

INTENTIONAL ACTION, KNOW-HOW, AND LUCKY SUCCESS

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Elizabeth Anscombe held that acting intentionally entails knowing (in a distinctively practical way) what one is doing. The consensus for many years was that this knowledge thesis faces decisive counterexamples, the most famous being Donald Davidson's carbon copier case, and so should be rejected or at least significantly weakened. Recently, however, a new defense of the knowledge thesis has emerged: provided one understands the knowledge in question as a form of progressive judgement, cases like Davidson's pose no threat. In this paper, I argue that this neo-Anscombean maneuver fails because it is founded on an untenable conception of the difference between intentional and merely lucky success. More specifically, the neo-Anscombean view conflates merely lucky success with subjectively surprising success. Unlike the former, subjectively surprising success may well be intentional, for it may well be the result of an exercise of knowledge-how. After sketching an alternative view that better captures the intuitive contrast between lucky and intentional success, I argue that the conflation of surprising and merely lucky success owes to a tacit commitment to the thesis that knowing how entails knowing that one knows how. This thesis is not only false, but distortive of the explanatory role of knowledge-how. This result, in turn, tells us something important about what practical knowledge cannot be.

IN her monograph, *Intention*, Elizabeth Anscombe proposed that there is a deep connection between acting intentionally and what she calls *practical knowledge*—the non-observational knowledge a person has of her intentional actions. Such knowledge is, in her view, constitutive of intentional action; as she writes, “without [practical knowledge] what happens does not come under the description—execution of intentions—whose characteristics we have been investigating” (2000: 88). Anscombe thus seems committed to the following knowledge thesis:

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(K) Necessarily, an agent is φ -ing intentionally only if she knows that she is φ -ing.

Yet (K) appears to be susceptible to counterexamples. The most famous of these—and the one which will be the focus of this paper—is Davidson's carbon copier case:

Carbon Copier: A man is writing heavily on a stack of carbon paper with the intention of making ten legible carbon copies. As he writes, he neither knows nor believes with any degree of confidence that he is succeeding, but, supposing he is indeed producing ten legible copies, he is making them intentionally.¹

Carbon Copier might persuade one not only that (K) is false, but that it is a mistake to think the notion of practical knowledge has any significant role to play in an adequate theory of intentional action. A more moderate response might concede the counterexamples, but insist that their force is limited: they show only that (K) is in need of revision, not that Anscombe's insight is wrongheaded.²

There may be another option: Michael Thompson (2011) and Will Small (2012) contend that, provided one understands practical knowledge as a form of progressive judgement, *Carbon Copier* is not a genuine counterexample to (K).³ They attribute the influence of the apparent counterexample to a failure to fully appreciate the contrast between intentional and merely lucky success. As this contrast is precisely what (K) is intended to explain, Thompson and Small's defense is attractive: it effectively turns the tables on the opponent of (K) by challenging her to explain the contrast between intentional and merely lucky success that cases like *Carbon Copier* take for granted.

My aim is to show that this neo-Anscombean strategy systematically distorts the explanatory role of knowledge-how and so should be rejected. I begin by outlining the neo-Anscombean strategy, emphasizing the role played by the claim that intentional action is undermined by luck in motivating the view. I then argue that, while Small and Thompson are right to note that intentional action is constrained by anti-luck conditions, their response to Davidson is founded on

1. See Davidson (2001: 92). I should note that Davidson's scenario is meant to undermine more than (K)—it supposedly rules out the need even for weaker cognitive attitudes like belief.

2. Many proponents of *cognitivism about intention*—the view that the intention to φ is either partly or wholly constituted by a cognitive attitude the content of which is that one is φ -ing (or, in the case of future-directed intention, that one is going to φ)—employ variants of this strategy, especially those whose cognitivism is rooted in Anscombean leanings. See, for example, Velleman (1989: 112ff.), the introduction and first two essays in Setiya (2016), and Schwenkler (2019: 180–91).

3. While there are important differences between Thompson's and Small's accounts of intentional action, they are united in their treatment of *Carbon Copier*.

an untenable conception of the kind of luck that undermines intentional action. Specifically, their views run together success that is subjectively surprising and what I call *fluky success*: success that, owing to luck, is not intentional. In fact, that success is “lucky” in the sense of being subjectively surprising does not entail that it is fluky. Unlike fluky success, surprising success may well be the result of an exercise of knowledge-how, and success in φ -ing which manifests knowledge how to φ is intentional φ -ing. The conflation of surprising and fluky success is the result of tacit commitment to the thesis that knowing how entails knowing that one knows how. As I argue in the final section of the paper, this thesis is not only false, but distortive of the explanatory role of knowledge-how. I close with a brief reflection on how this result should inform future inquiry into the nature of practical knowledge.

1.

Let us start by noting that it does not follow from the fact that an agent is ψ -ing with the aim of φ -ing and succeeding in φ -ing, that she is φ -ing intentionally. Success in φ -ing can fall short of intentional action (under that description) in virtue of being lucky in some relevant sense. Suppose I pull the lever of a functioning, unmanipulated slot machine with the aim of winning the jackpot, and actually do win. Intuitively, I did not win intentionally since I did so by sheer luck.⁴ Nor is the sort of lucky success that falls short of intentional action confined to the realm of games of chance. To gain admittance to a prestigious medical school program, even a strong applicant will need some measure of good fortune—after all, whether her application is successful depends in no small part on factors beyond her control (such as the strength of the other applicants during that admissions cycle). Even given that the admissions process does not involve anything like a game of chance, there is nevertheless an intuitive sense in which a successful applicant did not gain admittance intentionally. This much should be common ground among action theorists of every stripe.

Now let us return to *Carbon Copier*. The upshot of the foregoing is that whether the carbon copier makes ten carbon copies *intentionally* will depend on how the details of the case are filled in. Accordingly, Thompson and Small consider two possible elaborations of the original example.⁵

4. One need not hold that there could not be *any* sense of ‘intentionally’ which applies to my winning the jackpot. The point is rather that we pre-theoretically distinguish a more demanding sense of ‘intentionally’. To elicit the relevant intuition, it can help to reflect on how odd it would have sounded had I declared that I intend to win the jackpot with *this* pull of the lever.

