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## **Testimonial Knowledge-How<sup>1</sup>**

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### **Introduction**

There is an emerging skepticism about the existence of testimonial knowledge-how (Hawley (2010)<sup>2</sup>, Poston (2016), Carter and Pritchard (2015a)). This is unsurprising since a number of influential approaches to knowledge-how struggle to accommodate testimonial knowledge how. Nonetheless, this scepticism is misguided. This paper establishes that there are cases of easy testimonial knowledge-how. It is structured as follows: First, a case is presented in which an agent acquires knowledge-how simply by accepting a speaker's testimony. Second, it is argued that this knowledge-how is genuinely testimonial. Next, Poston's (2016) arguments against easy testimonial knowledge-how are considered and rejected. The implications of the argument differ for intellectualists and anti-intellectualists about knowledge-how. The intellectualist must reject widespread assumptions about the communicative preconditions for the acquisition of testimonial knowledge. The Anti-intellectualist must find a way of accommodating the dependence of knowledge-how on speaker reliability. It is not clear how this can be done.

### **1. Knowledge How through Testimony**

Consider the following case:

TOURIST: Sally, a tourist, arrives in a new city, and wants to visit the house of her favourite composer: Wolfgang von Wagner. Sally doesn't know how to find the house. Luckily for her it is a popular tourist destination, and most locals know where it is located. She asks Mark, a passer-by, for directions. Mark knows where the house is located and sincerely tells her "It is the red house on Bond Street". Sally understands and accepts Mark's testimony.

Supposing that Sally knows how to find Bond Street she straightforwardly gains knowledge-how upon accepting Mark's testimony. She knows how to find Wolfgang von Wagner's house. I take this to be uncontroversial. There are two points which may prove controversial however. Firstly, philosophers are not interested in all forms of knowledge-how. It might be held that Sally does not acquire knowledge-how of the interesting kind. Secondly, it may prove controversial whether or not Sally's knowledge-how is genuinely testimonial.

In the next section I will argue that Sally does acquire the interesting type of knowledge how. Following this, I will establish that Sally's knowledge-how is genuinely testimonial. The argument for this claim will proceed in two stages. Firstly I argue that the acquisition of this knowledge-how is dependent on the speaker's trustworthiness with respect to the content of their testimony (as well as the audience's ability to understand the content of the speaker's assertion). This indicates that either the knowledge-how is testimonial, or it is dependent on some other piece of genuinely testimonial knowledge. In the second section I argue that the knowledge-how is not dependent on any other piece of testimonial knowledge, as the case can be modified such that any other potential testimonial knowledge would be subject to environmental luck (which is consistent with knowledge-how).

### **2. Knowledge How: Deontic vs Non-Deontic**

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<sup>1</sup> This paper has benefited greatly from the comments of a referee at Erkenntnis, and also from discussions with Josh Habgood-Coote.

<sup>2</sup> Hawley does not commit to the impossibility of testimonial knowledge-how. However, she questions whether apparent cases of testimonial knowledge-how will be genuinely testimonial.

Knowledge-how ascriptions may be used in different ways. They may be used, for example, to indicate that an agent knows how she ought to  $\varphi$ , or may permissibly  $\varphi$ . If Sally learns of the expected (or permissible) way to greet the Queen, we might say that she learns how to greet the Queen. If she learns that running is a good way of staying fit we may say she learned to run. What we communicate by using such an ascription is that she learned that she ought to run (presuming physical fitness is amongst her ends). Call this “deontic knowledge-how”. Knowledge-how ascriptions can also be used to indicate that an agent is in a state which underlies (or perhaps even constitutes) an ability to  $\varphi$ . If we say that Sally learned how to ride a bike, to change a lightbulb, or to remove malware from a computer, we will typically communicate that Sally gained the ability to ride a bike, change a lightbulb, or remove malware from a computer. This is the form of knowledge-how philosophers are typically interested in.<sup>3</sup>

One can possess non-deontic knowledge-how without possessing deontic knowledge-how, and vice versa. Suppose Sally is an experienced IT professional, and is able to remove malware from computers in the majority of circumstances. Suppose she works for a company with strict regulations about what may be done to company computers (we may also suppose these regulations are in place for good reason), and suppose she is presented with a computer full of malware. If she does not know the company regulations, and is only able to remove the malware in a way which would violate the regulations, then we should not say that she possesses deontic knowledge-how. She does not know how she ought to, or may permissibly remove the malware. Nonetheless, she still has the ability to remove the malware, and she can do so intentionally. Thus, she does possess non-deontic knowledge-how. Next, suppose Sally is watching a figure skating competition. Her companion is pointing out the different moves, so that she is able to identify when a skater has performed a particular move, and when they have done so correctly. When the skater does a triple salchow her companion says “that is how you do a triple salchow”. Sally thereby learns how one ought to perform a triple salchow. She is, upon accepting this testimony, able to identify properly performed triple salchows. However, she does not thereby gain non-deontic knowledge-how. She is not thereby put in a cognitive state which either constitutes, or is capable of underlying, an ability to perform the triple salchow.<sup>4</sup>

It is uncontroversial that we can gain deontic knowledge-how via testimony. It is controversial whether we can acquire non-deontic knowledge-how via testimony. Thus, it might be objected that Sally only gains deontic knowledge-how in TOURIST. She merely learns how one ought to, or may, locate Wolfgang von Wagner’s house. However, it seems clear that, upon accepting Mark’s testimony, she is able to locate the house. This is not an ability she had before. And her success in locating the house will be no accident (as it would have been had she found the house without instruction). Moreover, we can modify the case in such a way that Sally does not gain deontic knowledge-how. Suppose the city has, at its centre, a “forbidden zone”. One is not permitted to travel through the forbidden zone, and if one does travel through the forbidden zone bad things happen to other people. Nonetheless, there are no actual physical barriers stopping one from traversing the forbidden zone, and no dangers inside. Suppose Mark tells Sally “You can find the house if you traverse the forbidden zone, then take your next left as you leave the zone. It will be the red house on your right”. Sally will not, upon accepting Mark’s testimony, learn how one ought to, or may, locate Wolfgang von Wagner’s house. The method she acquires is one she is not permitted (either prudentially, morally, or legally) to utilize. So, she does

