Knowledge-How, Linguistic Intellectualism, and Ryle's Return*

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1 Introduction

How should we understand knowledge-how – knowledge how to do something? And how is it related to knowledge-that – knowledge that something is the case?[1] In this paper, I will discuss a very important and influential aspect of this question, namely the claim – dubbed 'Intellectualism' by Gilbert Ryle (1945, 1949) – that knowledge-how can be reduced to knowledge-that. Recently, Jason Stanley and Timothy Williamson (2001) have tried to establish Intellectualism with the aid of linguistic considerations. This project – Linguistic Intellectualism – will be criticized on three levels. First, I will reconstruct and object to Stanley & Williamson's positive argument in favour of Intellectualism (section 2). Second, I will assess their view of the relationship between knowledge-how and practical ability and argue that their stance is not well-motivated (section 3). Third, I will discuss their criticism of Ryle's objection against Intellectualism. After distinguishing between different versions of Ryle's argument, I will show that its strongest version is both immune to the objection by Stanley & Williamson and a decisive argument against their own theory (section 4). Given that Intellectualism fails for these three reasons, I finally draw on a broader reading of Ryle in order to develop the beginnings of a positive account of knowledge-how and its relationship to knowledge-that (section 5).

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[1] It should be briefly noted that not every use of "knows that" indicates knowledge-that and not every use of "knows how" indicates knowledge-how. For example, "She knows that person" does not indicate knowledge-that, and "He knows how long the journey takes" does not indicate knowledge-how. For various other uses of "knows how" which do not indicate knowledge-how, compare Bengson *et al.* (2009, 389).

2 Linguistic Intellectualism

2.1 The Argument from Linguistics

In the words of Gilbert Ryle, champions of Intellectualism hold that "the primary exercise of minds consists in finding the answers to questions" (Ryle 1949, 27). Stanley & Williamson fit this bill precisely. Their argument in favour of Intellectualism (2001) relies on the idea that knowledge-how consists in knowing the answer to a question, namely the question which is syntactically 'embedded' in the sentence attributing knowledge-how. For example, if Gregor knows how to ride a bicycle, linguists tell us that the expression 'how to ride a bicycle' is an embedded version of a question like "How can one ride a bicycle?" Then, to say that Gregor knows how to ride a bicycle is just to say that Gregor knows an answer to such a question, that he knows that such-and-such would be a way for him to ride a bicycle. Since this knowledge is knowledge-that, Stanley & Williamson conclude that knowledge-how is a species of knowledge-that.

It is crucial to note that this argument begins with an account not of knowledge-how, but of *ascriptions* of knowledge-how. These, the claim goes, are best understood in terms of embedded questions. The reason is simple:

> Our view of ascriptions of knowledge-how is very straightforward. It is just that the standard linguistic account of the syntax and semantics of embedded questions is correct. (2001, 431)

I will not give a full account of the linguistic theories Stanley & Williamson cite in order to get their argument going (compare 2001, 417-432). However, let me label the linguistic theory they rely on the Karttunen Account – in honor of their central point of reference, an article by Lauri Karttunen (1977) – and indicate briefly that its core idea is a unified explanation of the semantics of 'to know' followed by an interrogative particle:

> Hannah knows where to find a nickel.
> Hannah knows whom to call for help in a fire.
> Hannah knows why to vote for Gore.
> (examples from Stanley & Williamson 2001, 417 f.)

All of these are accounted for in terms of knowledge-that as an answer to an embedded question: Hannah knows where to find a nickel just in case she knows, for some place x, that x is a place where to find a nickel. This is an answer to the question "Where to find a nickel?" By the same token, Hannah knows why to vote for Gore just in case she knows, for some reason r, that r is a reason why to vote for Gore. This is an answer to the question "Why vote for Gore?"

Stanley & Williamson merely add that this theory of knowledge-*wh* – knowledge-where, knowledge-whom, and so on – can be extended in order to include a further interrogative particle: "how". Thus, what they derive from the Karttunen Account is that

> ["Hannah knows how to ride a bicycle."] is true if and only if, for some contextually relevant way w which is a way for Hannah to ride a bicycle, Hannah knows that w is a way for her to ride a bicycle. (Stanley & Williamson 2001, 426)

Generally speaking, they hold that "S knows how to F" is true if and only if, for some contextually relevant way w which is a way for S to F, S knows that w is a way for them to F.[2] This is obviously a claim about the truth conditions of "S knows how to F", but Stanley & Williamson go on to infer a claim about knowledge-how and knowledge-that, Intellectualism. I will call this argument the Argument from Linguistics. This is how it works in detail:

1   Linguistics determines that "S knows how to F" is true if and only if S knows an answer to the question "How to F?"

2   Linguistics determines that S knows an answer to the question "How to F?" if and only if, for some contextually relevant way w

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[2]Sometimes it is true that somebody knows how to do something, but it may be impossible to specify a way to do so because the activity is too complex. David Wiggins (2005) has proposed several such examples and even argued that in such cases, we have little reason "to believe that there is some simple propositional knowable that spells out the whole set of complete procedures which would somehow comprise and exhaust" a person's knowledge-how (Wiggins 2005, 271). I sympathize with this worry, but I will nevertheless grant the existence and knowability of such propositions for the sake of Stanley & Williamson's argument.

which is a way for S to F, S knows that w is a way for them to F.

3   Thus, linguistics determines that "S knows how to F" is true if and only if, for some contextually relevant way w which is a way for S to F, S knows that w is a way for them to F.

4   If Linguistics determines that "S has the property P" is true if and only if S has the property Q, then P is Q.

5   Thus, knowledge how to F is, for some contextually relevant way w, knowledge that w is a way to F.

6   Knowledge-how is a species of knowledge-that if and only if knowledge how to F is, for some ϕ, knowledge that $\phi(F)$.

7   Thus, knowledge-how is a species of knowledge-that.

The first part of this argument, premises 1 and 2 and their consequence 3, are what Stanley & Williamson derive from the Karttunen Account. It is therefore possible to reject their argument simply by rejecting that theory. However, Stanley & Williamson are correct when they point out that the Karttunen Account is a standard theory in formal semantics. Of course, this does not mean that everybody has to accept it, but it would be better to have good reasons not to do so, reasons independent from the question of knowledge-how.

One such independent reason to reject the Karttunen Account would be a better rival theory from the literature within linguistics. One such rival has been proposed by Manfred Krifka (2001), and Laura Michaelis (forthcoming) explicity shows how an even further linguistic account bears on the philosophical problem of knowledge-how. A further option is to deny that knowledge-how can be understood in terms of knowledge-wh, or – with Jonathan Schaffer (2007) – to deny that knowledge-wh can be understood in

terms of knowledge-that. Finally, as opposed to rejecting the Karttunen Account in general, one might argue specifically against the first two premises of the Argument from Linguistics, such as Daniele Sgaravatti and Elia Zardini (2008), who object to premise 1, and Rowland Stout (2010) who objects to premise 2.[3]

However viable and interesting these dialectical options are, I will not discuss them here. My strategy will be to show that – independently of the outcome of these debates at the intersection of linguistics and the philosophy of language – the Argument from Linguistics fails. It fails because it is not clear that linguistics can do philosophical work in the way Stanley & Williamson assume. Their bridge from the analysis of language to metaphysical claims is premise 4. As far as I can see, they do not even explicitly formulate this claim, but they evidently rely on it (compare, for example Stanley & Williamson 2001, 411 f.). I will provide two independet arguments for the conclusion that this bridge is unstable. We should reject premise 4 and with it the Argument from Linguistics.