5. See Thompson (2011: 209–10) and Small (2012: 197–203).

The first of these (*Mundane Copier*) interprets Davidson's scenario as a relatively ordinary instance of carbon copy making. Normally, when one's aim is to make ten carbon copies, one first writes heavily on the top sheet of the full stack, and then checks to see if the impression has gone all the way through to the bottom. If it has, one is finished. If not, one removes the copies that did get made and repeats the procedure with the reduced stack that remains. All along, one is making ten carbon copies (Small 2012: 198; Thompson 2011: 210). If we read Davidson's example along these lines, it can be true that the man is, in writing heavily on the top sheet of the stack, making ten carbon copies *even if* the impression is not going all the way through the stack. So, if what is meant by Davidson's stipulation that the man does not know he is succeeding is just that he does not know, as he writes on the top sheet, that the impression is going all the way through, this need not preclude him from knowing that he is making ten carbon copies. Thus, the neo-Anscombean can happily acknowledge that, once the man produces the tenth carbon copy (however long this may take), he will have made ten carbon copies intentionally—*Mundane Copier* poses no threat to (K).

This analysis of *Mundane Copier* exploits a conception of practical knowledge as a form of *progressive* judgement.⁶ On this conception, (K) ascribes knowledge of something which is underway but not yet complete—that is, an ongoing process rather than a completed event. Progressive judgements are expressed linguistically by constructions employing imperfective grammatical aspect ('S is/was φ -ing') whereas those concerning completed events employ the perfective aspect ('S φ -ed'). Understanding practical knowledge in this way makes for a considerably more flexible view, since it allows one to exploit the *openness* and *broadness* of the progressive in connection with intentional action.⁷ Progressive judgement is *open* in the sense that a person may be doing something she never does; interruption or abandonment of an action-in-progress will not falsify the judgement that S was φ -ing. I may be driving to your house even if, due to an accident, I never arrive. Progressive judgement is *broad* in the sense that a person may, in one sense, count as φ -ing even if she is, more narrowly, not presently doing anything for the sake of φ -ing. In virtue of the broadness of the progressive, I may be driving to your house—and know that this is what I am doing—even as I make a wrong turn.⁸ In the same way, the carbon copier can

6. This conception of practical knowledge is nowadays popular among neo-Anscombeans. See Lavin (2015) for an accessible and representative example.

7. Falvey (2000) offers an early and influential sketch of such a view; my characterization of the openness/broadness of the progressive closely follows his.

8. Compare Anscombe's caution that focusing narrowly on "small sections of action and slips which can occur in them" will mislead us about the nature of practical knowledge and its role in constituting intentional action (2000: 88).

know that he is making ten carbon copies even if his initial plan—of writing once on the top sheet—turns out to be insufficient for making ten copies.

While this treatment of *Mundane Copier* has the look of a defensive maneuver, Thompson and Small hold not only that *Mundane Copier* poses no threat to (K), but also that acceptance of (K) is a prerequisite for making sense of the scenario. They argue that only practical knowledge could explain the sense in which, even as the mundane copier writes heavily on the top sheet of the stack, it will be no accident if he ends up having made ten carbon copies. Unless the man *knows* that it will be no accident if he ends up having made ten carbon copies, the only connection there could be between what he is doing and what he ends up having done will fail to manifest his practical intelligence. And this would ensure he is not acting intentionally under the description ‘making ten carbon copies.’ The nerve of the analysis of *Mundane Copier* is that knowing it will be no accident if he ends up having made ten carbon copies does *not* require that the man know writing once on the top sheet will suffice. After all, and as Small points out, in the event that this initial plan turns out to be insufficient, the man will learn, not that he has failed, but that he is not finished yet (2012: 198).

Now consider a second elaboration of Davidson’s scenario (*Desperate Copier*). In *Desperate Copier*, the man only gets one shot at writing on the top sheet of the stack, after which he is done, whatever the result. Here, it matters that the impression is going all the way through to the bottom of the stack. In this case, Thompson and Small concede, the man does not know he is making ten carbon copies, since he could only know this if he knew that the impression is going all the way through to the bottom of the stack (Thompson 2011: 210; Small 2012: 199). Yet Thompson and Small deny that this undermines (K): even if the man succeeds, he will not have made ten carbon copies intentionally, but will have brought this off by luck. According to Thompson, the man’s success is on par with a lottery winner’s: neither is to be labeled ‘intentional’ in the sense of that term which is of primary interest to action theorists (2011: 210).

The verdict that *Desperate Copier* is not a case of intentionally making ten carbon copies may still clash with one’s intuitions (it certainly clashes with mine). However, our intuitions *already* distinguish a notion of intentional action which applies to *Mundane Copier* but not to the lottery case; the question to ask is whether the action theorist should group *Desperate Copier* with the lottery case or with *Mundane Copier*, not whether there is some sense in which it can be called “intentional action.” Now, in both the lottery case and *Mundane Copier*, an agent is intentionally doing something with the aim of thereby doing something else. Neither agent knows in advance whether what he is doing right now will suffice for achieving his aim, so this cannot be what distinguishes the two cases. What makes the lottery player’s success lucky seems rather to be that, in addition to

not knowing whether what he is doing right now suffices for achieving his aim, he knows that he can only succeed if what he is doing right now suffices for achieving his aim. As this is equally true of the man in *Desperate Copier*, there look to be principled grounds for disregarding any intuition to the effect that the second carbon copier intentionally makes ten copies.

2.

2.1. *Surprises and Flukes*

We should reject the foregoing argument. Notice that we do not regard the lottery case and *Desperate Copier* as involving the same kind of luck. It will be a *fluke* if the lottery player wins the lottery, but not if the carbon copier ends up having made ten copies—the carbon copier’s success would attest to his ability to make ten copies at once, an ability he could exercise again in relevantly similar circumstances. Of course, Thompson and Small do not claim that there are no differences whatsoever between the lottery case and *Desperate Copier*, but only that there are no *theoretically significant* differences. But this is precisely the claim I think we ought to reject. In what follows, I will use the term ‘fluke’ to describe the sort of success that is exemplified by the lottery case and not by *Desperate Copier*. My plan is to show that the distinction between fluky and non-fluky success is an important one for the purposes of theorizing intentional action.