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<sup>3</sup> This form of knowledge-how is closely related to skilled action. If Sally is skilled at  $\varphi$ ing she must know how to  $\varphi$ . However, the precise relation between non-deontic knowledge-how and skill is controversial (see Pavese (2016) for an overview). In particular, we use non-deontic knowledge-how ascriptions in relation to actions we do not normally think of as involving skill; actions such as changing lightbulbs, or removing malware from a computer. These actions only involve skill in a very weak sense. Thus, I do not take the acquisition of knowledge-how, in the sense we are interested in, to always involve the acquisition of something we might call “skill” in normal circumstances. I take the relevant form of knowledge-how to underlie intentional action more generally, not just the type of intentional action we would normally label as skilful (although I am open to there being a sense of “skill” according to which the ability to remove malware from a computer, or to find some particular house, constitutes a skill; perhaps the sort of skill one might list as such on a CV).

<sup>4</sup> See Glick (2012) for a more extensive discussion of the distinction between deontic and non-deontic knowledge-how.

not gain deontic knowledge-how. Nonetheless, there is a clear sense in which she does, upon accepting the testimony, know how to find Wolfgang von Wagner's house. She does gain the ability to find his house. Thus, we should conclude that Sally does acquire non-deontic knowledge-how. This is the kind of knowledge how which underlies and explains our success in intentional action. I will now establish that Sally's new know-how is genuinely testimonial.

### **3. Testimony, Luck, and Knowledge-How**

I propose the following heuristic for determining whether a piece of knowledge is testimonial:

TEST: If an audience's acquisition of knowledge is dependent on A) the audience's correct comprehension of a speaker's testimony, B) the reliability of the speaker with respect to the content of their testimony, and C) the audience's acceptance of this testimony, then either the audience's new knowledge is testimonial, or else it is based on a piece of testimonial knowledge.

I do not claim that any of these conditions are necessary for the acquisition of testimonial knowledge, but I do take them to be sufficient for an instance of knowledge to count as testimonial. These conditions are met with respect to Sally's knowledge-how. Thus, either her knowledge-how is testimonial or it is derivative from testimonial knowledge<sup>5</sup>.

It is clear that conditions A and C are met. If Sally did not understand Mark's testimony she would not thereby gain the ability to find Wolfgang von Wagner's house, nor would she if she failed to accept Mark's testimony (for example, if she distrusted him). What is not immediately clear is whether condition B is met. That is, it is not clear that the acquisition of knowledge-how is dependent on the speaker's reliability. I propose the following simple condition on speaker reliability:

RELIABLE: A speaker *S* is reliable with respect to a proposition *p* in circumstances *O* iff not easily could it be the case that *S* would assert that *p* in *O* without it being the case that *p*.

Clearly if Mark's testimony was false Sally would not gain knowledge-how. What about cases in which the speaker utters a truth, but is nonetheless unreliable? Cases like the following:

DISHONEST: Mark is sitting outside a cafe minding his own business when Sally, a tourist, approaches him to ask where Wolfgang von Wagner's house is. Mark has no idea where the house is, but he did recently notice a pretty looking red house on Bond Street, so he says "it is the red house on Bond Street", intending to send Sally there instead. As it happens, the red house Mark saw is Wolfgang von Wagner's house, although Mark does not have any reason to believe this. So Sally forms a true belief upon accepting Mark's testimony.

This is a standard Gettier case. Clearly Sally does not come to know that Wolfgang von Wagner's house is the red house on Bond Street. Her belief in this proposition is unsafe. But does she know how to find the house upon accepting the testimony? This is less clear as knowledge-how, unlike knowledge-that, is thought to be consistent with certain kinds of luck.

Following Carter and Pritchard (2015b) we can divide forms of epistemic luck into two types: environmental and intervening. Environmental luck occurs when an agent's belief connects up to the world in the right way, but it easily could have failed to do so due to the epistemically unsafe environment. Fake barn cases are paradigms of environmental luck:

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5 Hawley (2010) questions whether cases of apparent testimonial knowledge will be genuinely testimonial by questioning whether such knowledge-how will ever be dependent on the trustworthiness of the speaker.

BARN: Lisa is driving through the countryside and she sees a barn. She forms the belief “that is a barn”. Unbeknownst to Lisa the barn she just saw is the only barn in the county. Yet the county is riddled with fake barns which are indistinguishable from real barns from the road.

In this case Sally correctly perceives the barn. She forms the belief on the basis of a properly functioning belief forming process. However, she does not gain knowledge as she would have formed the same belief upon seeing a barn facade. Because of the nature of her environment this easily could have occurred. Carter and Pritchard (2015b) argue that environmental luck is consistent with knowledge-how. They ask us to consider a case like the following (based of Cath’s (2011) ‘LUCKY LIGHT BULB’ case, to be discussed shortly):

INSTRUCTIONS: Charlie wants to know how to change a light bulb. He goes to the bookshop and finds a whole shelf of copies of “The Idiots Guide to Every Day Tasks”. He picks up an arbitrary copy and begins reading. As it happens he has picked up a genuine copy of the Idiot’s Guide. The instructions are accurate and he gains the ability to change a light bulb upon reading them. Unbeknownst to Charlie the copy he picked up was the only genuine copy of the Idiots Guide on the shelf. The rest have been replaced with imposters, full of misleading advice.