Before getting started, let me make two remarks. First, by arguing that *this* bridge from language to metaphysics is unstable, I do not reject *every* such bridge. I agree that much of philosophy has to start with an analysis of

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[3]Both of these enterprises rely heavily on the distinction between what does and what does not qualify as an answer to a question in a strict sense. I cannot discuss this issue in the present context, but on a standard view of the matter, both seem to fail. *Sgaravatti & Zardini* claim that one can know an answer to the question "How to square the circle?" – the *only* correct answer "In no way!" – without thereby knowing how to square the circle. But they acknowledge that a question of the form "How can one F?" typically carries the presupposition that there is a way to F. Thus, "In no way!" cannot count as an answer in the strict sense. Compare: When asked "Have you stopped beating your wife?", one can deny the question's presupposition, but only "Yes" and "No" count as answers in a strict sense. By contrast, *Stout* argues that one might know *of* an answer to a question that it is true without thereby knowing an answer *to* that question. He thinks that both "What does 3 + 5 make?" and "What added to 5 makes 8?" can be answered by citing the fact that 3 + 5 makes 8. However, the answers to these questions are "8" and "3", respectively. One can know these answers in virtue of the fact that 3 + 5 makes 8, and one can even say "3 + 5 makes 8" in response to them. But that fact is not *itself* an answer. "8" and "3" are the answers, even if this is conveyed in the statement "3 + 5 makes 8". After all, one can also know that "3" is the answer to "What added to 5 makes 8?" in virtue of a different fact, the fact that 8 - 5 makes 3, and one can convey this answer by saying "8 - 5 makes 3". In any case, it is not clear at all whether such a case can be constructed for knowledge-how.

the way we think and talk. Given that premise 4 turns out to be a problematic connection between language and metaphysics, we should still look out for better ones.

Second, it could be argued in defense of Stanley & Williamson that while premise 4 might indeed be problematic, the instance needed for their argument might nevertheless be true. That is, we might simply replace 4 with:

4*   If Linguistics determines that "S knows how to F" is true if and only if, for some contextually relevant way w which is a way for S to F, S knows that w is a way for them to F, then knowledge how to F is, for some contextually relevant way w, knowledge that w is a way to F.

But this defense begs the question. If 4 is implausible, the burden of proof about particular instances of this scheme – such as 4* – is on those *defending* them, not on those rejecting them. In other words, unless we learn what should be special about knowledge-how and the expression "to know how to", we can reject the Argument from Linguistics by rejecting 4.

2.2   Language understated

I have promised two arguments against Stanley & Williamson's bridge from language to metaphysics. The first of these has already been developed nicely by Ian Rumfitt (2003). He argues that if the Argument from Linguistics is sound, so are corresponding arguments about languages other than English. And if metaphysical claims can be inferred from claims about *some* language, these claims should be consistent with what *other* languages suggest. In short, if Stanley & Williamson urge us to take language seriously, we cannot take only *one* language seriously. They understate language.

This shows that the Argument from Linguistics is specific to English. In particular, the first step of the argument should be corrected. It turns out that we do not arrive at 3, but at:

3*   Linguistics determines that "S knows how to F" is true *in English* if and only if, for some contextually relevant way w which is a way for S to F, S knows that w is a way for them to F.

But how can we now use 4 in order to derive 5?

> 4   If Linguistics determines that "S has the property P" is true if and only if S has the property Q, then P is Q.

3* concerns the truth-conditions of English ascriptions of knowledge-how whereas 4 concerns *all* ascriptions of knowledge-how. Accordingly, Rumfitt points out that this step of the argument will be undermined if we find examples of ascriptions of knowledge-how which differ from those in English. In particular, the argument fails if we find a sentence "such that the best semantic theory for the language to which it belongs will construe its knowledge-verb as expressing (in that sentential context) a relation between a person and an activity." (Rumfitt 2003, 160) Without looking out for such sentences, it would be premature to infer a metaphysical thesis – such as Intellectualism – from linguistic data. And "the quest for such examples cannot be confined to English sentences. This is because the metaphysical thesis concerns the nature of knowledge-how, not the semantics of 'knows how'." (Rumfitt 2003, 160) In short, it is possible to derive 5 from 3* and 4 *only if* the linguistic evidence across languages is univocal.

Given the vast number and diversity of languages, it should not be surprising that there is evidence to the contrary. This is even aggravated by the fact that French, a language very closely related to English, provides such counterexamples. Consider sentences involving the expression 'savoir faire', for example "Il sait nager." Again bracketing the exact linguistic subtleties, there is a crucial difference between this sentence and English sentences involving 'to know how': "Il sait nager" is not analyzed in terms of embedded questions. Therefore, it is impossible to apply the Karttunen Account and infer that this sentence attributes knowledge-that (compare Rumfitt 2003, 160 ff.).

A natural defense on behalf of Stanley & Williamson is to claim that the 'linguistic deep structure' even of prima facie counterexamples like this still turns out to conform to the analysis they have given for English. Ascriptions of knowledge-how in other languages might also involve embedded questions –

even if there is no interrogative particle involved at all.[4] But this seems to beg the question. Why should we accept such a globalization of the Karttunen Account? Stanley & Williamson could try to justify this conjecture with a further conjecture, the idea that "the uses of 'know' in ['Hannah knows how to ride a bicycle'] and ['Hannah knows that penguins waddle'] are translated by the same word" in all natural languages (Stanley & Williamson 2001, 237). However plausible such a line of argument from lexical uniformity to syntactic deep structure may be, we can yet again make the unsurprising discovery that some languages use different words in order to translate these two uses of 'to know'. In most cases, German fits this bill,[5] but in any case, Rumfitt shows that Russian is an absolutely clear case in point (compare 2003, 164). Thus, this line of defense is blocked by the linguistic data.

I conclude that Rumfitt is right: Taking language seriously requires taking languag*es* seriously. And then, the Argument from Linguistics fails because premise 4 turns out to be false. It cannot be true that if Linguistics determines that "S has the property P" is true if and only if S has the property Q, then P actually *is* Q. Instances of "S has the property P" in different languages have different truth-conditions. And it would be absurd to hold that *all* of these are necessarily instantiated whenever *any* instance of "S has the property P" is true, regardless of the language it is formulated in.

2.3   Language overstated

The above argument relies on the idea that Stanley & Williamson do not take language seriously enough. However, there is a complementary reaction to their argument: Why should linguistics bear on metaphysics in the first place? Alva Noë has suggested that the Argument from Linguistics is an instance of "good old-fashioned Oxford philosophy (GOOP)", which is "methodologically backward" (Noë 2005, 279, 290). According to him, there

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[4]Jason Stanley (2011) claims that this is the case.

[5]In German, there are three verbs corresponding to the three uses of 'to know' philosophers have found most important. Knowledge by acquaintance – as in "I know her" – is expressed by 'kennen', knowledge-that is expressed by 'wissen' and knowledge-how is expressed by 'können'. However, instead of 'können', one sometimes also uses 'wissen wie', which is similar to 'to know how'.

is no reason to infer facts about knowledge from facts about 'to know'. Stanley & Williamson simply overstate language.

So far, this worry is far too general. But it relies on more than an intuitive unease with a certain style of philosophy. While Noë goes on to criticize mainly how Stanley & Williamson treat knowledge-how and abilities (compare section 3), I think that there is an independent argument for the conclusion that the Argument from Linguistics overstates language.

I have already indicated that the Karttunen Account is praised, among other things, because it offers a unified explanation of the expression 'to know' followed by various interrogative particles including 'how'. But in philosophical discussions, there is one such construction which has received considerable interest, namely: "Tom knows what it is like to be a bat." Crucially, the Karttunen Account treats 'knows what it is like to' along the very same lines.[6] It implies that Tom knows what it is like to be a bat just in case he knows that something is the case. In line with Stanley & Williamson's analysis of knowledge-how, the most natural candidate is this: Tom knows what it is like to be a bat just in case he knows, for some quality of experience q, that q is what it is like to be a bat.

I think that these considerations provide a further reason to reject Stanley & Williamson's bridge from linguistics to metaphysics:

4   If Linguistics determines that "S has the property P" is true if and only if S has the property Q, then P is Q.

If the Karttunen Account is true, this claim seems to be false. For even if ascriptions of knowledge-what-it-is-like are true just in case some knowledge-that about qualia can also truly be ascribed, it does not follow that knowledge-what-it-is-like therefore *is* knowledge-that about qualia. Rather than knowledge *about* qualia, knowledge-what-it-is-like essentially involves phenomenal *acquaintance with* something, say, being a bat. Even if this were coinstantiated with knowledge-that, how could it actually *be* a *species* of knowledge-that?