Very roughly, the idea of fluky success is the idea of an agent’s achieving an aim that it was not fully in her power to achieve. Observe that the lottery winner *knows* from the outset that it would be a fluke if he wins. This is not the fruit of an optional inference; it is instead internal to his grasp of the connection between his means and end out of which he is acting. This suggests that the notion of *flukiness* I am alluding plays a role in characterizing the lottery winner’s practical representation of his action, which is important in light of the fact that Thompson, Small, and neo-Anscombeans more generally understand intentional action as constituted by effective practical representations. To raise the possibility that the flukiness of the lottery winner’s success distinguishes it from the desperate copier’s success thus does not beg the question against the Anscombean view.

Fluky success and subjectively surprising success are not interchangeable: that success is subjectively surprising is neither necessary nor sufficient for it to fall short of intentional action. Let me explain. At the beginning of §1, I offered *winning the jackpot* as an example of success which is too lucky to be intentional. But any game of chance would have worked as an example, even one for which the odds of winning are much better than those of the typical slot machine jack-

pot. If I successfully call a fair coin toss, for instance, I do not thereby act intentionally under the description ‘won the coin toss,’ even if winning was my aim, precisely because my success was a matter of luck. And one can be too lucky to count as acting intentionally even when the odds greatly favour success. Imagine playing a game in which you are to first nominate one number between one and six, and then roll a six-sided die; the rule is that you win so long as you do *not* roll the number you picked. Despite the fact that you have favourable odds—and so would hardly be surprised to win—whether or not you win the game is still a matter of sheer luck, which precludes your action’s being intentional under that description. But neither is intentional action precluded by a low degree of subjective confidence in the proposition that one will succeed. Consider, for example, exercising a fallible skill in high-stakes circumstances. A person who has successfully performed a difficult dance move during practice may still worry about getting it right at the recital and pray that luck is on her side. Performance anxiety might lead her to dramatically overestimate the likelihood of making an error (even as she steps on stage and begins to perform the routine). Nevertheless, to be lucky in the way she hopes to be would not, I submit, make her success anything less than fully intentional under the relevant description.

In the next section, I appeal to the notion of *knowledge-how* to explain why fluky success and subjectively surprising success can come apart, and, in so doing, to clarify what goes wrong with the Small-Thompson analysis of *Carbon Copier*. However, I want to emphasize that my aim in developing this proposal is not simply to revive an old counterexample to (K) or to do justice to intuitions about a fringe case. If that were my aim, one might well wonder if the reward would be worth the trouble. Piñeros Glasscock (2020) argues that the real problem with the knowledge thesis is that any non-trivial version of it can ultimately be shown to conflict with general principles capturing important properties of knowledge—in particular, those aiming to capture the fact that a belief can constitute knowledge only if it is non-accidentally true.⁹ A virtue of this type of argument, he notes, is that it does not in any way depend on intuitions about

9. What Piñeros Glasscock has in mind are margin for error principles, and, more specifically, ones that apply to knowledge of one’s actions. Roughly speaking, and abstracting many details, the idea is as follows. Suppose I am trying to φ throughout some interval of time and that I believe I am φ -ing throughout that interval of time. Suppose further that my belief is true when my attempt begins, but that gradual changes in the material conditions of my action eventually make it the case that I am not φ -ing (and thus that I falsely believe that I am φ -ing). The thought is that my belief, even if true, can only count as knowledge if there is some margin for error: if my belief is true at t but false one millisecond after t (owing to a minute shift in the material conditions) then the truth of the first belief is too accidental to count as knowledge, since I am not in a position to discriminate between what is the case at t and what is the case one millisecond later (with respect to what I am doing).

fringe cases (like *Carbon Copier*); the Small-Thompson defensive strategy is thus powerless against it (2020: 1246). The jury is still out on whether Piñeros Glasscock's objection is decisive—Beddor and Pavese (2021) argue that it is possible to formulate an epistemic condition on intentional action that survives it, at least so long as one additionally denies that there are any intrinsically intentional actions¹⁰—but even if it is not, the move away from reliance on intuitions about fringe cases represents a genuine advance in the debate about the relationship between knowledge and intentional action.

However, there is a more general issue that will remain whether or not something like Beddor and Pavese's maneuver succeeds. My aim in probing the Small-Thompson analysis in connection with the distinction between fluky and subjectively surprising success is to bring this issue—which goes far deeper than conflicting intuitions about fringe cases—into view. The issue, at bottom, is this: it is a mistake to conceive of practical knowledge as knowledge-that of the sort that forms the subject matter of traditional epistemology, the sort that is precluded by such things as having a low degree of epistemic confidence.¹¹ Whether they realize it or not, this is what Small and Thompson are doing in interpreting *Desperate Copier* as they do. The knowledge that the desperate copier lacks is not the sort of knowledge that could be necessary for intentional action because it is not the sort of knowledge whose presence explains success even when it is present. Or so I shall argue. Note, though, that if I am right, then any knowledge condition or conception of practical knowledge which is compatible with the Small-Thompson analysis—including those of Piñeros Glasscock and Beddor and Pavese, each of whom express sympathy for that analysis¹²—must be mistaken. Or, to put the point another way, the distinction between fluky success and subjectively surprising success imposes a constraint on what practical knowledge could be. But first we need to understand why fluky success and subjectively surprising success can come apart in the first place.

10. That is, actions such that, whenever they are performed, they are performed intentionally. The doctrine that there are such actions is associated with Anscombe—see (2000: 85). While Beddor and Pavese reject this doctrine, they argue that we can preserve and capture the main motivations for positing essentially intentional actions by positing *intention-entailing actions*—actions that are accompanied by an intention whenever they are performed (2021: 15).

11. An important point of clarification: I am not claiming that practical knowledge cannot be knowledge-that. So I am not saying, for example, that practical knowledge must be know-how (conceived as an anti-intellectualist would have it). The point is rather that practical knowledge cannot be the sort of knowledge-that with which epistemologists have traditionally been concerned, the sort that is ruled out by such considerations as that a person's epistemic confidence is too low. This leaves it open that practical knowledge is a peculiar sort of knowledge-that which we have not yet succeeded in characterizing. Giving such a characterization is far beyond the scope of this paper, but I hope to explore this possibility in future work.

