local error theory would then be unavoidable: in a certain range of cases, ordinary speakers systematically attribute knowledge-how while there isn't any. The very same materials that Stanley & Williamson employ in order to address the *overgeneration* problem (i.e. PMPs) can thus be turned against them in order to raise what seems to be a serious *undergeneration* problem.

## 5. Objections and Replies

Given the structure of the previous argument, I can see three main strategies for blocking it, none of which, as I explain, looks particularly promising:

- (i) *Deny (TK)*. True belief under a PMP does imply knowledge-that.

*Reply*. Firstly, although the implication from true belief to knowledge-that is, to say the least, highly problematic in its full generality, it must be conceded that it might be maintained for some special cases:

- (a) Truth implies knowledge-that. A certain range of propositions may be such that their obtaining implies their being known by a certain subject *s* (consider e.g. the propositions describing *s*'s experience). If *P* is one such proposition, it would then follow that, if *s* truly believes that *P*, then (it is true that *P* and hence) *s* knows that *P*.

- (b) Belief implies knowledge-that. It may be part of the possession conditions of certain concepts that some specific propositions involving these concepts be believed. This link may in turn be sufficient to generate knowledge of these propositions. If  $P$  is one such proposition, it would then follow that, if a subject truly believes that  $P$ , then (she believes that  $P$ , she thereby possesses the concepts involved and hence) she knows that  $P$ .

Both these examples are however highly debatable and, even if they were correct, true belief under a PMP would not seem to be assimilable to either of them.

Moreover, it might be true that, when one aptly  $F$ s, *via* a feed-back mechanism one becomes aware (at least implicitly), of the way  $w$  in which one  $F$ s, that one could  $F$  in  $w$ , and so one comes to know (at least implicitly) that one could  $F$  in  $w$ . Setting aside the point that, while this might happen in some (most) cases in which one aptly  $F$ s, it is hard to see why it should happen in all such cases, the observation lends anyways no credence to the denial of (TK). For, in the problematic cases, one might truly believe, for some way  $w$ , under a PMP of  $w$ , that one could  $F$  in  $w$  without having never  $F$ ed, and so without having never triggered the relevant feed-back mechanism (notice also that having never  $F$ ed is quite compatible with knowing how to  $F$ : for example, it would be true to say of a puppy Labrador that it knows how to swim even before it has ever been in water).

Secondly, the crucial analogy between beliefs under a PMP and indexical beliefs would break down, as there can certainly be non-knowledgeable true indexical beliefs.



For example, I might have burning pants without noticing it and at the same time misread a sentence of the newspaper as reporting that I myself have burning pants. In that case, I would truly believe of myself, under a first-personal mode of presentation, that I myself have burning pants without thereby knowing that I myself have burning pants.

(ii) *Deny (TA)*. In no situation is merely true belief under a PMP sufficient for generating, under suitable conditions, a disposition to apt action.

*Reply*. Firstly, note that the crucial analogy between beliefs under a PMP and indexical beliefs would again break down, as merely true indexical beliefs can certainly be sufficient for generating, under suitable conditions, a disposition to apt action. For example, my merely true belief of myself, under a first-personal mode of presentation, that I myself have burning pants (maybe formed as described in (i)) would still generate in me the disposition, whenever a blanket is at hand, aptly to grab it and use it to extinguish the fire.

Secondly, it must be conceded that there might be cases where an explanation of action in terms of knowledge-that would be better than explanations in terms of other mental (or mental-*cum*-environmental) states (see Williamson [2000], pp. 60–92). For example, a burglar’s ransacking a house for the whole night might best be explained by the burglar’s *knowing* that there was a diamond in the house (rather than, say, by his truly believing that there was a diamond in the house). Could one then maintain that the (complex and mediated) connection to action that should be referred to on the right-hand side of (KHA) requires, under suitable conditions, a disposition to action that displays a

similar robustness against contrary (misleading) evidence and that can only be explained in terms of knowledge-that?<sup>13</sup>

I think that this move would be unsatisfactory in at least two respects. For starters, that a similar robustness is required seems unlikely, as Helen's merely true belief that she could play the guitar in  $w$  may never be challenged, in which case a knowledge-how attribution would still seem to be warranted by her extremely good guitar performances.