Charlie does not come to know of the particular method that he acquires that it is a way of changing light bulbs. Nonetheless, Carter and Pritchard claim, he does come to know how to change a light bulb. He is, upon reading these instructions, able to intelligently and intentionally change a light bulb. I will assume Carter and Pritchard are correct about this (I find their judgement about the case intuitive). If DISHONEST were a case of environmental luck then we could plausibly claim that despite lacking knowledge-that Sally nonetheless acquires knowledge-how. But DISHONEST is not a case of environmental luck. It is not the epistemically unsafe environment that prevents Sally from acquiring knowledge-that, it is the unreliability of Mark’s testimony. This makes DISHONEST a case of intervening epistemic luck.

It is controversial whether intervening epistemic luck is consistent with knowledge-how. Carter and Pritchard take it to be inconsistent with knowledge-how. They would thus be committed to the claim that Sally does not acquire knowledge-how in DISHONEST, and thus that Sally’s knowledge-how in TOURIST is dependent on Mark’s reliability. However, it is argued by Poston (2009) and Cath (2011, 2015) that knowledge-how is also consistent with intervening luck. Poston provides the following argument that knowledge-how is not susceptible to gettierisation:

- P1. Gettier cases for know-how would require that the subject be able to successfully perform the action in question  $\varphi$ .
- P2. If one can successfully  $\varphi$  then one knows how to  $\varphi$ .
- C. Therefore there cannot be Gettier cases for knowledge-how.

As I have presented it, this argument can be read in different ways depending on how one understands the relevant notion of ability (and the corresponding “can” in P2). Firstly, we can treat ability as involving counterfactual success. On this reading P1 is plausible. In Gettier cases the agent truly believes  $p$ , but their belief is true as a matter of luck. Successful action is the analogue of true belief in Gettier cases for knowledge-how, so they would have to be cases in which the agent can successfully perform the action in question, despite the luck involved in the case. DISHONEST is such a case. If Sally were to follow Mark’s instructions she would find Wolfgang von Wagner’s house. So if P2 is correct then Sally knows how to find Wolfgang von Wagner’s house even in DISHONEST, meaning that her acquisition of knowledge-how in TOURIST is not dependent on the speaker’s reliability. We will soon see that P2, as stated above, is false. However, there is a second way to read the relevant ability ascription, one which is closer to Poston’s original argument. On this second reading the relevant ability does not only require success, but rather intelligent success; success which is sufficiently

connected to the agent's intellect. On this reading both P1 and P2 are plausible. However, it is not clear that, in DISHONEST, Sally is able, in this second sense, to locate Wolfgang von Wagner's house. This will become clearer as we consider more examples. With this in mind, it is worth considering Cath's (2011) reasons for concluding that knowledge-how is consistent with intervening epistemic luck.

Cath (2011) provides what he takes to be an intuitive case in which an agent gains knowledge-how despite being subject to intervening luck:

**LUCKY LIGHT BULB:** Charlie wants to learn how to change a light bulb, but he knows almost nothing about light fixtures or bulbs (as he has only ever seen light bulbs already installed, and so he has never seen the end of a light bulb or the inside of a light fixture). To remedy this situation, Charlie consults *The Idiot's Guide to Everyday Jobs*. Inside, he finds an accurate set of instructions describing the shape of a light fixture and bulb and the way to change a bulb. Charlie grasps these instructions perfectly. And so there is a way, call it 'w1,' such that Charlie now believes that w1 is a way for him to change a light bulb, namely, the way described in the book. However, unbeknownst to Charlie, he is extremely lucky to have read these instructions, for the disgruntled author of *The Idiot's Guide* filled her book with misleading instructions. Under every entry, she intentionally misdescribed the objects involved in that job and described a series of actions that would not constitute a way to do the job at all. However, at the printers, a computer error caused the text under the entry for 'Changing a Light Bulb,' in just one copy of the book, to be randomly replaced by new text. By incredible coincidence, this new text provided the clear and accurate set of instructions that Charlie would later consult. Cath, 2011: 115.

Cath's intuitive verdict is controversial. The case parallels a similar case presented by Stanley and Williamson (2001) about which they (at the time) have the opposite intuition to Cath. Carter and Pritchard (2015b) also express uncertainty regarding their intuitions with respect to LUCKY LIGHTBULB, as does Stanley (2011). Still, for the sake of argument we can suppose that Cath is correct to claim that Charlie does gain knowledge-how in LUCKY LIGHT BULB. This is because not all cases of intervening luck are alike. Cath (2015) points to a case of intervening luck from Gibbons (2001) in which it is clear that the agent does not possess knowledge-how:

**BOMB:** Bobby intends to kill his uncle by planting a bomb in his house and then, after moving a safe distance away, pressing the large red button on the remote control device. He does not know much about how these things work. He thinks that pressing the button will cause the bomb to detonate but has no idea about the details of this process. His belief is true and, we can suppose, justified. But here is what happens. A satellite, launched by the National Security Agency and designed to prevent bombings of just this kind, intercepts Bobby's transmission; this causes the satellite to send a warning to the intended victim; but, because of an unfortunate choice of frequency, this causes the bomb to detonate. Bobby killed his uncle and caused the bomb to detonate, but he did not do either of these things intentionally. Gibbons, (2001), p 589.