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[6]I will not go into detail here, but linguists have confirmed that this is correct.

It should be noted that some philosophers explain the difference between knowledge-what-it-is-like and knowledge-that by claiming that knowledge-what-it-is-like is a form of knowledge-how – very roughly, knowledge how to imagine the experience in question.[7] Of course, this view presupposes the falsity of Intellectualism since knowledge-what-it-is-like, understood in terms of knowledge-how, only differs from knowledge-that if knowledge-how differs from knowledge-that. Thus, in criticizing the Argument from Linguistics on the basis of a notion of knowledge-what-it-is-like that differs from knowledge-that, I have to reject this view on pain of committing a *petitio principii*. As already indicated, I think that knowledge-what-it-is-like is best understood in terms of the notion of acquaintance and I see no need to understand acquaintance in terms of knowledge-how. But I cannot discuss this issue here in more detail.

My argument about knowledge-what-it-is-like is a reductio of the conjunction of premise 4 and the Karttunen Account. Thus, it could also be used in order to attack the latter rather than the former. But I will not take sides on the Karttunen Account in this paper. My argument only targets Stanley & Williamson's bridge from language to metaphysics and remains neutral on the linguistic question. One reason why I think that this is a better way to take the present argument is that there are parallel problems at the intersection of formal semantics and the philosophy of language. In particular, I think that modality is a phenomenon that should lead us to the same conclusion. Even if the best linguistic account of some expressions analyzes them in terms of possible worlds, it does not follow that possible worlds are more fundamental than modalities and that modalities actually *are* constellations of possible worlds. Given linguistic theory, there is still room for debate about metaphysics.

Let me briefly point out a further complication for Stanley & Williamson.

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[7]The so-called Knowledge Argument against physicalism – formulated most prominently by Nagel (1974) and Jackson (1982, 1986) – has been criticized on these grounds by Levin (1986), Nemirow (1990) and Mellor (1993). This dialectic has partly motivated a renewed interest in knowledge-how and Intellectualism; compare, for example, Stanley & Williamson (2001, 442 ff.) and Snowdon (2003, 26 ff.). Compare Alter (2001) and Nida-Rümelin (2009) for further discussion, especially on the question if the response relies essentially on the notion of know-how rather than the notion of ability.

The kind of knowledge-that they take to be identical with knowledge-how involves ways of doing things. But what are these? Stanley & Williamson write:

> We believe that any successful account of natural language must postulate entities such as ways. But we shall not have much more of substance to say about the metaphysics of ways in this paper. (2001, 427)

By analogy, it seems like they are committed to the claim that any successful account of natural language must postulate entities such as qualia. For just like ways of doing things are part of the kind of knowledge-that to which knowledge-how is reduced, qualia are part of the kind of knowledge-that to which knowledge-what-it-is-like is reduced.[8] Again, we are presented with the claim that a metaphysical question – "Are there qualia at all?" – is decided by linguistic theory. Of course, one might try to avoid this problem by looking for a different analysis of knowledge-what-it-is-like as knowledge-that which does not involve qualia. But even if such an analysis is possible, it merely solves this further complication. It still remains incredible that knowledge-what-it-is-like actually is knowledge-that.[9]

I conclude that Stanley & Williamson's bridge from linguistics to metaphysics does not hold. We have good reason to reject premise 4 and thereby the Argument from Linguistics.

3   Intellectualism and ability

Having cast some doubt on Stanley & Williamson's Argument from Linguistics, let me now go on to cast doubt on its conclusion. In particular, I will discuss what Stanley & Williamson say about the relationship between

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[8]Of course, even if qualia exist, the logical space for accounting for them will remain large. For example, they may be ontologically grounded in other entities such as brain-states.

[9]In conversation, Jason Stanley has expressed his readiness to bite these bulletts. While this issue leads to a more thorough discussion of phenomenal knowledge, my reaction is: So much the worse for Linguistic Intellectualism.

knowledge-how and practical ability (section 3.1) and show that this view is unfounded (section 3.2).

3.1   From abilities to practical modes of presentation

If knowledge-how is merely knowledge that such-and-such is a way to do something, where does the ability to actually do so come in? Stanley & Williamson answer: "Nowhere, and why should it?"

> It is simply false, however, that ascriptions of knowledge-how ascribe abilities. [...] [A]scriptions of knowledge-how do not even entail ascriptions of the corresponding abilities. For example, a ski instructor may know how to perform a certain complex stunt without being able to perform it herself. Similarly, a master pianist who loses both her arms in a tragic car accident still knows how to play the piano. But she has lost her ability to do so. (Stanley & Williamson 2001, 416)

Does this mean that it is simply a mistake to think that there is a conceptual connection between my knowledge-how and my actions? Let us assume for a moment that knowledge-how has indeed little to do with ability. Still, Stanley & Williamson see for themselves that there are prima facie counterexamples to their theory:

> Suppose that the way in which John is riding his bicycle is in fact a way for Hannah to ride a bicycle. So, where the demonstrative 'that way' denotes John's way of riding a bicycle, (28) seems true:
> (28) Hannah knows that that way is a way for her to ride a bicycle.
> Relative to this context, however:
> (29) Hannah$_i$ knows [how PRO$_i$ to ride a bicycle].
> seems false. (Stanley & Williamson 2001, 429 f.)

What Hannah lacks is a connection between her knowledge and *her* actions rather than John's. Stanley & Williamson agree. However, they think that what is missing is not Hannah's ability to ride a bicycle, but something

concerning her knowledge-that about John's way of riding a bicycle. In order to account for this missing element, they amend their linguistic account of the truth-conditions of "S knows how to F" with some philosophy of language and claim the following:

> "S knows how to F" is true if and only if, for some contextually relevant way w which is a way for S to F, S knows that w is a way for them to F, and S entertains w under a practical mode of presentation. (compare Stanley & Williamson 2001, 430 f.)[10]

Accordingly, what Hannah lacks is a practical mode of presentation of John's way of riding a bicycle. She entertains this way in a purely demonstrative mode of presentation and therefore lacks knowledge-how.

But what are practical modes of presentation of ways of doing things? Stanley & Williamson rely substantively on this concept, and unless they spell out in more detail what such modes of presentation might be, their attempt of accomodating the intuitive connection between knowledge-how and action is incomplete. Even worse, entertaining some way w under a practical mode of presentation might come down to knowing how to instantiate it – Stanley & Williamson's account would then be circular (compare Koethe 2002). Alternatively, entertaining some way w under a practical mode of presentation might be having the ability to instantiate that way, contrary to their explicit denial of a connection between knowledge-how and ability (compare Rosefeldt 2004 and Jung & Newen 2010).

However, Stanley & Williamson try to avoid these consequences by leaving the exact nature of practical modes of presentation for another occasion. What matters, they claim, is that there are such things, never mind what exactly they are. They argue by analogy:

> Suppose that John is looking in a mirror, which he mistakenly believes to be a window. Seeing a man whose pants are on fire,

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[10]I will omit the question whether modes of presentation are part of pragmatics rather than semantics. Stanley & Williamson are right: Their account can accomodate this, too. Further, let me note that the addition of modes of presentation changes the content of parts of the Argument from Linguistics, but that this does not bear on the discussion above.

and not recognizing that man as himself, John forms the demonstrative belief that that man is on fire. [...] [R]elative to this envisaged context, (26) is true and (27) false:

(26) John believes that that man has burning pants.

(27) John believes that he himself has burning pants. (2001, 428)

It is typically assumed that (26) and (27) both picture John as believing in the truth of one and the same proposition, that he believes, of himself, that he has burning pants. In (26), John believes, of *the person he happens to be*, that that person has burning pants. In (27), John believes, of himself *as himself*, that he has burning pants. Canonically, this is explained by appeal to the mode of presentation under which John entertains that belief about himself: The first case involves a demonstrative mode of presentation and the second case a first-personal mode of presentation.