Moreover, even if such robustness were required, whether challenged or not Helen's merely true belief may, for some reason or other, be very stubborn, so as to be as robust as knowledge-that against contrary (misleading) evidence.<sup>14</sup>

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<sup>13</sup> Taking (TA) and (KHA) literally, this move would strictly speaking target the latter rather than the former. The move itself, however, suggests an easy amendment to (KHA) (just add the extra clause that the disposition to apt action has the required robustness). In order for my argument to remain valid, (TA) would then have to be correspondingly amended, and the move is in effect targeting this latter amendment. This is why I think it's more illuminating to discuss this move in connection with strategy (ii).

<sup>14</sup> Williamson [2000], p. 63 remarks that "stubbornness [...] cannot replace knowing in all causal-explanatory contexts, for the simple reason that those who know  $p$  often lack a stubborn belief in  $p$ ". I agree, but notice that all the point in the text needs is simply a case where stubbornness is present and produces a similar robustness against contrary (misleading) evidence as is produced by knowledge-that (I hasten to add that Williamson does not put forth that remark—nor the burglar example discussed in the text—in order to address the issue at hand). Indeed, stubbornness and its like are sometimes more valuable than knowledge-that when it comes to practical evaluation. Stanley [2011b], p. 181 writes that "knowledge of how to do something is more valuable than true belief. Suppose that John has formed a true belief about how to fly a plane from an unskilled flight instructor who has, by luck, given John the correct instructions. We would not be as happy with John as our pilot as we would be with someone trained by a skilled flight instructor even if we were antecedently assured that their beliefs about how to fly the plane are the same". But that arguably depends on the details. To take but one example, if John has thereby acquired an

(iii) *Deny (right-to-left) (KHA)*. That, under suitable conditions, one is disposed aptly to *F* does not imply that one knows how to *F*.

*Reply*. Firstly, there is the sheer implausibility of denying (right-to-left) (KHA). That could be buttressed by noticing first, with Stanley & Williamson themselves, that, quite generally, it is “very plausible that intentional actions are employments of knowledge-how” (Stanley & Williamson [2001], pp. 442–443),<sup>15</sup> and second that aptly *F*ing seems conceptually to imply intentionally *F*ing. Together, these two claims suffice to entail (right-to-left) (KHA), and so this strategy for blocking my argument is foreclosed to whoever is committed to both of them (including, very likely, Stanley & Williamson themselves).

Secondly, it must be conceded that it is a general, if sometimes exaggerated, phenomenon with ‘know wh’-ascriptions that ordinary speakers are sometimes tolerant with them even if they are aware that the epistemic credentials of the subject of the ascription are very bad.<sup>16</sup> For example, if, at a quiz show, the question is what the capital

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exhaustive set of stubborn and correct—albeit lucky—beliefs about how to fly the plane on which he also acts promptly, while the other candidate—albeit knowledgeable—is very insecure and also takes hours of rumination before acting on her knowledge, I think we would be much happier with John as our pilot than with the other candidate.

<sup>15</sup> Because of examples such as that offered by Setiya [2008], p. 404, the claim may need some qualification for non-basic actions. If such qualification is in fact needed, we should assume that what we’re considering is a basic action.

<sup>16</sup> I’m grateful to both Jason Stanley and Timothy Williamson for discussions on this issue.

of Brazil is, and John is the only one to believe that Brasilia is the capital of the Brazil, then ordinary speakers are surprisingly tolerant with the ascription ‘John knows what the capital of Brazil is’ even if they are aware that John’s true belief has been formed and sustained only on the basis of astrological speculations. Could one then maintain that the source of such tolerance is also the source of the general intuition concerning the truth of (right-to-left) (KHA) and of the specific intuitions concerning the truth of ‘know how’-ascriptions in the problematic cases, and hence that such intuitions should not be trusted?

I think that this move would be unsatisfactory in at least two respects. For starters, even speakers tolerant in the way described above are happy to retract the original ascription in favour of the more accurate ‘Although he has a correct belief as to what the capital of Brazil is, John does not know what the capital of Brazil is’. But they are not equally happy to re-describe Helen’s case with ‘Although she has a correct belief as to how to play the guitar, Helen does not know how to play the guitar’.