Bobby clearly doesn't know how to blow up his uncle, despite the fact that his action plan would be successful if carried out. This indicates that knowledge-how is inconsistent with certain forms of intervening luck. It also shows that also that P2 of Poston's argument, on the simple ability reading, is false – Bobby can successfully blow up his uncle despite not knowing how to do so. It is not clear that this case is problematic for Poston's argument on the second reading, as it is not clear that Bobby's success is due to his intellect in the right way. On this reading of Poston's argument we would have to maintain that whilst BOMB is a Gettier case for knowledge-that, it is not a Gettier case for knowledge-how, as the success condition for knowledge-how (intelligent successful action) is not met. However, as we will see shortly, we should diagnose BOMB in the same way as we diagnose DISHONEST. Thus, if the success condition for knowledge-how is not satisfied in BOMB we should not take it to be satisfied

in DISHONEST either, meaning that we should still deny that knowledge-how is gained in DISHONEST.

Cath's diagnosis is as follows: the difference between BOMB and LUCKY LIGHT-BULB seems to be that in LUCKY-LIGHTBULB Charlie is lucky to acquire a reliable method, whereas in BOMB Bobby is lucky that the method he employs brings about the intended result. The former type of luck, Cath holds, is consistent with knowledge-how. Unlike Charlie in LIGHT BULB, Sally in DISHONEST is not lucky to acquire the method she acquires. We can imagine that Mark's intention was quite stable, he wanted to send Sally to the red house, regardless of whether it was Wolfgang von Wagner's house. In this sense DISHONEST is more akin to BOMB than LUCKY LIGHT BULB, suggesting that Sally fails to acquire knowledge-how. So, if Cath's diagnosis is correct, then we should maintain that Sally's method of finding Wolfgang von Wagner's house is only luckily a way of finding the house.

This seems puzzling. After all, in TOURIST Sally acquires the same method from Mark, and gains knowledge-how. The only difference between the cases is that in TOURIST Mark is sincere and knows where the house is, and in DISHONEST Mark is insincere and doesn't know where the house is. How can this affect the reliability of the method acquired? I am, for this reason, sceptical of Cath's diagnosis of the difference between LUCKY-LIGHTBULB and BOMB. Nonetheless, whatever one's diagnosis of the difference it can be shown that the type of luck involved in BOMB is sensitive to the reliability of the agent's epistemic source. To see this consider the following two modifications of BOMB:

DISHONEST BOMB: Bobby wants to kill his uncle, but he needs some help. He asks Alice for some advice. Alice doesn't want Bobby's uncle to die, so she gives him what she thinks is misleading advice. She gives him a bomb and tells him that if he presses the large red button it will blow up. Alice, unlike Bobby, knows about the NSA satellite, and was careful to give Bobby a bomb which would be detected by the satellite. She thus believes that Bobby will fail to kill his uncle. Bobby presses the big red button, the signal is intercepted, and the NSA satellite sends its counter signal. Due to an unfortunate choice of frequency the NSA signal sets off the bomb, killing Bobby's uncle.

HONEST BOMB: Bobby wants to kill his uncle, but he needs some help. He asks Alice for some advice. She gives him a bomb and tells him that if he presses the large red button it will blow up. Alice, unlike Bobby, knows about the NSA satellite, and was careful to give Bobby a bomb which would be detected by the satellite and set off by the NSA signal. Sally thus knows that the bomb will detonate, killing Bobby's uncle. Bobby presses the big red button, the signal is intercepted, and the NSA satellite sends its counter signal. As Sally predicted, the NSA signal sets off the bomb, killing Bobby's uncle.

In DISHONEST BOMB, like Gibbons' original case, Bobby does not know how to blow up his uncle, and his success is due to luck. However, in HONEST BOMB Bobby's success does not seem to be down to luck, and he does seem, upon accepting Alice's testimony, to know how to blow up his uncle. What this shows is that in cases such as BOMB whether or not one gains knowledge-how can be dependent on the reliability of one's source<sup>6</sup>. This also indicates that, insofar as Poston's P2 is plausible on the second reading, whether or not an agent counts as having the ability to intelligently  $\varphi$  will depend on the reliability of their informant. Thus, since HONEST BOMB and DISHONEST BOMB parallel TOURIST and DISHONEST, we should conclude that this proposed success condition for knowledge-how is not satisfied in DISHONEST. Either way, Sally does not gain knowledge-how in DISHONEST. So, Sally's acquisition of knowledge-how in TOURIST is dependent on Mark's

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<sup>6</sup> This lends some initial support to the judgement of Carter and Pritchard (2015b) and Stanley (2011) that Charlie does not gain knowledge-how from his instructions. This is because Charlie's source is arguably not reliable with respect to how one should change light-bulbs.

reliability<sup>7</sup>, meaning that all three conditions of TEST are met. Either Sally's knowledge-how is genuinely testimonial or else it is based on some genuinely testimonial knowledge.

#### **4. Testimonial Knowledge-That, Where, or Which?**

We have just seen that Sally's knowledge-how in TOURIST is either testimonial, or else it is based on some other instance of testimonial knowledge. In this section we will see that her knowledge-how is not based on any other instance of testimonial knowledge. Thus, it must be genuinely testimonial.

In TOURIST Sally seemingly gains more than just knowledge-how. She comes to know that Wolfgang von Wagner's house is red and located on Bond Street, she comes to know (roughly) where the house is, and she perhaps comes to know which house it is<sup>8</sup>. These items of knowledge all meet the conditions in TEST, thus we should conclude that they are all testimonial (or derivative from testimonial knowledge). Moreover, combined with Sally's prior background knowledge and abilities they are all plausibly sufficient to allow her to find Wolfgang von Wagner's house. Thus, it could be maintained by the opponent of easy testimonial knowledge-how that Sally's knowledge-how is not genuinely testimonial. It is dependent on a speaker's reliability simply because it is dependent on a piece of testimonial knowledge-that, where, or which.