12. See Piñeros Glasscock (2020: 1245–46), Beddor and Pavese (2021: 4, footnote 2).

2.2. *Knowing How*

I propose that that the cases I am calling ‘flukes’ are cases in which the agent’s success in φ -ing is not the manifestation of a certain kind of intelligence, viz., *know-how*.¹³ Thus, in labelling the lottery winner’s success ‘a fluke,’ we assert that it does not manifest knowledge how to win the lottery; and in knowing that his success would be a fluke, the lottery winner knows that his success will not owe to knowledge how to win the lottery. These claims fit well with the following intuitive principle:

(IKH) *Intentional action entails know-how*. Necessarily, if S φ s intentionally, then S knows how to φ .¹⁴

(IKH) vindicates the intuition that the lottery winner does not win intentionally: *win the lottery* is not something he knows how to do, so he is in no position to win it intentionally.¹⁵ Nor is this explanation objectionably *ad hoc*, since the difference between those of us who do not know how to win the lottery and the person who does know how is just that, all else being equal, she would not need to rely on luck in order to win.¹⁶

This analysis of the lottery winner’s success does not commit us to any analogous conclusion with respect to *Desperate Copier*, even supposing the agents would be equally surprised to learn of their respective successes. Subjective surprise at success is compatible with intentional action because it is compatible with knowing how. And it is compatible with knowing how because knowing how to φ does *not* entail knowing (or even being in a position to know) that one knows how to φ . To see this, it suffices to consider an example. Suppose that Michelle wonders, having neglected to practice for a long period of time,

13. This may be a departure from the ordinary usage of ‘fluke.’ My own intuition is that, at least when we are talking about successful (or unsuccessful) action, we use ‘fluke’ to deny the manifestation of know-how. But I would be content to stipulate this use of the term at least for the cases we have been considering, i.e., as a proposal for cashing out the difference between *Desperate Copier* and the lottery case.

14. Both Thompson and Small would accept this principle. So, moreover, would Anscombe herself, since, on her view, practical knowledge just is the manifestation of know-how (2000: 88–89). And more recently, Beddor and Pavese (2021) defend a knowledge condition on intentional action which entails (IKH). In any case, acceptance of (IKH) (or some variant of it) is a mainstream position in the literature on know-how (although it is not universally accepted—see, e.g., Setiya 2012: 285–87 for dissent).

15. See Gibbons (2001), Stanley and Williamson (2001), Pavese (2018), and Habgood-Coote (2018) for examples of this analysis of the lottery case. Both Habgood-Coote and Pavese imply that the same sort of argument could be adapted to show (correctly, in my view) that one is typically not in a position to *lose* the lottery intentionally.

16. I.e., supposing she tried to win.

whether she still knows how to play Beethoven's *Moonlight Sonata*. If knowing how to φ entailed knowing (or being in a position to know) that one knows how to φ , it is hard to see how Michelle could have this thought without being epistemically irrational. Yet it seems a perfectly ordinary and unobjectionable thought to have. Indeed, it might lead her to sit down at the piano and attempt to play *Moonlight Sonata*, and so settle for herself the question of whether she still knows how to play it.

The upshot is that, while the man in *Desperate Copier* does not know *whether* he knows how to make ten carbon copies in his circumstances—in this respect, he differs from the man in *Mundane Copier* (who knows he knows how) and from the lottery winner (who knows he does not know how)—this does not entail that he does not know how. This does not settle the question of whether *Desperate Copier* is a case of intentional action, but it does make room for an affirmative answer: it is consistent with the carbon copier's practical representation of what he is doing that he may be manifesting knowledge how to accomplish his goal.¹⁷ And given that the explanatory role of knowledge-how is to explain the non-lucky success characteristic of intentional action,¹⁸ if the carbon copier *does* succeed through the manifestation of knowledge how to make ten carbon copies, he will have made ten copies intentionally.

The question to ponder is thus whether the man's success in *Desperate Copier* manifests knowledge how to make ten carbon copies (i.e., in his circumstances).¹⁹ Even if the answer to this question changes depending on how the case is elaborated, that will be enough to undermine Thompson and Small's analysis, since they contend that the combination of the desperate copier's doubts about the efficacy of his selected means and his knowledge that he will only succeed if those means are effective entails that his success is lucky rather than intentional.

To determine whether the desperate copier's success manifests the appropriate knowledge-how, it will help to take a cue from Gilbert Ryle's work on the explanatory role of knowledge-how.²⁰ Ryle takes *knowledge-how* to be whatever accounts for the intelligence of the intelligent selection and execution of means that characterizes intentional action.²¹ In a case of intentionally φ -ing by ψ -ing, the agent's selection of her means and her execution of her chosen means can

17. I.e., unlike the lottery winner's practical representation.

18. See Pavese (2018) for a defense of this conception of the explanatory role of knowledge-how.

19. I follow Hawley (2003) in taking the circumstances to qualify *what* is known rather than merely *when* it is known. For example, my knowledge how to drive is, fully spelled out, knowledge-how-to-drive-in-circumstances-C, where 'C' denotes a range of normal road conditions. When I am driving on perilously icy roads, I still know how to drive-in-circumstances-C, but may nevertheless not know how to drive-in-icy-conditions.

20. See Chapter 2—"Knowing How and Knowing That"—in Ryle (1949).

21. For this interpretation (and its ramifications for understanding Ryle's broader project), see Small (2017) and Bäckström and Gustafsson (2017).

each be assessed for its intelligence. My thought is that success is too lucky to be intentional just when it would be a category mistake to assess the selection and/or execution of means for their intelligence by the light of the agent's end. I will argue that the agent's selection and execution of his means in *Desperate Copier* are both assessable for their intelligence by the light of his end of making ten carbon copies, and that we consequently have good reason to regard him as exercising knowledge-how and thus acting intentionally. Before presenting this argument, however, I need to clarify the notion of assessing the selection and execution of means for their intelligence. In this, I will stick fairly close to the presentation in Small (2017).²²

Consider first the selection of means. Suppose my aim is to go to work. I might recognize that there are several different ways in which I could realize my aim—I could walk, drive, cycle, ride the bus, and so on. If I end up intentionally going to work, it will be because I made a selection between the means (I took to be) available to me. Even after I have decided which means to take, however, there is still the matter of carrying them out. Suppose I end up deciding to walk to work. My subsequent walk to work is a concrete action—a particular event which is the culmination of a particular process²³—that instantiates the act-type *walk to work*. The properties of the concrete action need not be fully determined by my selection of means—for example, it may be that the duration of today's walk to work is considerably shorter than that of yesterday's walk.