Now, Stanley & Williamson grant that it may be very difficult to characterize exactly both what first-personal and what practical modes of presentation are. But they compare (26) and (27) with their examples (28) and (29) which are quoted on page 13:

> In both cases, however, one can provide an existence proof for such modes of presentation. If, as is assumed in much of philosophy of language, there is a sound argument from (26) and (27) to the existence of first-personal guises of propositions, then there is a sound argument from (28) and (29) to the existence of practical guises of propositions. (Stanley & Williamson 2001, 429)

Alva Noë has criticized this analogy as "plainly circular" because we have "no independent reason to believe that the complement clauses in (28) and (29) express the same proposition." (2005, 288) But this is mistaken since the first part of the Argument from Linguistics provides such an independent reason. One may disagree with this argument, but Stanley & Williamson do not commit a dialectical mistake.

This concludes Stanley & Williamson's attempt of accomodating the intuitive connection between knowledge-how and action. They argue that there are such things as practical modes of presentation of ways of doing things and

claim that these are independent from being able to engage in those ways of doing things. How such modes of presentation should be understood, however, remains an open question.

3.2 Abilities reestablished

It has turned out that Stanley & Williamson's commitment to practical modes of presentation of ways of doing things is not without its problems. However, it is a consequence of two ideas they explicitly endorse, the Argument from Linguistics on the one hand, and the claim that knowledge-how is independent from ability on the other. Given this background, assuming such modes of presentation is a bullet they simply have to bite. Accordingly, there are two independently sufficient ways to avoid such a commitment. Above, I have already criticized the Argument from Linguistics. Now, I will cast serious doubt on their view of the relationship between knowledge-how and ability.

Like Stanley & Williamson, Paul Snowdon (2003) also thinks that knowledge how to F is independent from the ability to F. In order to support this claim, these authors rely on examples like the following:[11]

Skiing A ski instructor knows how to perform a complex stunt. Still, he is not able to do so himself.

Piano A piano player loses her arms. She still knows how to play the piano, but has lost her ability to do so.

Pudding A cook knows how to make Christmas pudding. If the world's supply of sugar is obliterated, he still knows how to do so, but has lost his ability to do so.

Etiquette Susan knows how to address the queen correctly, but is unable to do so because she gets too nervous in the queen's presence and develops

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[11]Skiing and Piano are taken from Stanley & Williamson 2001 (416), the others from Snowdon 2003 (8 f.). Snowdon also cites three further cases, but I think that these can be accounted for along the lines of the cases I discuss. Namely, Snowdon's cases "(b)" and "(d)" parallel Piano and his case "(e)" parallels Etiquette.

a speech impediment.

I agree that these cases show that there is *some* sense in which one may have knowledge how to do something without having the ability to do so. However, they eventually fail to support the claim that knowledge-how is independent from ability. In order to bring out this point, I will have to offer better redescriptions of these alleged counterexamples.[12]

I take it that three of the four cases can be redescribed following a simple strategy: The person in question does not only have knowledge how to do something, but also has the ability to do so, which, for some reason or another, is blocked from being executed (compare Noë 2005).

Piano The piano player still has the ability to play the piano, but without her arms she cannot execute it. Her ability is blocked by a bodily impediment.

Pudding The cook still has the ability to prepare Christmas pudding, but without sugar he cannot execute it. His ability is blocked by an external impediment.

Etiquette Susan has the ability to address the queen correctly, but because of her nervous condition she cannot execute it. Her ability is blocked by a psychological, possibly a neurological impediment.

These redescriptions are perfectly intelligible because the notion of an ability is tied to the notion of possible successful action, given some preconditions. If these preconditions are absent, and the action in question therefore cannot be performed, there is no need to infer that there is no ability in the first place.[13] But what if the impediments in question are so severe that the abilities are not only temporarily, but *forever* blocked from being executed?

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[12]One might criticize this by claiming that my redescriptions are biased. Bengson *et al.* 2009 have tried to support the rival claim that knowledge-how and ability are independent by engaging in a statistical study of people's intuitive verdicts about these and cognate cases. Bracketing how plausible experimental philosophy is in general, this study in particular is flawed in several respects, as shown by Jung & Newen 2010.

[13]Compare Hawley (2003). Of course, abilities cannot be understood in such a way that too many impediments are compatible with their existence. For example, it would be false to say that I have the ability to beat every chess grand master, which happens to be

For example, having lost her arms, the piano player will never be able to play again. If so, how can we continue to believe *that* she has the ability to do so?

This is a fair question, but it is not the only one. It has a sibling, namely: How can we continue to believe that she knows how to do so? What the alleged counterexamples would have to show is that these questions have to be answered independently. But they fail to establish this. Rather, it is possible – and, I would say, very plausible – to claim that the question whether or not the ability to play the piano can be retained even if both arms are lost has to be answered in tandem with the question whether or not knowledge how to do so can be retained under these conditions. Either both are retained or none.[14]Thus, the most natural position is that both the knowledge-how and the ability to play the piano are lost. However, both may be able to persist in the way part of that person's brain works and what information is stored there. When these features of her brain are gradually lost, so are both the ability and the knowledge-how in question (compare Jung & Newen 2010, 117).

This leaves one last case in support of the view that knowledge-how and ability are independent:

Skiing A ski instructor knows how to perform a complex stunt. Still, he is not able to do so himself.

I am not alone in thinking that this case is misdescribed even more profoundly (compare Noë 2005). The idea that this ski instructor knows how to perform a stunt simply relies on the fact that he is able to teach others how to perform that stunt. But the knowledge-how *that* implies is not knowledge

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blocked because of the limits of my intelligence. I simply do not have that ability. There is a threshold for what may count as a blocked ability and what cannot sensibly be called an ability at all.

[14]Let me note two things at this point. First, this account is also available to Stanley & Williamson. The acquaintance with a way of doing something under a practical mode of presentation may very well fade if it is not used in action. Thus, even if knowledge-how is understood along the lines of Linguistic Intellectualism, it might still be linked to ability. Second, this connection between knowledge-how and ability leaves entirely open whether or not some knowledge-that related to the capacities in question might survive their loss. I will come back to this in section 5.2.

how to *perform* the stunt, but knowledge how to *teach others* how to perform
the stunt. It is a commonplace truth that knowledge how to teach how to do
something does not imply knowledge how to do it. Some teachers know how
to do what they teach, others do not. Maybe there are activities one can only
know how to teach if one knows how to perform them oneself. Performing
a ski jump is not one of those, but maybe philosophizing and conducting an
orchestra are. But this still does not show that knowing how to perform and
knowing how to teach how to perform are the same thing.

I conclude that the alleged independence of knowledge-how from abil-
ity has not been established by any of the examples cited by Stanley &
Williamson and Snowdon. Even though I have not positively shown why
knowledge-how and ability are connected,[15] there is no reason to detach
them.[16] I will come back to this connection in section 5.

4   Ryle's objection

I have argued that Stanley & Williamson fail to establish Intellectualism
(section 2) and that they fail to establish the claim that knowledge-how is
independent from practical abilities (section 3). In this section, I will turn
to Gilbert Ryle's influential stance on knowledge-how. He writes:

> Philosophers have not done justice to the distinction which is
> quite familiar to all of us between knowing that something is the

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[15]Those who support this view include Carr (1979, 1981) and Katzoff (1984). Often, they
rely on possible successful action as a crucial connection between ability and knowledge-
how. Above, I have subscribed to possible success as an ingredient of the notion of ability,
but I will not continue to explore these questions in my own discussion of knowledge-how.
Katherine Hawley (2003) has proposed an interesting analysis of this issue.