This response fails. As noted earlier, knowledge-how, unlike knowledge-that (and other forms of knowledge such as knowledge-which and knowledge-where) is compatible with environmental luck. We can modify TOURIST, turning it into a case of environmental luck. The amended case is as follows:

ENVIRONMENTAL: Sally, a tourist, arrives in a new city and wants to visit the house of her favourite painter, Wolfgang von Wagner. Sally doesn't know how to find the house. Unfortunately this city is full of tourist hating liars who live to give false directions. By pure chance Sally approaches Mark and asks for directions. Mark is the only honest testifier in the city, and he knows where the house is located. He sincerely tells her "It is the red house on Bond Street". Sally understands and accepts Mark's testimony.

In this case Sally does not gain knowledge-that, which, or where. Her beliefs about Wolfgang von Wagner's house are all unsafe. It was only by chance that she approached Mark, she could easily have approached a different testifier and formed false beliefs about which house is Wolfgang von Wagner's, where it is, and its colour. However, if environmental luck never rules out knowledge-how then we should conclude that Sally still gains knowledge-how. If this is the case then her knowledge-how is not dependent on any testimonial knowledge-that, which, or where, meaning we should conclude that the knowledge-how she acquired simply through accepting Mark's testimony is genuinely testimonial.

This argument assumes that knowledge-how is never ruled out by environmental luck. But this is not an unreasonable assumption if we accept that knowledge-how is, in some cases, consistent with environmental luck. The type of luck present ENVIRONMENTAL seems to be of a kind with that present in INSTRUCTIONS. In each case the agent selects a reliable source of information, but easily could have failed to do so. So it cannot simply be claimed that a different type of luck is present in each case. It could, of course, be claimed that knowledge-how is sometimes, but not always eliminated by this particular form of environmental luck. I do not wish to rule out this possibility, but we are owed a story about the types of additional factor which affect whether or not knowledge-how is ruled out by

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<sup>7</sup> Likewise, Bobby's knowledge-how in HONEST BOMB seems to be dependent on Alice's reliability.

<sup>8</sup> She gains knowledge-where insofar as she discovers the house is on Bond Street. This exhausts her knowledge-where, she does not know where on Bond Street the house is. So this knowledge-where alone would not allow her to find the house. Moreover, she only knows which house is Wolfgang von Wagner's insofar as she would be able to distinguish it from the other houses on Bond Street, although at this point she has no acquaintance with any of these houses (as Hawthorne and Manley (2012) point out, it is not clear that acquaintance is required for knowledge-which). These issues will be put to one side.

environmental luck. It is not obvious that such a story could be given in a manner consistent with any of the currently available approaches to knowledge-how.

## **5. Poston on Testimonial Knowledge-How**

Poston (2016) argues that knowledge-how, unlike knowledge-that, cannot be easily acquired through testimony. In 'TOURIST' (and ENVIRONMENTAL) Sally gains testimonial knowledge-how simply by accepting Mark's testimony. This contradicts Poston's conclusion. If Poston's arguments were compelling this would perhaps encourage us to revise our verdict about 'TOURIST'. Thankfully Poston's argument is not sufficiently compelling. Poston's argument has two parts. Firstly, he considers a case similar to 'TOURIST', and argues that it is not a genuine case of testimonial knowledge-how. Secondly, he provides a general argument against easy testimonial knowledge-how. These arguments will be considered in turn.

### **5.1 The Bimini Twist**

Poston asks us to consider the following case:

TWIST: John is an expert fisherman and, among other things, he knows how to tie many different knots. There is a specific knot he has heard about - the Bimini Twist - and he wants to learn how to tie this knot. He asks Sam and Sam tells him how to tie the Bimini Twist. It is plausible that John acquires some new practical knowledge from Sam's testimony. John comes to know for the first time how to tie a Bimini Twist.

Poston, 2016, 870.

Poston argues that this is not a genuine case of new testimonial knowledge-how. Rather, John already has a general skill at tying knots. By accepting Sam's testimony he gains new deontic knowledge-how (knowledge of how one ought to tie a Bimini Twist), and this allows him to apply his already existing general knowledge-how to a new case. There are three problems with Poston's diagnosis of 'TWIST'. The first two are familiar. The third is instructive.

Firstly, we can modify 'TWIST' in such a way that John's apparent deontic knowledge-how would be subject to environmental luck. Suppose, for example, John could have easily picked an unreliable informant who would have provided him with misleading instructions. If this is the case it is far from clear that he knows how he ought to tie a Bimini Twist. Yet it still seems clear that he gains the ability to intelligently and intentionally tie a Bimini Twist in such circumstances.

Secondly, the deontic knowledge-how diagnosis relies on the fact that there is only one way to tie a Bimini Twist: presuming that it is permissible to tie a Bimini Twist, it is permissible to tie one in the instructed way. However, if we modify the case to involve a act  $\varphi$  which can be performed in various different ways, some of which are permissible and some of which are not, we get the result that one can acquire non-deontic knowledge-how without acquiring deontic-knowledge-how. This is precisely what happens in 'TOURIST', where we consider the possibility of traversing the forbidden zone.

I believe the aforementioned problems are serious. However, they do not touch on an important aspect of Poston's diagnosis: the claim that John's knowledge-how is not really new, as Sam's testimony merely allows John to apply his old knowledge-how to a new case. This leads us to the third problem with Poston's diagnosis: the case can be reconstructed in such a way that John does not have any background knowledge-how to draw on:

OVERHAND: Bill has never tied a knot before in his life. In fact, he only has a very vague idea of what a knot even is. Still he is told the following by somebody he trusts: "In order to tie an



overhand knot you fold a piece of string over itself once, and then pass the end of the string under the resultant circle. Pull tight and you will have an over hand knot”.