We are now in a position to understand the idea of assessing the selection and execution of means for their intelligence. Choosing to walk to work is (all else being equal) much more reasonable than, say, choosing to sprint there, since the latter would leave me sweaty and exhausted.²⁴ But my concrete realization of the act I selected is also assessable for its intelligence: if I underrate my own fitness and end up arriving at work an hour before my shift starts, then it was foolish of me to leave as early as I did, or to walk as quickly as I did. To criticize the intelligence of my execution in this way need not imply that anything was wrong with the favourable assessment of the intelligence of my selection of means—even though there is something foolish in my execution, it was still more reasonable to try to get to work by walking there than by sprinting there.

22. While my presentation largely follows Small's, I should note that whereas he assumes that the intelligent selection of means must rest on *knowledge* of propositions of the form 'I can ϕ by ψ -ing' (or ' ψ -ing is a way of ϕ -ing'), I do not require that these procedural propositions be known by the agent.

23. There will only be a token action of the type *walk to work* if my action is successful, but I suppress this for the sake of brevity.

24. This is not to say that there cannot be circumstances in which deciding to sprint would be the judicious choice—this might be so if I am running late and work is relatively nearby, or if I am in impeccable shape. But if I arrive at work sweaty and exhausted simply because I chose to sprint there, it would hardly be unreasonable for my boss to criticize my decision.

When we assess an agent's selection and execution of her means for their intelligence, we trace the contours and extent of her knowledge how to accomplish her aim. If I decide to sprint to work when I could have walked instead, and consequently arrive too exhausted to do any work, my decision warrants a degree of criticism: there was a better method that it was well within my power to undertake. That my decision is criticizable in this way does not, of course, mean that I am morally blameworthy for selecting as I did. In the case under consideration, I was simply ignorant of the comparative disadvantages of sprinting instead of walking. Nevertheless, my ignorance amounts to a salient deficiency in my knowledge how to get to work. To say, of a person's knowledge how to φ , that it is deficient in this sense is essentially to make a comparative judgement—that is, it is to say that there is salient room for improvement (by the agent's own lights), that one could come to *know better* how to φ . While such judgements are often made by observers, it is important to notice that they may also be rendered by an agent about her own actions. Indeed, it is by rendering such a judgement that I will, having completed my exhausting sprint to work, come to regard my choice as a mistake, and so resolve to walk next time.

The upshot is that the assessment of the intelligence of the selection and execution of means involves comparing a person's actual knowledge how to φ with counterfactual knowledge how to φ . Making such an assessment thus takes it for granted that the agent actually knows how to φ and manifests it in acting. Where an agent lacks knowledge how to φ , we should expect an assessment of her selection and execution of means by the light of her aim of φ -ing to be a category mistake. Here is an example to illustrate what this looks like in practice. Suppose that Peter is playing chess and finds himself in a relatively simple endgame position. He knows that there is a standard procedure for forcing checkmate from this position, but he cannot quite remember what the procedure is. More specifically, he knows that exactly one of procedure A and procedure B is appropriate, but he cannot remember which one. Unfortunately, since the game is subject to a time control, he does not have time to work through each procedure before making his move. Thus, he arbitrarily selects between the two procedures, hoping that he made the right choice. Fortunately, he chooses the right procedure, and so ends up checkmating his opponent. Intuitively, Peter was lucky to choose correctly, and so his success falls short of intentional action under the description 'checkmated the opponent.' This is because Peter's selection of the correct procedure did not manifest knowledge how to checkmate an opponent from the position he was in when he made his selection. As proof, we can cite the fact that his selection between the two procedures was *arbitrary* by the light of his aim. Or, to put the same point another way, it would be a mistake to say that, inasmuch as he succeeded, his choice between the two procedures was a smart one.

The fact that Peter's choice is not fully intelligent by the lights of his aim of selecting the correct forced checkmate procedure does not mean that it is unintelligent in *every* respect. Indeed, in recognizing that exactly one of two specific procedures would work, Peter is much closer to knowing how to checkmate from the initial position than someone who only knows that there *is* an effective procedure but who has no idea what the procedure is. Moreover, Peter *knows* that he is choosing between A and B on grounds that are arbitrary *by the lights of his aim*. And this amounts to his recognizing that he is not in any position to make an intelligent choice between the two. In this respect, he is very similar to our lottery winner, who knows that he will win the lottery only provided he buys the winning ticket, but who knows that he cannot intelligently choose the winning ticket from those on display.²⁵ Both agents outsource their success to the notoriously unreliable Fortune. And while Fortune may well favour the bold, she does not cooperate with them.²⁶

Now let us return to *Desperate Copier* and ask whether (and in what respects) the man's selection and execution of his means are assessable for their intelligence. With respect to the man's execution of his means, things seem to be clear-cut: he displays the same facility in the lost art of carbon copying that he would manifest in making two copies or five copies—the thicker stack does not deprive his execution of intelligence.²⁷ His selection of means also manifests intelligence.

25. In other words, the lottery winner's selection of means is, in some practically relevant respect, not intelligent by the lights of his goal of winning the lottery (as well he knows). His selection of means is in a crucial respect unaccountable to the outcome of his attempt—his winning no more vindicates his choice of method than losing would have undermined it. When we are asking whether a selection of means is more or less clever or stupid by the lights of some end, it must at least be an open possibility that the (in)efficacy of the chosen means for bringing that end about would make a difference to the answer.

26. Similar reasoning could allow a proponent of the knowledge thesis to (partially) resist the sort of argument that Shepherd and Carter (in press) raise against that thesis. They claim that certain activities for which an agent's success rate (with a single method) falls into the middle percentiles constitute counterexamples to the knowledge thesis. But at least some of the cases they identify—especially those drawn from sports—arguably fall short of intentional action, precisely because they are cases in which the agent's selection of her means could not have been fully intelligent by the light of her aim. In these cases, one agent has to take into account the actions of another agent who is trying to stop her from succeeding; the problem is that what one *ought* to do if one is to succeed often depends on what one's opponent is going to do, and yet one is generally not in a position to know, in advance, what one's opponent is going to do. However, perhaps this response on behalf of the neo-Anscombean is merely an invitation for Shepherd and Carter to clarify their position, for they imply that success achieved through a reliable method that is difficult to execute also threatens the knowledge thesis. The present framework offers a way of putting this point that avoids conflation with the problematic sports cases, *viz.*, the intelligent *execution* of means does not require knowing that one will succeed.