[16]The claim that knowledge-how is a form of ability implies that animals pose a fur-
ther threat to Linguistic Intellectualism. For if some abilities of animals can be classi-
fied as knowledge-how, this theory implies that they possess knowledge-that. But given
knowledge-how in animals, it should remain an open question whether or not they have
propositional knowledge, too. Stanley & Williamson think that we ascribe knowledge-that
to animals as happily as knowledge-how (2001, 438 f.). But I take it that most of us would
credit, say, some dogs with knowledge how to catch a frisbee, but have trouble conceiving
of those dogs as knowing that such-and-such is a way for them to catch a frisbee (compare
Rosefeldt 2004, Noë 2005 and Jung & Newen 2010). However, I will bracket animal cases
in this context.

case and knowing how to do things. In their theories of knowledge they concentrate on the discovery of truths or facts, and they either ignore the discovery of ways and methods of doing things or else they try to reduce it to the discovery of facts. [...] I want to turn the tables and prove that knowledge-how cannot be defined in terms of knowledge-that and further, that the concept of knowledge-how is a concept logically prior to the concept of knowledge-that. (Ryle 1945, 4 f.)

I will argue that Stanley & Williamson's reconstruction of Ryle's argument misses a crucial point. I distinguish between different versions of Ryle's argument and show how what I take to be the strongest version is both immune to the objection by Stanley & Williamson and a decisive argument against their own version of Intellectualism. Thus, next to my above arguments against the motivation of Linguistic Intellectualism, Ryle's objection provides a clear-cut argument showing directly that this view is mistaken.

4.1   Stanley & Williamson's Ryle

Gilbert Ryle writes:

The crucial objection to the intellectualist legend is this. The consideration of propositions is itself an operation the execution of which can be more or less intelligent, less or more stupid. But if, for any operation to be intelligently executed, a prior theoretical operation had first to be performed and performed intelligently, it would be a logical impossibility for anyone ever to break into the circle. (Ryle 1949, 31)

Here is how Stanley & Williamson construe this reasoning:

Ryle's argument has two premises:
(1) If one Fs, one employs knowledge how to F.
(2) If one employs knowledge that p, one contemplates the proposition that p. (2001, 413)

> If knowledge-how is a species of knowledge-that, the content of knowledge how to F is, for some ϕ, the proposition that $\phi(F)$. So, the assumption for reductio is:
>
> RA: knowledge how to F is knowledge that $\phi(F)$. (2001, 414)

The idea is that, given (1) and (2), RA implies that "doing anything would require contemplating an infinite number of propositions of ever-increasing complexity." (Stanley & Williamson 2001, 414) But since nobody should be credited with the ability to do that and many people in fact do employ knowledge-how, RA is rejected. However, Stanley & Williamson think that

> Ryle's argument does not get off the ground. There is no uniform reading of the two premises in Ryle's argument on which both are true; the argument is unsound. (2001, 416)

The problem is that premise (1) has to be restricted to intentional actions, while contemplating propositions, as mentioned in premise (2), is not an intentional action. As for premise (1), there are many things we do without knowing how to do them. Stanley & Williamson present convincing examples: digesting food or winning a fair lottery (2001, 414 f.). Thus, if Ryle's argument is to be valid, premise (2) will also have to be read as concerning an intentional action of contemplating.

Let me make this correction explicit and add two premises which have already been mentioned (2 and 5 below). Given these changes, this is a full statement of how Stanley & Williamson understand Ryle:

1   If one intentionally Fs, one employs knowledge how to F.

2   Knowledge-how is a species of knowledge-that if and only if knowledge how to F is, for some ϕ, knowledge that $\phi(F)$.

3   If one employs knowledge that p, one intentionally contemplates the proposition that p.

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4   Thus, if knowledge-how is a species of knowledge-that, to intentionally F requires contemplating an infinite number of propositions of ever-increasing complexity.

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5	To intentionally F does not require that.

6	Thus, knowledge-how is not a species of knowledge-that.

Let me call this argument the Contemplation Regress. This reconstruction makes clear how the vicious regress arises. By 1, intentional action requires knowledge-how. Assuming the doctrine that knowledge-how is a species of knowledge-that, 2 requires that such knowledge-how is propositional. By 3, employing such knowledge requires contemplating a proposition. Since this is an intentional action, by 1, it requires a further bit of knowledge-how. This, by 2, consists in a further bit of knowledge-that, the employment of which, by 3, requires contemplating a further, more complex proposition, and so on ad infinitum. Thus, premises 1-3 imply 4, which allows for the use of 5 in order to reject the doctrine that knowledge-how is a species of knowledge-that.

Where do Stanley & Williamson disagree with Ryle? They point out that the argument depends on premise 3, what I would like to call the Contemplation Requirement, and assert that this is "straightforwardly false" (2001, 415). If contemplating a proposition is an intentional action, "it is simply false that manifestations of knowledge-that must be accompanied by distinct actions of contemplating propositions" (2001, 415). If we say that the contemplation of a known proposition is in some sense required in order to employ knowledge-that, this contemplation should not be regarded as an intentional action.

Stanley & Williamson (2001, 415) support this view with a counterexample due to Carl Ginet:

> I exercise (or manifest) my knowledge *that* one can get the door
> open by turning the knob and pushing it (as well as my knowledge
> *that* there is a door there) by performing that operation quite
> automatically as I leave the room; and I may do this, of course,
> without formulating (in my mind or out loud) that proposition
> or any other relevant proposition (Ginet 1975, 7).

This is indeed suited at least to call the Contemplation Requirement into question. For my present purposes, I will therefore grant that the Contem-

plation Regress should be rejected.[17]

However, Stanley & Williamson miss a crucial part of Ryle's argument. Intellectualism, he writes, is committed to the view that to employ knowledge-that is

> always to do two things; namely, to consider certain appropriate propositions, or prescriptions, and to put into practice what these propositions or prescriptions enjoin. It is to do a bit of theory and then to do a bit of practice. [...] I shall argue that the intellectualist legend is false and that when we describe a performance as intelligent, this does not entail the double operation of considering and executing. (Ryle 1949, 30)

Of this 'double operation' of considering and executing, Stanley & Williamson have addressed only half. They have argued that considering propositions, understood as an intentional action, cannot be required for employing knowledge-that. However, they have left the "putting into practice" of these propositions out of the picture. This is puzzling, since they themselves quote Ryle as follows (compare Stanley & Williamson 2001, 412):

> I largely rely on variations of one argument. I argue that the prevailing doctrine leads to vicious regresses, and these in two directions. (1) If the intelligence exhibited in any act, practical or theoretical, is to be credited to the occurrence of some ulterior act of intelligently considering regulative propositions, no intelligent act, practical or otherwise, could ever begin [...]. (2) If a deed, to be intelligent, has to be guided by the consideration of a regulative proposition, the gap between that consideration and the practical application of the regulation has to be bridged by some go-between process which cannot by the pre-supposed definition itself be an exercise of intelligence and cannot, by definition, be the resultant deed. (Ryle 1945, 2)

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[17]It should nevertheless be noted that this counterexample conflates the contemplation of propositions with their *conscious* contemplation.

Thus, Ryle can give away the argument sketched after "(1)" in this passage – the Contemplation Regress – and fall back on a second regress argument supporting the same conclusion: the one sketched after "(2)".[18] This argument can be presented as follows:

1*   If one intentionally Fs, one employs knowledge how to F.

2*   Knowledge-how is a species of knowledge-that if and only if knowledge how to F is, for some ϕ, knowledge that $\phi(F)$.

3*   If one employs knowledge that p, one intentionally applies the proposition that p to the case at hand.

4*   Thus, if knowledge-how is a species of knowledge-that, to intentionally F requires applying an infinite number of propositions of ever-increasing complexity to an infinite number of cases of ever-increasing complexity.

5*   To intentionally F does not require that.

6*   Thus, knowledge-how is not a species of knowledge-that.

I will call this argument the Application Regress. Obviously, it closely parallels the Contemplation Regress. Among other things, 1*, 2* and 6* are identical with 1, 2 and 6, respectively. Also, the inference from 1*-3* to 4* can be understood along the same lines as the corresponding inference in the first regress argument.