Supposing that Bill fully understands the instructions (i.e. he knows what he is being told to do at each step, and he is able to hold all these instructions in his head at once) he will come to know how to tie an overhand knot. Yet he does not have any previous knot tying expertise. He is not applying his general knot tying knowledge-how to a new case. We can generalize cases like this. Suppose that, rather than an overhand knot, Bill is told how to tie a slightly harder knot. If he is still able to understand each step of the instructions, and he is able to hold each step in his mind, he will gain the ability to tie this slightly harder knot. We can extend this method to knots of arbitrary complexity. Of course, when we get to highly complex knots (or, to other more complex tasks) the instructions will inevitably become harder to grasp, and the many steps will be harder for a normal agent to immediately integrate in their minds. Normal agents will not be able to learn how to tie a Bimini Twist without some experience tying other less complex knots. However, this is merely due to our limited ability to integrate large amounts of novel information at one time. A sufficiently gifted agent in Bill’s position could, if it possessed all of the requisite concepts, plausibly learn any task in this manner.<sup>910</sup>

The initial plausibility of Poston’s diagnosis derives from the fact that most ordinary agents would not be able to learn how to tie a Bimini Twist without significant background knowledge. Properly understanding complex instructions is hard. Firstly, it requires that we be able to hold the instructions in our minds and integrate them. The less familiar the task, the harder this will be. Secondly, many tasks are hard to explain without utilizing concepts which are most easily acquired by practicing the task itself. One will be instructed of what do to when one finds oneself in a situation one is only able to recognize by applying proprioceptive concepts typically gained via the performance of the task at hand (or a sufficiently similar task). Thus, in many cases where we are given complex instructions we are not immediately able to fully grasp them. We actually have to practice the task in order to grasp the instructions we are trying to follow. This experience will be familiar to anybody who has practiced a new skill, such as learning a musical instrument. There is a feeling that one gains a better understanding of the very instructions one is trying to follow, as one practices the task. This observation will help us diagnose the flaw in Poston’s more general argument against easy testimonial knowledge-how.

## **5.2 Poston’s Master Argument**

Poston asks us to compare two inferences. The first is as follows:

GOOD

- (1) Bill knows how Obama will govern.
  - (2) Bill tells Hannah how Obama will govern.
- So, (3) Hannah knows how Obama will govern.

Poston, (2016), p 869.

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<sup>9</sup> This is not to say that such an agent would automatically gain the ability to perform actions of arbitrary complexity upon fully grasping and understanding the testimony. If an agent learns how to tie a Bimini Twist, yet lacks fingers, they will still not be able to tie the knot. However, they would meet the cognitive preconditions for intelligently and intentionally performing the act: if they met the physical prerequisites they would have the ability. This is, plausibly, one of the factors which sets knowledge-how apart from skill. Skill requires physical capacity, and is lost when the physical capacity is lost. Knowledge-how does not.

<sup>10</sup> It might be responded that even if Bill doesn’t have any prior knot tying knowledge-how he is still merely applying old knowledge-how to new cases. Perhaps this would be his knowledge of how to follow instructions and manipulate macroscopic objects with his hands. However, we could say the same of the acquisition of most new knowledge-how, not just through testimony but also through practice, or trial and error. We will be able to write of almost all cases of acquired knowledge-how as cases in which an agent gains the ability to apply old knowledge-how to new cases. This is an implausible result. We are clearly able to gain new knowledge-how.

This inference is reasonable as long as we suppose certain background conditions are in play. That is, as long as we suppose that Hannah understands Bill's testimony and is within her rights to accept it. This, according to Poston, contrasts with the following inference:

BAD

(4) Bill knows how to ride a bike.

(5) Bill tells Hannah how to ride a bike.

So, (6) Hannah knows how to ride a bike

Poston, (2016), p 869.

Poston maintains that this inference is bad even supposing we assume that Hannah understands Bill's testimony and is within her rights to accept it. We need an explanation for the asymmetry between the cases. Poston suggests that the difference between the cases is that acceptance of testimony is a standard route to knowledge-that, but not a standard route to knowledge-how. We cannot gain testimonial knowledge-how simply by accepting a speaker's sincere testimony. This, for Poston, explains the apparent asymmetry between GOOD and BAD. This explanation for the apparent asymmetry would perhaps be reasonable if we do not have independent reason to accept the possibility of easy testimonial knowledge-how. But this is not the situation we are in, thus we should be skeptical of such a diagnosis.

Since we have seen that there are cases of easy testimonial knowledge-how we must reject Poston's diagnosis and propose an alternative in its place. I propose that there is no asymmetry between GOOD and BAD, the appearance of an asymmetry is an illusion. This illusion is explained as follows: in cases where a speaker attempts to transmit knowledge-that the understanding condition is usually met. If we are told that a speaker has told an audience that  $p$  we will usually assume that the audience has understood the testimony. However, as we saw in the previous section, attempted transmission of knowledge-how often involves complex instructions which can be hard to grasp straight away. This is especially true of tasks such as bike riding, which involve the ability to track and respond appropriately to proprioceptive sensations which would be unfamiliar to one who has never attempted the task. Thus, when we are told that a speaker has told an audience how to  $\varphi$  we do not automatically assume that the audience has fully understood the testimony. It is not at all unusual in such cases for the understanding condition to fail<sup>11</sup>. However, Poston has postulated that in BAD the understanding condition is met. BAD is, in this sense, quite an exceptional case. Hannah somehow fully understands Bill's instructions, thus she knows how to ride a bike.

Of course, even assuming full understanding, Hannah may not immediately gain the ability to ride a bike upon accepting Bill's testimony. However, it is possible to know how to  $a$  without being able to  $\varphi$ . A master pianist does not lose her knowledge of how to play the piano upon losing her hands, but she does lose the ability to play. Likewise, if Hannah really does fully understand Bill's testimony then she knows how to ride a bike, despite the fact that she may not (yet) be physically able to do so.