27. Perhaps it would if, for example, he ended up pressing so hard on the page that his fine motor control deteriorated to the point of rendering his script virtually illegible. Alternatively, his execution might lack intelligence if what he does is not something he can reliably do (e.g., produce the maximum amount of force that his muscle fibres are physically capable of generating).

We must take care to remember that the man's goal—the goal which governs his selection of means—is to make ten carbon copies, not to make-ten-carbon-copies-in-one-shot. As proof, note that if the man learned afterwards that he had more time than he realized—so that he could have made additional attempts had he needed them—he might wish he had known earlier so that he could have avoided such emotional distress. If his goal had really been to make-ten-in-one-shot, this could not have made any difference to his anxiety. None of this is to deny that, insofar as the man is pressed for time, his only feasible option is to make all ten in one go, nor that this makes a difference to his practical reasoning. Indeed, that his selection of means is sensitive to his circumstances in this way does not undermine but rather attests to its intelligence.

In sum, there is conceptual space for a position which rejects the analysis Thompson and Small give of *Carbon Copier* while at the same time taking seriously the insight that intentional action is constitutively governed by anti-luck constraints. In fact, such a position makes better sense of the distinction between intentional and merely lucky success than the alternative, for the failure of Thompson and Small's analysis of *Carbon Copier* is symptomatic of a fundamental defect in their conception of lucky success. The root of this defect is an implicit commitment to (KKH):

(KKH) Necessarily, if S knows how to φ , then S knows (or is in a position to know) that she knows how to φ .

In the final section of the paper, I examine (KKH) more closely, and show that the prospects of motivating it and of defending it against counterexamples like the *Moonlight Sonata* case are dim. In so doing, I demonstrate that principles like (KKH) fail because they distort the explanatory role of knowledge-how.

3.

3.1. *Why (KKH)?*

I suspect that (KKH) is often implicitly taken for granted in part because it seems like a straightforward implication of the fact that knowledge-how is inherently *practicable*. Whatever knowledge how to φ consists in, it must be more than just a reliable capacity to φ . If one is completely unaware that one has the capacity to φ (under that description), for example, one does not know how to φ . Minimally, this suggests one cannot know how to φ while having *no idea* that one knows how to φ . On the other hand, merely having some idea that one might be able to φ (even if this idea turns out to be correct) does not suffice for knowing how to φ .

either—one must also be in some sense disposed to employ this ability in action and to represent oneself as having it in deliberation. For example, it is possible that, from this moment onward, I will always pick the winning lotto numbers any time I choose to play. It is even possible that this will be no mere coincidence, that some secret admirer of mine who works for the lottery corporation will rig the results so that I always win. But as I am not in any way disposed to rely on these remote possibilities, I do not count as knowing how to win the lottery even if they happen to obtain. Or consider a more mundane case. If I know myself to be a strong runner, I may believe I have a good chance of winning a footrace against my friends. Still, as I have no idea whether my friends are in fact strong runners, and as it is entirely outside of my control whether they run a good race or a poor one, I am in no position to represent my ability to run as fast as I can as the ability to reliably win footraces against my friends. Hence, I do not count as knowing how to best my friends in footraces, even if it happens that I would be the reliable winner.

If knowing how to φ involves being disposed to employ an ability in action and to represent oneself as having that ability in deliberation, then there are arguably grounds for holding that knowing how to φ entails believing that one knows how to φ . But (KKH) calls for *knowledge*, not mere belief, that one knows how. Perhaps this higher-order knowledge is to be secured by the relation between knowledge-how and counterfactual success. Consider that counterfactual success—one would succeed if one tried to φ —is necessary but insufficient for knowing how to φ . Nor does it suffice for knowing how that one has a true (or even justified and true) belief that one would succeed if one tried. This is because a subject who misunderstands her success does not know how to φ . The following example, adapted from Hawley (2003: 27), illustrates the claim. If Susie believes, on the basis of previous experience, that she has the ability to annoy her brother by smoking, when in fact it is not the smoking itself that annoys him but rather Susie's habit of tapping on the cigarette tin as she smokes, then Susie does not know how to annoy her brother. That said, Susie believes truly that she would succeed if she tried to annoy her brother, and her belief may even be justified. But Susie's false beliefs about how she would succeed arguably prevent her from being in a position to *know* that she would succeed if she tried. This may suggest that knowing how to φ entails *knowing* that one would succeed if one tried.²⁸ And perhaps this knowledge puts one in a position to know that one knows how to φ .²⁹

28. Hawley herself seems sympathetic to this suggestion (2003: 28).

29. Obviously, the view of the relation between knowledge-how and counterfactual success sketched in this paragraph is overly simplistic (Hawley 2003: 28ff. discusses a number of important complications that arise). But the argument fails regardless of how the details are filled in, since (as I shall presently argue) knowing how does not entail knowledge of counterfactual success.

However, these considerations offer little support for (KKH). To start, it is doubtful that knowing how to φ entails knowing (or even being in a position to know) that one would succeed if one tried. For it seems possible to construct cases in which all of the following are true: (i) one knows how to φ ; (ii) one has a true belief that one would succeed if one tried (or that one has the reliable ability to φ); and (iii) this belief falls short of knowledge. Suppose I am in toy gun country but happen to have picked up one of the only real guns. I have a true belief that I would succeed in shooting the target if I tried, but this belief falls short of knowledge, since I do not *know* that I am carrying a gun. But it would be hard to deny that I know how to shoot the target, or that, were I to succeed in doing so, my success would be a manifestation of knowledge-how.³⁰ By the same token, it would be hard to deny that I shoot the target intentionally—after all, my action of shooting the target is fully under my control.³¹