However, as my labels already indicate, the nature of the regress has changed (4* and 5*). While the Contemplation Regress rejects Intellectualism on the grounds that it requires *contemplating* an infinite number of

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[18]Why have Stanley & Williamson overlooked this? In the part both they and I have omitted from the above quotation, Ryle mentions that the first regress "is the turn of the argument that I chiefly use" (1945, 2). Also, they quote only this passage from Ryle's Presidential Address on *Knowing How and Knowing That* (1945) and otherwise rely exclusively on Ryle's later discussion of knowledge-how in *The Concept of Mind* (1949), where the second argument plays a very minor role.

propositions, the Application Regress does so on the grounds that it requires *applying* these propositions to an infinite number of *cases*. Ryle himself explicitly states this problem. Speaking of the "go-between application-process" as construed by Intellectualists, he says:

> Consistency requires, therefore, that this schizophrenic broker must again be subdivided into one bit which contemplates but does not execute, one which executes but does not contemplate and a third which reconciles these irreconcilables. And so on for ever. (Ryle 1945, 3)

> [I]t requires intelligence not only to discover truths, but also to apply them, and knowing how to apply truths cannot, without setting up an infinite process, be reduced to knowledge of some extra bridge-truths. (Ryle 1945, 6)

Obviously, this difference relies on a different premise as the trigger of the regress, namely 3*, which I would like to call the Application Requirement. Let me evaluate the plausibility of this requirement with the aid of Stanley & Williamson's own example (2001, 415, and Ginet 1975, 7).

I have granted that my knowledge that one can get the door open by turning the knob and pushing it does not have to be contemplated in order for me to be able to leave the room. However, there is clearly some sense in which I need to *apply* this knowledge in order do so. Given that I know that one can get the door open by turning the knob and pushing it, I must judge what specific action I need to perform in order to do so. This will turn on my knowledge of the location of the door and how I can reach it. But, again, without applying this knowledge, it is not clear how it helps me actually leave the room.

John Koethe has suggested that an objection along these lines is "similar in spirit to Ryle's" (2002, 328) and claimed that it eventually defeats Intellectualism. I agree that Ryle can be read as making this argument. However, Stanley & Williamson are free to object against the Application Regress in the very same way as they have objected against the Contemplation Regress. They can simply deny that the application of propositions to cases is an in-

tentional action: Even though employing knowledge-that *does* mean applying this knowledge to a case, such an application is not an *intentional* action. Just like one can walk intentionally without *intentionally* engaging in several sub-actions of muscle contraction, one can employ knowledge-that without *intentionally* engaging in the sub-action of applying it. Thus, both the Contemplation Regress and the Application Regress eventually fail.

4.2   Correctness

I have discussed how Stanley & Williamson understand Ryle and how they can answer both the Contemplation Regress, which they explicitly discuss, and the Application Regress, which they fail to address. In both cases, the problem is that if employing knowledge-that requires some further action, it is plausible to deny that it has to be an intentional action.

However, I think we should shift the issue from a problem about *intentional* action to a problem about *correct* action. This is both closer to Ryle's original ideas and more plausible independently.[19]   And it leads to a third and final regress argument against Intellectualism.

This third argument can be understood as an adaptation of the Application Regress. Its core insight is that we should look not at acting *intentionally* and *intentional* application of knowledge-that, but at acting *correctly* and *correct* application of knowledge-that. Accordingly, I will call this argument the Correctness Regress. Here is how it works in detail:

1'   If one correctly Fs, one employs knowledge how to F.

2'   Knowledge-how is a species of knowledge-that if and only if knowledge how to F is, for some ϕ, knowledge that $\phi(F)$.

3'   If one employs knowledge that p, one correctly applies the proposition that p to the case at hand.

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[19]Charles Wallis (2008) discusses extensively why conscious intent does not play an important role for knowledge-how, whether Intellectualism is true or not.

4' Thus, if knowledge-how is a species of knowledge-that, to correctly F requires correctly applying an infinite number of propositions of ever-increasing complexity to an infinite number of cases of ever-increasing complexity.

5' To correctly F does not require that.

6' Thus, knowledge-how is not a species of knowledge-that.

I do not think that Gilbert Ryle does a very good job at distinguishing the Application Regress from the Correctness Regress.[20] Much of what he says naturally leads to the idea that knowledge is supposed to be applied intentionally and thereby to the Application Regress. All things considered, however, I hold that the Correctness Regress fits in more smoothly with Ryle's overall thinking about knowledge and action, and that it brings out the full force of his objection to Intellectualism.

The core fact which leads me to this conclusion is that Ryle hardly ever speaks of "intentional" action. Rather, he repeatedly states that he is interested in "operations [that are] intelligently executed" (1949, 31). Such 'exercises of intelligence' are picked out in terms of the attributes we can attach to them. They are actions which can be called 'witty', 'stupid', 'intelligent', 'smart', 'dull', 'attentive' and so forth (compare Ryle 1945, 1 f., and Ryle 1949, 26). In other words, they can be evaluated according to their rationality, simplicity, originality and the like – that is, in the light of *standards of intelligent conduct*. And according to these standards, actions can be better or worse, correct or incorrect.

These passages show that it is well justified to ascribe premise 1' to Ryle. Also, premise 3' is well supported by Ryle's texts. He explicitly writes that "whatever "applying" may be, it *is* a proper exercise of intelligence" (1945, 3) and that somebody who has learned maxims of playing chess well "might still play chess stupidly, that is, be unable intelligently to apply the maxims"

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[20]And neither do many of his commentators. For example, the presentations of Ryle's argument by Jennifer Hornsby (2005, 113 ff.) and David Wiggins (2005, 268 f. and 273) can be read in either way.

(1945, 5). Thus, the Correctness Regress expresses best what Ryle was up to all things considered: In order to apply knowledge-that, never mind whether or not this is an intentional action, one has to apply it *correctly*. And to do something correctly requires knowledge how to do so.

Let me remark that I do not want to claim that whether somebody acts correctly is independent from the question whether she acts intentionally. But I do claim that Ryle's argument can be formulated without bothering too much about this question. What is at issue is not – as in the first two regress arguments – the agent's inner life, her intentions and how she acts upon them. Rather, we are concerned with the explanation of doing something well or correctly, which transcends this inner life and includes essentially intersubjective standards.[21]

I think that this is an argument Stanley & Williamson cannot resist. After all, they are themselves committed to the claim that intersubjective standards play a role in ascriptions of knowledge-how. They write:

> Consider now:
> (19) Hannah knows how PRO to ride a bicycle.
> In such an example, we should expect the embedded question to have four interpretive possibilities, corresponding to (20a-d):
> (20a) Hannah knows how she ought to ride a bicycle.
> (20b) Hannah knows how one ought to ride a bicycle.
> (20c) Hannah knows how she could ride a bicycle.
> (20d) Hannah knows how one could ride a bicycle. (Stanley & Williamson 2001, 424 f.)

(20a) and (20b) show that knowledge-how concerns doing something how it ought to be done – correctly. And (20b) and (20d) show that this is

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[21]A further remark: Ryle would probably add a second Correctness Regress, which relies on the claim that to apply knowledge-that requires correctly *contemplating* a proposition *before* correctly applying it (compare the passage quoted on page 20, as well as Ryle 1945, 2 ff.). But I do not see exactly how a proposition can be contemplated in an incorrect way, if this does not mean that it is not contemplated at all because what is actually contemplated is a different proposition. However, this complication is independent from the Correctness Regress as I have stated it.

something which is not specific to a single person – it is intersubjective. However, Stanley & Williamson go on:

> The interpretations given in (20a) and (20b) quite obviously seem to attribute some kind of propositional knowledge to Hannah, so they are not the interpretations underlying the thesis that knowledge-how is not a species of knowledge-that. (Stanley & Williamson 2001, 425)

Of course, these interpretations do not immediately show why Intellectualism is false. But they do play a role in showing that. By granting a role for intersubjective standards of correctness in knowledge-how, Stanley & Williamson have effectively granted premise 1' of the Correctness Regress. They think that "[i]t is rather interpretations such as (20c) and (20d) that seem to be at issue in philosophical discussions of knowledge-how" and that "(20c) [is] the paradigm reading of (19), on which we shall focus in the rest of this discussion". (Stanley & Williamson 2001, 425) But this is a mistake. Once we have seen that the different readings of ascriptions of knowledge-how support premise 1', the Correctness Regress is on its way.