Poston briefly considers this objection. He offers two responses. Firstly he postulates that understanding and knowledge of how one ought to  $\varphi$  ('deontic understanding-how' and 'deontic knowledge-how') are easily transmitted when one is told how to  $\varphi$ , meaning that we may simply be confusing our intuitions about the acquisition of knowledge-how with intuitions about the acquisition of deontic understanding or knowledge-how. Secondly, he observes that if we explain Hannah's lack of knowledge-how in terms of her failure to understand Bill's testimony then we cannot explain how she gains deontic knowledge or understanding-how from his testimony.

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11 This will depend on the action in question. In some cases the explanation needn't be particularly involved. TOURIST is such a case. Moreover, in such cases the corresponding inference does not seem problematic: (1) Mark knows how to find Wolfgang von Wagner's house, (2) Mark told Sally how to find Wolfgang von Wagner's house, therefore (3) Sally knows how to find Wolfgang von Wagner's house.

These responses are unconvincing. Firstly, we are not given a clear picture of what deontic understanding-how amounts to, thus it is unclear why we should accept that it is easily transmitted via testimony. Moreover, we can simply reconstruct the case, as we have done with previous examples, in such a way that deontic knowledge-how (or, presumably, understanding-how) is not acquired. There are various ways to ride a bike. Some are better than others. We might suppose that the method Bill teaches Hannah is inappropriate for somebody of her body type. It is, thus, not a way in which she ought to ride a bike. We can also modify the case such that Bill's method is not one via which one may permissibly ride a bike. Perhaps a small cute animal is killed whenever one employs Bill's method of bike riding. Presumably, in such a case, one is not permitted to employ the method. Nonetheless, one would, by employing the method, successfully ride a bike. Thus, by learning Bill's method, Hannah will learn how to ride a bike.

This still leaves Poston's second response: we do seem able to gain deontic knowledge-how through testimony, even when we cannot gain non-deontic knowledge-how. If failures to acquire non-deontic knowledge-how are due to a lack of understanding, then it seems mysterious how we gain deontic knowledge-how in such cases. This worry assumes that one either understands what one has been told, or one fails to do so. However, understanding is more complex than this. Understanding comes in degrees, and complete understanding is rarely required for testimonial knowledge. If I am told that Alex's walls were painted a vibrant lilac, but I do not know what colour lilac is, then I will not have fully understood what I have been told. But I do gain some knowledge: I come to know, in a very robust sense, that Alex's walls are vibrantly coloured. Moreover, I know in a thin sense that her walls are lilac, even though I do not know what this really amounts to.

Different degrees of understanding are required for different forms of knowledge-how. Deontic knowledge-how involves knowing of some method of  $\varphi$ ing that it is a permissible way to  $\varphi$ , or that it is the way one ought to  $\varphi$ . This does not require a very robust understanding of what one has been told. One needn't even be acquainted with the relevant method in order to know of it that it is a way in which one ought to  $\varphi$ . Non-deontic knowledge-how requires a great deal more. If one possesses non-deontic knowledge-how then, at the very least, one meets the cognitive prerequisites for being able to successfully and intentionally  $\varphi$ . The thin sort of understanding required for deontic knowledge-how will not be sufficient. Rather, one must understand the instructions well enough that, if sufficiently physically equipped, one would be able to apply the method. This level of robust understanding is rarely acquired, for the reasons discussed above. Thus, Poston's response ultimately fails.

However, even if Poston's response was successful, there is a second reason to be sceptical of his argument. There is a great deal of context sensitivity with respect to the acceptability of utterances of (2) and (5). (2) could report an instance of Bill telling Hannah that Obama will govern wisely, or it could report an instance of Bill laying out an in depth analysis of the actions Obama will undertake. The way we interpret such reports will depend on the context. It is very difficult to assess such exchanges without being given more contextual information. Likewise (5) could report an instance of Bill telling Hannah (a): "you sit on the seat, hold the handlebars, and move the peddles", or it could report Bill giving (b): an in depth explanation of how to ride a bike.

It is easy to worry that this context sensitivity undermines the reliability of our intuitions about BAD. In postulating that Hannah does acquire knowledge-how I have assumed that Bill's testimony is rather substantive, potentially involving concepts or descriptions which are hard for one to grasp if one does not have the relevant experience<sup>12</sup>. This is the type of testimony which would, if correctly understood, grant knowledge-how. Moreover, it is the type of testimony for which there should not be an assumption of understanding. But we may be tempted to interpret (5) as a case similar to (a), as the "telling" locution naturally invokes the speech act of "telling", which in turn lends itself to being thought of in terms of a single utterance rather than an involved series of utterances. This explains why one might be initially tempted to assume that understanding is present in (5). However, given the

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12 This needn't be experience of riding a bike. It may be experience of something similar, such as riding a tricycle, or experience of separate tasks such as using a stationary exercise bike, and tight rope walking.

context of the investigation we will naturally read (6) as attributing knowledge-how in the more substantive sense relevant to our investigation. Knowledge-how, in this sense, cannot be gained from testimony along the lines of (a). But this is no more interesting than the fact that in depth knowledge of the actions Obama will undertake cannot be gained from accepting testimony stating “Obama will govern wisely”. For these reasons we should, at the very least, be skeptical of our judgements about such cases. We can be pulled in different directions depending on how we fill out the context. This skepticism should be amplified by the fact that we have good positive reasons to accept the existence of easy testimonial knowledge-how.