Moreover, contrary to what is sometimes intimated, there is nothing peculiar in this respect in the behaviour of ‘know wh’-ascriptions. For the same kind of tolerance can be found with ‘know that’-ascriptions. For example, if, at a time when John is drafting his will, his wife is cheating on him, and he believes that his wife is cheating on him, then ordinary speakers are surprisingly tolerant with the ascription ‘John knows that his wife is cheating on him’ even if they are aware that John’s true belief has been formed and sustained only on the basis of astrological speculations. For knowledge-that just as for knowledge-wh, ordinary speakers tend in certain contexts to ignore the gap between true belief and knowledge. This very *unspecific* fact cannot be used without further elaboration to rebut a specific undergeneration objection based on intuitive principles and

judgements and targeted against a certain account of a certain kind of knowledge. If it could, any objection based on intuitive principles and judgements about the presence of knowledge-that and targeted against scepticism or any other implausibly demanding theory of knowledge-that could be so rebutted, which it clearly can't. Suppose for example that a theorist holds that knowledge that  $P$  quite generally requires proof that  $P$  from the axioms of Peano arithmetic. When presented with a specific undergeneration objection based on the intuitive fact that, for example, there are cases where one knows that one has hands without having proved this from the axioms of Peano arithmetic, it would not be a good reply for such a theorist simply to point out that ordinary speakers tend in certain contexts to ignore the gap between true belief and knowledge-that and that this is a case in point! What one attracted by this style of response would need to do is rather to give independently plausible, non-trivial sufficient conditions under which ordinary speakers tend to ignore the gap between true belief and knowledge, and show that some or other of these always obtain for the general intuition concerning the truth of (right-to-left) (KHA) and for the specific intuitions concerning the truth of 'know how'-ascriptions in the problematic cases. The jury is still out on whether this task can be accomplished.<sup>17</sup>

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<sup>17</sup> Stanley [2011a], p. 219; [2011b], pp. 180–181 suggests the condition that speaker and audience are more interested in the belief's truth rather than in its epistemic credentials. Setting aside whether this interesting suggestion works in the case of other 'know wh'-ascriptions and 'know that'-ascriptions, it does not seem to work for 'know how'-ascriptions: the obtaining of the suggested condition seems to be pretty much independent from the tendency to attribute knowledge-how in the presence of merely true belief. On the one hand, the suggested condition might obtain but the tendency be absent. For example, Helen might truly believe, for some way  $w$ , that she could play the guitar in  $w$  but initiate completely wrong movements every

Let me complete this defence of my argument by briefly discussing the issue of how far it reaches. In particular, one might worry that an analogous argument for other ‘know wh’-ascriptions clearly targeting a state of knowledge-that could appear to have equally *prima facie* plausible premises. If that were the case, it would give reason to suspect that my own argument overreaches and that the *prima facie* plausibility of some of its premises is after all spurious.<sup>18</sup>

Common as this worry might may be for other considerations advanced against intellectualism, on reflection it is however hard to see how it could be substantiated in the case of my own argument. For finite ‘know wh’-ascriptions it is not even clear what the relevant analogue of (KHA) could be:

(KHA<sub>1</sub>) Necessarily, Rudolf knows who was at the party iff, under suitable conditions, he is disposed aptly to...

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time she tries to play one (a benign demon may then each time correct her movements so that they conform to *w*). In such a case, even in contexts where one is only interested in truth (and success) rather than epistemic credentials, there is little if any intuition that Helen knows how to play the guitar. On the other hand, the suggested condition might fail to obtain but the tendency be present. To elaborate on a previous example, Helen might have a merely true but unshakeable belief, deriving from an extremely unreliable source, for some way *w*, under a PMP of *w*, that she could play the guitar in *w*, and such a belief, given that (TA) is now no longer under discussion, can be assumed to suffice for her to play the guitar divinely (even better than Segovia!). In such a case, even in contexts where one is interested in epistemic credentials, the strong intuition persists that Helen, such a divine player, knows how to play the guitar (it would for instance be felicitous to assert ‘Although her source is extremely unreliable, Helen knows how to play the guitar’).

<sup>18</sup> Thanks to an anonymous referee for pressing this worry.