This argument shows that Linguistic Intellectualism is false *qua* Intellectualism. Still, let me take the time and spell out the argument as applied to Stanley & Williamson's account.

Suppose that Hannah is riding her bicycle, which is something she does properly, or correctly, and that she thereby knows how to ride a bicycle. If Linguistic Intellectualism is true, her knowledge how to ride a bicycle boils down to her knowledge that, say, sitting in the saddle and pedaling is a way for her to ride a bicycle. Given that she correctly employs this knowledge in riding a bicycle, she knows how to employ her knowledge that sitting in the saddle and pedaling is a way for her to ride a bicycle. Given Linguistic Intellectualism, this knowledge-how again boils down to her knowledge that, say, placing herself on the saddle and letting her muscle memory do the rest is a way for her to correctly employ her knowledge that sitting in the saddle and pedaling is a way for her to ride a bicycle. But again, this knowledge needs to be applied.

Generally speaking, Linguistic Intellectualism leads to the result that to do something correctly (to F correctly) requires knowledge that w is a way to F, which requires knowledge that w' is a way to correctly employ knowledge that w is a way to F, which in turn requires knowledge that w* is a way to correctly employ knowledge that w' is a way to correctly employ knowledge that w is a way to F, and so on ad infinitum.

It is natural to wonder whether Stanley & Williamson can simply bite this bullet. The idea is that there is nothing wrong with the claim that knowing how to ride a bicycle involves knowing that an infinite number of propositions is true because there are other cases where such infinite propositional knowledge is accepted much more naturally. However plausible, it might be argued that some people's mathematical knowledge includes knowledge of an infinite number of true propositions. Unfortunately, however, even if there are such cases, this reply does not suffice to block the Correctness Regress. In order to reject 5', the premise in question, one would have to show not only that people may indeed have infinite propositional knowledge, but also that correct action requires the correct application of infinite propositional knowledge.

This, I take it, is a bullet nobody should be prepared to bite. Even if, say, my own mathematical knowledge were to include knowledge of an infinite number of true propositions, it would still be false that I rely on this knowledge when I solve equations or prove theorems. The direction of explanation would be exactly the other way around. My solving equations correctly and proving theorems correctly would make it plausible to attribute such infinite propositional knowledge to me – if such an attribution is plausible in the first place.

5 Knowledge-how and methodological knowledge

I have argued that the Correctness Regress is Ryle's strongest weapon against Intellectualism and the most plausible statement of his argument. In this

last part of my paper, I would like to indicate briefly how Ryle draws on this insight and even suggests a more adequate account of knowledge-how and one specific form of knowledge-that: methodological knowledge.

But let me begin by remarking that the Correctness Regress does not entail this. As I use this term, methodological knowledge is a specific form of knowledge-that: knowledge that such-and-such is a way (or procedure or method) to F. This is just the kind of knowledge-that Stanley & Williamson have in mind. However, the Correctness Regress is neutral on the question whether or not any knowledge-that, let alone methodological knowledge, plays a role when an actor exercises knowledge-how. The only claim the argument entails is that *if* knowledge-that is involved *at all*, it cannot be *everything*. At least *some* knowledge-how is needed, as well.

Given this insight, one may even go on to claim that a distinction with such consequences should be abandoned and that both knowledge-that and knowledge-how should eventually be understood in terms of abilities.[22] By contrast, I will maintain this distinction and draw on Ryle's own further comments on knowledge-how and one of its paradigm cases in order to propose a positive account of knowledge-how its relation to methodological knowledge.[23]

5.1 Ryle on rules and knowledge-how

In the Correctness Regress, Ryle talks about knowledge-how in one of its paradigmatic roles: the explanation of correct action. Given this, he seems to suggest that *knowledge-how is an ability to do something according to intersubjective stardards of correctness*. But what are these?

Ryle explicitly draws a connection between knowledge-how and one kind of intersubjective standard of correctness: *rules*. He writes: "Knowing a rule is knowledge how." (Ryle 1945, 7) And he also holds that the converse is

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[22]For example, Stephen Hetherington (2006, 2008) argues along these lines.

[23]Spelling out the distinction between methodological knowledge and knowledge-how is a key problem in the current debate; compare, for example, Bengson & Moffett (2007), Williams (2008), Lihoreau (2008), and Fantl (2008). But this question is often framed in terms of a distinction between readings of ascriptions of knowledge-how which entail abilities and those which do not; compare footnote 24 on page 35.

true. When we credit people with knowing how to do something, he writes:

> Part of what is meant is that, when they perform these operations,
> they tend to perform them well, i.e. correctly or efficiently or
> successfully. Their performances come up to certain standards,
> or satisfy criteria. (Ryle 1949, 29)

One of Ryle's prime examples of knowledge-how is knowledge how to draw inferences. He cites Lewis Carroll's tortoise (1895), who fails to grasp the inference in a modus ponens argument on the basis of an explicit statement of the corresponding rule of inference (compare Ryle 1945, 6 f.). I take it that this well-known argument is simply an instance of the Correctness Regress: To correctly infer 'q' from 'p' requires knowledge how to do so. But if this knowledge consists in nothing but knowledge that the conditional '*if p, then q*' is true, that statement needs to be applied to 'p' – and *correctly* so. Thus, the question how to correctly infer 'q' from 'p' is transformed into the question how to correctly infer 'q' from 'p' and '*if p, then q*'. But this question raises the same problem and calls for a further premise to be added – if 'p' and '*if p, then q*', then 'q' – and so on ad infinitum.

Ryle expands on this particular instance of the Correctness Regress in his essay *"If", "So", and "Because"* (1950), which has been published shortly after his works on knowledge-how. Here, he uses an analogy in order to spell out how he understands the notion of correct application.

> The Argument "Today is Monday, so tomorrow is Tuesday" is an
> application of "if today is Monday, tomorrow is Tuesday"; and it
> is in this notion of application that lies the answer to our question
> [...]. (Ryle 1950, 328)

> Knowing *"if p, then q"* is, then, rather like being in the possession
> of a railway ticket. It is having a licence or warrant to make a
> journey from London to Oxford. (Ryle 1950, 329)

Since the ability to draw inferences is one of Ryle's own examples of knowledge-how, it is natural to wonder if this analogy carries over to knowledge-how in general.

On the one hand, we have the argument "Today is Monday, so tomorrow is Tuesday" and the statement "If today is Monday, tomorrow is Tuesday", and on the other hand we have Hannah's riding a bicycle correctly and – what? I propose that the missing element might be something like Stanley & Williamson's proposal as a definiens of knowledge-how. It might be Hannah's methodological knowledge that doing such-and-such would be a way to ride a bicycle.

For now, I would like to bracket the exact form of this methodological knowledge and rely on an intuitive understanding of this notion. Methodological knowledge is knowledge how something is done – knowledge that such-and-such is a way to do it. Then, Ryle's extended analogy can be spelled out as follows:

1. I can draw the inference from "Today is Monday" to "Tomorrow is Tuesday" with or without the conditional statement "If today is Monday, tomorrow is Tuesday". But knowing and applying this statement allows me to *state explicitly* what I am doing in drawing the inference and to *justify* that I am doing it *correctly*.

2. Hannah can be able to ride a bicycle correctly with or without the methodological knowledge that doing such-and-such is a way to ride a bicycle. But having and applying this methodological knowledge allows her to *state explicitly* what she is doing in riding a bicycle and to *justify* that she is doing it *correctly*.

Of course, the most obvious and probably best way for Hannah to justify that she knows how to ride a bicycle is simply to demonstrate this by riding a bicycle. But we cannot rely on such practical demonstrations as a justification for knowledge-how in every case. For example, it is much more convenient for me to justify my knowledge how to extinguish a fire by saying what I would do in order to do so – by citing methodological knowledge – than by actually extinguishing a statistically significant number of fires.