That knowledge-how is inherently practicable does not even establish the weaker claim knowing how to φ entails believing that one knows how to φ . One could know how to φ while merely *suspecting* that one knows how to φ . For example, I might suspect, but not outrightly believe, that I can prove a certain theorem by using a particular technique—this is the technique I would employ were I to find myself needing to prove that theorem, but I know better than to assume that it will work (anyone who has spent time proving theorems knows that such assumptions are often mistaken). Nevertheless, it is at least plausible that my suspicion might turn out to be correct, and that I will, finding myself in circumstances where I need to prove the theorem, exercise knowledge of how to prove it (i.e., by acting on that suspicion). If so, then I can count as knowing how to prove the theorem even though I do not outrightly believe that I know how to prove it. The thought that knowledge-how is inherently practicable does not

30. For similar Gettier-style examples, see Poston (2009), Cath (2015). Anscombe herself endorses this conclusion:

When knowledge or *opinion* are present concerning what is the case, and what can happen—say Z—if one does certain things, say ABC, then it is possible to have the intention of doing Z in doing ABC; and if the case is one of knowledge or if the *opinion* is correct, then doing or causing Z is an intentional action. (2000: 50, my emphasis)

31. This case may also be a counterexample to Beddor and Pavese's *Epistemic Theory of Control*, according to which S is in control of her φ -ing at t if and only if S knows that she is φ -ing at t , and she knows this in virtue of exercising her knowledge of how to φ (2021: 4). Beddor and Pavese address Gettier-style cases only briefly (2021: 5–6), but it seems to me plausible to interpret their theory as predicting that, as I do not *know* I am holding a gun, I cannot be in control of my action under such descriptions as 'firing a gun' and 'shooting the target.' This, I submit, is the wrong result. To appreciate why, it can help to imagine that I have been carrying around the gun for some months, and that, when I acquired it, I was not doing so with a view to shooting the target. That I was lucky a few months ago perhaps prevents me from *knowing* that I am holding a gun, but it does not undermine my control over the actions I perform with it today.

straightforwardly impose a necessary condition on knowing how to the effect that one outrightly believes one knows how.

3.2. *The Moonlight Sonata Case Revisited*

Let us return to our case of the pianist, Michelle, who aims to learn whether she retains possession of a certain skill, and who knows that she can find this out by observing the results of her attempt (i.e., that she retains the skill will be confirmed by success, undermined by failure).³² She can only know this if it is epistemically possible (by her lights) that she will end up exercising the skill in question, and it cannot be epistemically possible unless (KKH) is false. Michelle doubts that she knows how to play *Moonlight Sonata* on the grounds that she has neglected to practice for some time—this is something she knows tends to degrade her abilities. To successfully play the piece would show that, however surprising it may be, her lack of practice did not deteriorate her ability to the point that she no longer knows how to play the piece. Even if one wanted to insist that Michelle is “lucky” to have retained her ability despite not having practiced, that would not make her success a fluke.³³ Consequently, I think a (KKH)-sympathizer has little choice but to concede that Michelle’s successful performance demonstrates that she knows how to play *Moonlight Sonata* because it is an exercise of this knowledge-how.

The (KKH)-sympathizer’s best hope of defending (KKH) would thus be to show that the knowledge (KKH) ascribes to Michelle differs from the knowledge that she acquires in observing her success. For example, one could argue that Michelle *does* know that she knows how to play *Moonlight Sonata* to some degree—after all, neglecting to practice does not normally reduce one’s skill to the level of an untrained novice—but wants to find out *how well* she can play it. To do this, she makes an attempt at playing the piece and observes the results. She learns that she can play well enough (say) to entertain a friend, but not well enough to put on a public recital. This is new information for Michelle: even though she knew all along that she knows how to play *Moonlight Sonata*, she now has a much better sense of the extent of her expertise.

However, this reply simply redescribes the case: Michelle is not wondering *how well* she can play the piece, but whether she can play it in the first place. As long as she makes it through the piece, at tempo, without making any irrecoverable errors, even a “poor” performance with occasional wrong notes, imperfect

32. I use ‘skill’ and ‘know-how’ interchangeably throughout this section of the paper in the interest of readability.

33. In a slogan: there is a difference between being lucky to succeed and being lucky to know how.

dynamics, sloppy pedaling etc. would attest to her knowledge-how, dispelling her doubts.

Perhaps there is a weaker version of (KKH) that is compatible with the *Moonlight Sonata* case, and which still entails that the desperate copier's success is not intentional:

(KKH*) Necessarily, if S is exercising knowledge how to φ , then S knows (or is in a position to know) that she knows how to φ .

Provided one understands (KKH*) as attributing progressive knowledge, it seems to allow that Michelle plays the piece intentionally—thus manifests knowledge how to play it—without denying that she learns something—that she knows how to play the whole piece—at the conclusion of her performance. Consider that intentionally playing *Moonlight Sonata* is something that takes time, not something one does all at once. Likewise, exercising knowledge how to play it all the way through takes time. Perhaps it is enough to satisfy (KKH*) that, at each moment in her performance, Michelle knows that she knows how to do whatever is required of her at that moment for her to be playing the *Moonlight Sonata* all the way through. When she starts, for example, she knows that she knows how to play the first note, and then, as she continues, she knows that she knows how to play the second note, and so on. And at each in point in her performance, she is in a position to know that she knows how to play up to that point. By the time she reaches the end of the piece (but not before!) she will be in a position to know that she knows how to play the whole piece. And this is of course what she was trying to figure out in the first place. Hence, the *Moonlight Sonata* case looks to be compatible with (KKH*).³⁴

However, Michelle need not know, for instance, that she knows how to play the passage she is presently in the middle of playing. Indeed, she need not even know that she knows how to play the correct next note. We can imagine that, as Michelle makes to play a particular chord, suddenly something *feels wrong*. She braces herself for dissonance, but it never comes: though Michelle suspected she was about to make a mistake, no mistake was forthcoming. Thus, though there is a moment at which Michelle does not know that she knows how to do what is required of her at that moment for her to be playing *Moonlight Sonata*, her doubt is misplaced, and she carries on exercising her knowledge how to play it. So (KKH*) comes out false.

34. This application of (KKH*) may be especially appealing to neo-Anscombeans like Small and Thompson in that it looks to cohere with and indeed to parallel their conception of practical thought as a form of progressive judgement.