... do what? Things are better with non-finite 'know wh'-ascriptions to the extent that, given any particular 'know wh'-ascription, a relevant analogue of (KHA) for it can at least be generated in a natural way, but crucially such analogues lack any *prima facie* plausibility (in particular, in their right-to-left direction):

(KHA<sub>2</sub>) Necessarily, Rudolf knows why to jog iff, under suitable conditions, he is disposed aptly to jog

(KHA<sub>3</sub>) Necessarily, Rudolf knows with which persons to study iff, under suitable conditions, he is disposed aptly to study

(KHA<sub>4</sub>) Necessarily, Rudolf knows where to get hold of an Italian newspaper iff, under suitable conditions, he is disposed aptly to get hold of an Italian newspaper

For, under suitable conditions, Rudolf might be disposed aptly to jog, but only because he thinks that that will make him more intelligent (so that he would not know why to jog); be disposed aptly to study, but only on its own (so that he would not know with which persons to study); be disposed aptly to get hold of an Italian newspaper, but only by

having his butler buy it (so that he would not know where to get hold of an Italian newspaper).<sup>19</sup>

In closing this section, let me remark that this paper has been circulating in various drafts for some years now and its main contention has sometimes been (mis)characterized, in conversation and print, as being the one that there are no *Gettier cases* for knowledge-how (from which anti-intellectualism is somehow supposed to follow). That that is a severe mischaracterization should already be intimated by the fact that the notion of a Gettier case is never employed in the whole paper (save, of course, for this paragraph!). To reiterate, my argument is rather that Stanley & Williamson's account (and, as I proceed briefly to explain in the next section, other intellectualist accounts as well) preserves (left-to-right) (KHA) only at the expenses of introducing

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<sup>19</sup> Don't say that this problem can be finessed by switching, for example, from (KHA<sub>2</sub>) to something along the lines of:

(KHA<sub>2</sub>\*) Necessarily, Rudolf knows why to jog iff, under suitable conditions, he is disposed aptly to jog on the basis of good reasons for jogging

For, while not as obviously false as (KHA<sub>2</sub>), at least on its most natural reading (KHA<sub>2</sub>\*) still does not have much *prima facie* plausibility (if Rudolf's only source for believing that jogging is good for his health is the tarot, (KHA<sub>2</sub>\*) is intuitively false). Moreover, and more importantly, this move would be utterly useless in substantiating the worry discussed in the text: since my argument uses (KHA) rather than an analogue of (KHA<sub>2</sub>\*), that worry requires analogues of (KHA) for a 'know wh'-ascription involving an interrogative pro-form other than 'how' (and so, say, (KHA<sub>2</sub>) rather than (KHA<sub>2</sub>\*)) to have *prima facie* plausibility, which they don't (at best, this move would show that a hypothetical anti-intellectualist argument that relied on analogue of (KHA<sub>2</sub>\*) rather than on (KHA) may be problematic, but that would not be my argument).



materials that create an inconsistency between (right-to-left) (KHA) and other highly plausible theoretical principles concerning knowledge, true indexical belief and action (as (TK) and (TA)). Furthermore, I describe a situation about which both (a natural understanding of) these principles and ordinary judgements agree that it presents a direct counterexample to Stanley & Williamson's account. In so doing, I do make use of the idea of a merely true belief (which is quite different from that of a Gettiered belief), but, most emphatically, the highly plausible theoretical principles I appeal to do not entail that there are no cases of merely true belief without knowledge-how (see e.g. fn 14 and the text it is appended to). Nor do they entail that there are no Gettier cases for knowledge-how.<sup>20</sup> Indeed, my overarching dialectic is not even committed to either (TK) or (TA), as these can only be true if there are PMPs, and my overarching dialectic is not committed to that: it rather appeals to the fact that PMPs *have to exist if* the proposed reply to the

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<sup>20</sup> For what's worth, I think that the rather unclear phrase 'Gettier case for knowledge-how' can sensibly be used to mean at least two very different things: under either reading, I would wholeheartedly agree that there are Gettier cases for knowledge-how and nothing I say in this paper entails otherwise. More specifically, under one reading, that phrase stands for cases where one knows how to *F* although some of one's beliefs relevant to *F*ing are Gettiered and none is knowledgeable. I think there are such cases, but a defence of this claim lies beyond the scope of this paper. Under another reading, it stands for cases where one intelligently and successfully *F*s and one's beliefs contributing to one's intelligence are justified, although there is not the right connection between this justification (or the resulting intelligence) and one's success. Something similar to the latter reading (with talk of justification dropped) is adopted by Poston [2009], who argues for the implausible conclusion that there are no such cases. In so doing, Poston has to rely on a principle similar to (right-to-left) (KHA), but in which, given Poston's desired conclusion, aptness is replaced by the mere conjunction of intelligence and success. Poston's principle and his desired conclusion are both conclusively refuted, I think, by the kind of case discussed in fn 10.

overgeneration problem has to work, and builds upon that fact a converse undergeneration problem.