Poston’s hypothesis that we cannot gain easy testimonial knowledge-how may, perhaps, have been a reasonable diagnosis of the apparent asymmetry between GOOD and BAD if we did not have good reason to accept the existence of easy testimonial knowledge-how. But we do have good reason to believe in the presence of easy testimonial knowledge-how, and we have seen firstly that there are alternative explanations for the asymmetry, and secondly that we should be skeptical of our intuitive verdicts about GOOD and BAD. Thus we should continue to believe in easy testimonial knowledge-how.<sup>13</sup>

## **6. Lessons about Knowledge-How and Testimony**

Our theories of knowledge-how and testimonial knowledge must be able to accommodate the existence of easy testimonial knowledge-how. Yet many views in the literature will struggle to do so in a straightforward way. I will conclude by outlining the implications of my argument for our theorising about knowledge-how and testimonial knowledge.

First, consider ability views of knowledge-how: Many theorists inspired by Ryle’s (1949) discussion hold that knowing-how to  $\varphi$  consists in possessing the ability to  $\varphi$ . Such views have no problem predicting that one can acquire knowledge-how upon acceptance of testimony. However, it is not clear how they can capture the dependence of knowledge-how on the trustworthiness of a speaker. As Hawley (2010) points out, one can surely acquire an ability from an insincere testifier.<sup>14</sup> Abilities are acquired in DISHONEST and DISHONEST BOMB. Yet knowledge-how was not acquired in these cases. So, even if ability is required for knowledge-how, it is not sufficient. Something more is required; the relevant ability must be grounded in the right way. Whether or not the ability is correctly grounded will depend on factors external to the agent’s cognitive state (internalistically construed).

Carter and Pritchard (2015a) have recently argued that knowledge-how is a cognitive achievement. It might be thought that the problem I have just raised for ability views is solved by the addition of a cognitive achievement condition: one knows how to  $\varphi$  only if one has an ability to  $\varphi$  which is attributable to one’s cognitive abilities. However, this line of response is a non-starter. Carter and Pritchard adopt this view because, like knowledge-how, cognitive achievements are consistent with environmental luck but not intervening luck. This, they believe, sets knowledge-how apart from knowledge-that, as knowledge-that is not always a cognitive achievement. The claim that knowledge-that needn’t be a cognitive achievement is thought to be established by the following case from Lackey (2007) (discussed further in Pritchard (2012)):

CHICAGO: Having just arrived at the train station in Chicago, Morris wishes to obtain directions to the Sears Tower. He looks around, approaches the first adult passer-by that he sees, and asks how to get to his desired destination. The passer-by, who happens to be a Chicago resident who knows the city extraordinarily well, provides Morris with impeccable

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<sup>13</sup> I have tried to remain neutral between intellectualism and anti-intellectualism whilst diagnosing the problem with Poston’s argument. For a purely intellectualist response see Cath (2017).

<sup>14</sup> Similar worries arise for Cath’s (2015) guiding belief analysis, according to which one knows how to  $\varphi$  if one possesses a belief which would reliably guide one in  $\varphi$ ing.

directions to the Sears Tower by telling him that it is located two blocks east of the train station. Morris unhesitatingly forms the corresponding true belief. Lackey, (2007), 352.

Morris gains knowledge-that, yet he does not deserve credit for this knowledge. The credit for his true belief goes to the testifier. Thus, Morris's belief is not a cognitive achievement. Yet CHICAGO exactly parallels TOURIST. If Morris's knowledge does not constitute a cognitive achievement then neither does Sally's. So, if testimonial knowledge does needn't constitute a cognitive achievement then neither must knowledge-how. So the anti-intellectualist needs an alternative way to account for the difference between cases like TOURIST and DISHONEST.

Intellectualists, unlike ability theorists, hold that knowledge-how is a brand of knowledge-that: knowledge of some way  $w$  that it is a way for the subject to  $\varphi$ . We can easily acquire knowledge-that via testimony, so it might be thought that intellectualism is easily able to accommodate testimonial knowledge-how. But things are not so straightforward. Intellectualism is primarily motivated by appeal to the syntax of knowledge-how ascriptions (Stanley and Williamson (2001), Stanley (2011)). Knowledge-how ascriptions are infinitival constructions. Such constructions contain a hidden pronoun PRO which denotes the subject of the ascription. Moreover, PRO appears to denote the subject in an indexical manner. Consider "Bill expects to win the race", which would be interpreted as "Bill expects PRO to win the race", with PRO denoting Bill. This only seems appropriate if Bill has an indexical belief that he will win the race. If Bill fails to realize he is looking at his own reflection and believes of the object of his attention that it will win the race, we would not be inclined to say that Bill expects to win the race. Likewise, when we know "Bill knows how to ride a bike" we are saying that Bill knows a way for he himself to ride a bike. This, for the intellectualist, makes knowledge-how a form of de se knowledge.

However, it is standardly thought that we cannot acquire de se testimonial knowledge. After all, we cannot think one another's "I" thoughts. These thoughts cannot be shared. Yet testimonial knowledge is commonly thought to require the sharing of thoughts. This is central to transmission views of testimony, which hold that testimony involves, in a robust sense, the sharing of knowledge (such as the views presented by Burge 1993, 1997, Faulkner 2010, Hardwig 1985, 1991, McDowell 1994, Owens 2000, 2006, forthcoming, Schmitt 2006, Welbourne 1986, Williamson 2000, and Wright 2016). Moreover, the assumption that communication involves the sharing of thoughts or representations is standard even among theorists who deny the transmission theorist's claim that epistemic states are transmitted. If intellectualism is correct then this standard assumption must be rejected.

So, I offer a conditional conclusion. If anti-intellectualism is to be found plausible we need a way of construing abilities such that whether or not an agent has an ability can depend on the reliability of a speaker. It is not clear how to give such an account. On the other hand, if we reject anti-intellectualism in favour of intellectualism, we must reject the widespread assumption that knowledge-yielding communication always involves the sharing of representations. We will, thus, need a new account of knowledge-yielding communication. Either way, the implications of easy testimonial knowledge-how are significant.

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