Ryle's extended analogy suggests that to apply methodological knowledge about how to F is to state explicitly what one does in F-ing and to justify that one is able to F correctly. Given the Correctness Regress, and contra

Stanley & Williamson, this cannot be identical with knowledge-how. But how exactly should we think of their relationship? In the next and final section of this paper, I will provide a preliminary answer to this question.

5.2 Explicating knowledge-how

I think that methodological knowledge is an interesting and often crucial kind of knowledge, and that it underlies our correct performances in many cases. One sometimes knows how to do something partly because one has methodological knowledge about it – that is, because one knows how it is done. But it is equally possible to know how something is done without knowing how to do it. That is, methodological knowledge is neither sufficient nor necessary for knowledge-how.

For example, I know that forcing my opponent in a game of chess to trade pieces is a way for me to maintain the upper hand. Partly because of this, I know how to maintain the upper hand. But, crucially, my methodological knowledge is not sufficient for my knowledge how to do this. It only translates into knowledge how to maintain the upper hand in virtue of my knowledge how to do what to do in order to do so. It is only in virtue of my knowledge how to force my opponent to trade pieces that my knowledge what to do in order to maintain the upper hand translates into my knowledge how to do so.

Let me put this point more abstractly: Sometimes S knows how to F in virtue of S's methodological knowledge about F, that is, in virtue of S's knowledge that w is a way for them to F. But this is true only in cases where S *also* knows how to *instantiate* w.

This also explains why it is possible for me to know how something is done without knowing how to do it. That was my second claim: Methodological knowledge does not imply knowledge-how. I might know that forcing my opponent to trade pieces is a way for me to maintain the upper hand, but fail to know how to do so. If I do not know how to force my opponent to trade pieces, I probably do not know how to maintain the upper hand. At the very least, I do not know how to do so in virtue of my methodological knowledge

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about forcing a trade of pieces. I might know other ways of maintaining the upper hand, but this is independent from the methodological knowledge in question.

The same phenomenon underlies the Skiing case discussed above (compare section 3.2). A ski instructor who knows how to teach others how to perform a complex stunt, but is unable to perform it himself, does know *something* about performing that stunt. But what he possesses is methodological knowledge rather than knowledge-how.[24] He knows that doing such-and-such is a way to perform the stunt, and he does not know how to perform the stunt himself precisely because he cannot *instantiate* that way of performing the stunt. Still, he can employ his methodological knowledge about performing the stunt in teaching others how to do so. Other things equal, more methodological knowledge makes for better teaching.

Given that I claim that methodological knowledge is neither necessary nor sufficient for knowledge-how, one might wonder why methodological knowledge should be of any interest with respect to knowledge-how. This point about teaching already shows one important connection: In many if not all cases, it is partly in virtue of a teacher's methodological knowledge about an activity F that she is able to teach others how to F.

We can also make a corresponding point about learning: If a student wants to learn how to F, a very important way to do so is to seek methodological knowledge about that activity. In particular, such a student will look for methodological knowledge which involves ways or methods of doing things she already knows how to instantiate. If she is successful, she will have learned how to F because she knows that w is a way to F and because she can instantiate w.

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[24]It might be argued that sentences of the form "S knows how to F" are ambiguous between methodological knowledge and knowledge-how, which would explain why some are tempted to agree that the ski instructor knows how to perform the stunt in *some* sense; for discussion, compare Stanley & Williamson (2001), Rumfitt (2003), and Rosefeldt (2004), among others. However, I think that once the distinction between proper knowledge-how and methodological knowledge is clarified, "S knows how to F" can be seen to attribute knowledge-how, while methodological knowledge is attributed by "S knows how F-ing is done" or "S knows what to do in order to F". On a related issue, compare footnote 12 on page 17.

The Rylean considerations I discussed above even entail a further important aspect of methodological knowledge. The extended analogy I have proposed suggests that to apply methodological knowledge about how to F is to state explicity what one does in F-ing and to justify that one knows how to F correctly. We are now in a position to unpack this idea. First, I can claim that doing such-and-such is a way to extinguish a fire and thereby *specify* what extinguishing a fire amounts to (or can amount to). Second, I can use this claim in order to *justify* that I know how to extinguish a fire. Just like above, this justification will be successful only if I know how to instantiate the way to extinguish a fire I have cited. Third, however, methodological knowledge is also crucial for the fact that knowledge-how is what underlies the 'exercises of our intelligence' we can evaluate in the light of intersubjective standards. Methodological knowledge is crucial here because it lets us *understand* and *discuss* which of some candidate actions count as doing something correctly.

As a simple example, card games can be played correctly or incorrectly. There are rules governing which cards can be played when and by whom. But many traditional cardgames come in regional variants. It is therefore a crucial competence of players of cardgames that they can explicitly discuss what counts as playing the game correctly. Is playing such a card at such a point correct or not? Is my way of setting up the rules better or yours? We can make parallel observations for other instances of knowledge-how. It is important not only to be able and know how to solve an equation, but also to be able to discuss what counts as a way of doing so correctly – say, which methods are appropriate. It is important not only to be able and know how to falsify a theory, but also to be able to discuss what counts as a way of doing so correctly – say, which experiment is the right one.

This phenomenon can also be found in the case of conditionals, as the Rylean analogy from the last section indicates. If I can use conditionals, I can say that, wonder whether and discuss if certain inferences are correct ones. Generally speaking, if I understand methodological knowledge, I can say that, wonder whether and discuss if doing such-and-such qualifies as doing something correctly. I can talk about that practice in terms of its

intersubjective standards of correctness.

Taken together, the role of methodological knowledge I have described is one of *explicating knowledge-how.* Methodological knowledge can be used to *say* what doing something amounts to, which could otherwise merely be *shown* by doing it. And it can be used to talk about what does or should count as doing something *correctly.* Methodological knowledge lets us become self-conscious about our knowledge-how – that is, about the things we do according to intersubjective standards of correctness.

Of course, this is merely a preliminary account of knowledge-how, methodological knowledge and their relationship. I think that such a Rylean view on these notions is very promising,[25] but I will not be able to say more about this in the present context.[26]

6 Conclusion

I have offered a thorough criticism of Stanley & Williamson's attempt to establish Intellectualism against the canonical criticism of Ryle. I have argued that their positive argument in favour of this view is unsound and that their view of the relationship between knowledge-how and practical abilities begs the question. Then, I have pointed out a crucial blind spot in their reading

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[25]One merit of such a Rylean perspective is that it brings out how knowledge-how is connected to other important issues in the vicinity. The best example for this strength is that the relationship between knowledge-how and the problem of rule-following, which is neglected almost entirely in the current debate, comes back into view. Ryle himself writes that exercises of knowledge-how satisfy criteria, but that "this is not enough. [...] To be intelligent is not merely to satisfy criteria, but to apply them; to regulate one's actions and not merely to be well-regulated." (Ryle 1949, 29). This thought plays a prominent role in Ludwig Wittgenstein's *Philosophical Investigations* (1953) and in the discussion he has sparked. Arguably, Wittgenstein himself even endorses an argument along the lines of the Correctness Regress when he shows that we arrive at a "paradox" if we fail to appreciate "that there is a way of grasping a rule which is *not* an *interpretation*" (1953, § 201). However, I will have to leave an adequate assessment of this issue for another occasion.

[26]I think that it would be interesting to attempt to spell out such an account of the role of methodological knowledge in the specification and justification of knowledge-how in terms of Robert Brandom's notion of making normative practices explicit (1994, 2008). But this is only one possibility among several and nothing I have said in this paper depends on more specifically Brandomian commitments.

of Ryle's arguments and shown how this eventually leads to a fatal objection against their own version of Intellectualism.

Finally, I have drawn on a broader reading of Ryle in order to develop what might once be a a full-fledged account of knowledge-how and the species of knowledge-that I call methodological knowledge. I think that an account along these lines would enrich the debate sparked by Stanley & Williamson's article. It has been neglected that the Correctness Regress is Ryle's strongest weapon against Intellectualism and that Ryle himself says more about knowledge-how by saying more about one of his prime examples of knowledge-how, drawing inferences. A more fully worked-out Rylean account will hopefully become an interesting contender in the current debate.[27]

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