## 6. Generalizations

The *structure* of the problem emerged in the previous two sections is that the particular property which the relevant knowledge-that states must be postulated to exemplify in order to imply the right-hand side of (KHA) (in Stanley & Williamson's case, the property of being entertained under a PMP) seems to be such that merely true beliefs exemplifying it are already sufficient to imply the right-hand side of (KHA) and thus count as states of knowledge-how. Given the *generality* of these structural features, I submit that the argument developed in this paper is likely to present a quite general challenge for intellectualist strategies.

Since the range of possible intellectualist strategies is open-ended, substantiation of the last claim is obviously itself an open-ended matter. Here, I'll rest content with a brief consideration of two particularly clear further cases studies (I think that there are already other examples in the literature that fall under the template described in the previous paragraph, but there is no space here for an exhaustive survey). The first example is Brogaard [2008], pp. 183–185, who defends the intellectualist thesis that Helen knows how to play the guitar iff, for some way  $w$ , Helen knows that  $w$  is how to play the guitar. Recognizing the threat of overgeneration, Brogaard distinguishes between a *subject-control reading* (Helen knows that  $w$  is how *Helen* could play the guitar) and a

*generic reading* (Helen knows that  $w$  is how *one* could play the guitar), claiming that the former is what guarantees knowledge-how's characteristic connection to action. Hence, for Brogaard, the particular property which the relevant knowledge-that states must be postulated to exemplify in order to imply the right-hand side of (KHA) is the property of being about the specific knowing subject (rather than the property of being entertained under a PMP). An analogue of the undergeneration argument of section 4 presents such a view with the challenge of explaining why it is not the case that Helen's merely true belief, for some way  $w$ , under the subject-control reading, that  $w$  is how to play the guitar is not already sufficient to imply the right-hand side of (KHA) and thus count as a state of knowledge-how.

The second example is Stanley [2011b], pp. 125–126, who briefly considers an alternative to the account presented in section 3 for avoiding the threat of overgeneration (the latter still being the official account of the intellectualist view developed in Stanley [2011b]). That account distinguishes between a reading of the relevant modal which only looks at situations in which *Helen's physical state is kept fixed* with respect to the circumstance of evaluation (Helen knows that, in some situation in which her physical state is kept fixed with respect to the circumstance of evaluation, she plays the guitar in  $w$ ) and a reading which looks at situations in which *Helen may have undergone enough training* with respect to the circumstance of evaluation (Helen knows that, in some situation in which she may have undergone enough training with respect to the circumstance of evaluation, she plays the guitar in  $w$ ), claiming that the former is what guarantees knowledge-how's characteristic connection to action. Hence, for that account, the particular property which the relevant knowledge-that states must be postulated to

exemplify in order to imply the right-hand side of (KHA) is the property of being about situations in which the physical state of the knowing subject is kept fixed with respect to the circumstance of evaluation (rather than the property of being entertained under a PMP). An analogue of the undergeneration argument of section 4 presents such a view with the challenge of explaining why it is not the case that Helen's merely true belief, for some way  $w$ , that, in some situation in which her physical state is kept fixed with respect to the circumstance of evaluation, she plays the guitar in  $w$  is not already sufficient to imply the right-hand side of (KHA) and thus count as a state of knowledge-how.

## **7. Conclusion**

I conclude that Stanley & Williamson's account faces a serious problem of stability between overgeneration and undergeneration and that the argument developed in this paper is likely to present a quite general challenge for intellectualist strategies. One of the fundamental questions in the philosophical problem of knowledge-how is: what elevates our beliefs about playing the guitar to knowledge of how to play the guitar? The oscillation between overgeneration and undergeneration faced by intellectualist attempts at answering this question suggests that its correct answer does not lie in our beliefs' epistemic pedigree.

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