But perhaps this is too quick. An opponent might object that Michelle could be bracing herself for a mistake that never comes while knowing that she knows how to do whatever is required of her at that moment to be playing *Moonlight Sonata*. After all, to brace oneself for a forthcoming mistake is to *expect* something will happen that has not yet happened. So, even if Michelle is expecting that she is about to make a mistake, she would still know that she has not yet made one, and this is presumably because she knows that she knows how to do what is required of her *right now*, which is all that (KKH*) demands.

This response does not generalize. Consider a deaf pianist, who, in order to accomplish the same goal that Michelle is pursuing, must not only sit down at the piano and attempt to play *Moonlight Sonata*, but have a hearing friend listen to a recording of her performance and give her feedback. The deaf pianist will have to wait until after her performance has finished to find out whether her worry is well-placed. This suggests that whatever knowledge Michelle gains as she plays the piece—and which the deaf pianist acquires only later—is observational knowledge. But there is no reason to suppose that such a difference in observational knowledge entails a difference in whether one exercises knowledge-how; indeed, the deaf pianist may be playing just as skillfully as Michelle. More importantly, if it were a requirement on exercising knowledge-how that one know, on the basis of observation, that one is exercising knowledge-how, that would effectively amount to the rather implausible requirement that φ -ing intentionally entails that one has, not merely practical knowledge, but *observational* knowledge that one is φ -ing intentionally. All of this is to say that (KKH*) fares no better than (KKH).

(KKH)'s incompatibility with the *Moonlight Sonata* case owes to the principle's distortion of the explanatory role of *knowledge-how*. Knowledge-how, recall, is what explains the intelligence of an agent's selection and execution of means, thereby characterizing the non-flukiness of her success. But an adequate explanation of these things need not appeal to an agent's knowledge that she knows how, even if (as is often the case) she is in possession of this higher-order knowledge. In other words, such higher-order knowledge has nothing *as such* to do with the primary explanatory role served by *knowledge-how*. This is not to say that higher-order knowledge is never explanatorily relevant—in some cases, the intelligence of selection and execution of means, and the non-flukiness of success, cannot be explained without reference to higher-order knowledge—but that this is the exception rather than the rule. When higher-order knowledge *is* explanatorily relevant, there will be some special explanation for why. For example, suppose, in the course of teaching her student how to play *Moonlight Sonata*, a teacher demonstrates the piece. In order for the teacher to be *intentionally* teaching her student in giving this performance, she plausibly needs to have

selected her means—of demonstrating the piece—out of the knowledge that she knows how to play *Moonlight Sonata*. For part of what the teacher aims to do is to lead the student from a place of ignorance and incompetence to a place of knowledge and competence, and to attempt a demonstration will only serve this aim if the teacher in fact knows how to play the piece—if she does not know how, she may well end up worsening her student’s position. And if her selection of means is to be fully intelligent by the lights of her aim of teaching her student, the teacher cannot be leaving it up to Fortune whether she ends up helping or hindering her student’s progress. She must know that she knows how.³⁵

Before concluding, let me clarify the claim that the explanatory relevance of higher-order knowledge is the exception rather than the rule.³⁶ My claim is that these exceptional cases are *not* paradigmatic. They belong to the category of intentional action, but they do not have any privileged place within that category. I am thus rejecting the view which treats *merely lucky success* and *full-blown intentional action* as the endpoints of a spectrum, and which places Michelle’s performance somewhere between these two extremes.³⁷ My position is that Michelle’s performance no less perfectly exemplifies the category of intentional action than would the performance of a professional pianist who knows that she knows how to play *Moonlight Sonata*.³⁸ This is not to deny that the professional pianist’s knowledge that she knows how to play *Moonlight Sonata* might explain some things—for example, her acceptance of an invitation to give a recital, her offering to teach students how to play the piece, her confident attitude about her

35. I am not claiming that, in order to intentionally teach someone how to φ , one must be able to intentionally φ . My claim is just that one cannot, in φ -ing intentionally, count as intentionally teaching someone how to φ unless one knows that one knows how to φ . That said, I am inclined to think that intentional teaching is the paradigm case in which knowledge that one knows how is explanatorily relevant.

36. Thanks to an anonymous referee for pressing me on this point.

37. Small (2012: §3.1) appears to endorse this sort of view in connection with the idea that, as know-how comes in degrees, so, too, do intention and intentional action. But if the thought that know-how comes in degrees simply means that it may be intelligible to characterize one person as knowing better how to do something than another who also knows how, I do not see why this should make the latter’s success “less intentional” (or “luckier”) than the former’s. If the idea is rather that one can know *part* of a way of doing something, or that one person can be closer to knowing how than another (as perhaps Peter was with respect to checkmating his opponent than would have been a rank novice in his position), then I would agree that such a person would be luckier to succeed than someone who knows how. But it would be implausible to describe Michelle as merely knowing part of how to play *Moonlight Sonata*.

38. Of course, the professional pianist is presumably also a more skillful player of the piece than is Michelle. But we should distinguish the claim that the professional’s performance more perfectly exemplifies the category of intentional action than does Michelle’s from the claim that the professional puts on a more perfect performance of *Moonlight Sonata* than does Michelle. I am only denying the first claim.

performance. It is just to deny that it explains, in *any* respect, the non-luckiness of her success in performing the piece.

Let me conclude by noting that nothing I have said entails that there is no such thing as practical knowledge, nor that practical knowledge is reducible to general knowledge-how. There may indeed still be room for a substantial notion of practical knowledge, one which plays a foundational role in an adequate account of intentional action, although such a notion would have to be quite different from the one I have criticized. The question of exactly how practical knowledge ought to be conceived thus remains open as a topic for future inquiry.³⁹ And I expect this question will need answering if ever we are to understand intentional action, for I doubt the latter can be understood except through the idea of a non-accidentally true practical representation. What the focus on the explanatory role of know-how suggests is that making progress on this question requires that we refrain from assuming that the relevant sort of non-accidental-ity will have all of the same characteristics that traditional epistemology tends to associate with knowledge. In this connection, it may help to recall Anscombe's own complaint about her contemporaries to the effect that they were in the clutches of "an incorrigibly contemplative conception of knowledge" (2000: 57). Things have changed since then, but old habits die hard.

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39. I plan to contribute to this inquiry in future work.

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