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Regarding Joint Abilities and Joint Know-How: A Reply to Yuri Cath

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Yuri Cath (2020) has made a number of substantive and interesting comments in relation to my article, “Joint Abilities, Joint Know-How and Collective Knowledge” (2020), that warrant a sustained reply.¹

Firstly, I (more or less) assume in my article that the traditional threefold distinction between propositional knowledge, knowledge by acquaintance and knowing how should be maintained; reductions and, in particular, of knowing how to propositional knowledge (intellectualism) do not work.

Secondly, I argue that some distinction between knowing how and abilities should be maintained since one can have knowledge how without having an ability and one can have an ability without having knowledge how (in particular, one can have basic abilities without knowledge how). Evidently, the attempt to reduce knowledge how to abilities (abilitism i.e. Ryleanism) does not work.

On these two points Cath is apparently in agreement with me. He says: “In the end, I think we should join Miller in rejecting both abilitism and intellectualism” (15). Moreover, as Cath concedes, my assumptions and arguments in relation to this non-reductionist picture are not the central focus of my paper.

My central focus is on joint abilities and joint knowledge how. At any rate, in relation to intellectualism and abilitism in particular, for the most part I rehearse arguments made by others; arguments, I should concede, the details of which are better known to Cath than to me.

A Non-Reductionist Conception

To reiterate, in the opening section of my article we end up with a general non-reductionist picture in which the traditional threefold distinction between propositional knowledge, knowledge by acquaintance, and knowing how is maintained; and, in addition, a distinction between abilities and knowing how is maintained. When it comes to the details of this non-reductionist picture my view diverges somewhat from prevailing views. Specifically, on my account, knowledge how consists in possession of a learned technique (in the case of non-epistemic actions) or a learned intellectual procedure (in the case of epistemic actions)—such techniques and procedures being part of the means by which (e.g., the way in which) many non-basic actions are performed. Moreover, basic actions do not involve the use of learned techniques or learned intellectual procedures and, therefore, do not manifest knowledge how, although, of course, basic actions are exercises of abilities.

Before turning to joint abilities and joint know-how, let me address a number of points made by Cath in relation to my account of knowledge how. I note that my account of joint abilities and/or joint knowledge how may well survive in substance, even if my account of

¹ Cath, Yuri. 2020. “Seumas Miller on Knowing-How and Joint Abilities.” *Social Epistemology Review and Reply Collective* 9 (12): 14-21. Miller, Seumas. 2020. “Joint Abilities, Joint Know-How and Collective Knowledge.” *Social Epistemology* 34 (3): 197-212.

knowledge how does not survive Cath's criticisms of it. That said, I believe my account of knowledge how remains defensible and will seek to defend it.

First, on this general non-reductionist conception—with which Cath and I are seemingly in broad agreement—there is a task left undone, namely, to provide an account of knowing how that is consistent with, firstly, knowing how not being reducible to propositional knowledge or knowledge by acquaintance and, secondly, knowing how not simply being equated with ability. My account in terms of learned techniques and learned intellectual procedures meets both of these requirements although, of course, it may be objectionable on other grounds (including those provided by Cath). I also note that on my account, knowing how is, in effect, a necessary condition for possession of the ability to perform the non-basic actions in question.

Second, Cath misunderstands my main argument in relation to basic actions (and the corresponding basic abilities) perhaps because it was not clearly or otherwise adequately expressed. At any rate, let me try again. My essential idea is that knowledge how is not applicable to basic actions because it is conceptually superfluous; it has no role to play in relation to the performance of basic actions. My argument that basic abilities, e.g. raising one's arm, can exist in the absence of knowledge how is not supposed to wholly rely on the oddity of stating that one knows how to raise one's arm, knows how to move one's foot, etc. (although these cases do seem to me and others to be odd ways of speaking), but rather on the simplicity of such actions. That is, merely intentionally raising one's arm evidently wholly consists of an intention and a bodily movement (and, presumably, a causal relation between the intention and the bodily movement) and, since it is an action, it entails the existence of a basic ability which the action is an exercise of.

Here I assume that the ability is fully manifest in the action. For instance, in merely intentionally raising one's arm for no reason one is not intending to raise one's arm as part of a more complex action such as intentionally voting; voting is a non-basic action. My argument at this point is essentially this: ascribing knowledge how adds nothing to this conceptual breakdown of basic actions and corresponding basic abilities.² My appeal to the oddness of ascribing knowledge how to someone who makes basic intentional bodily movements is meant to be a symptom of the problem in need of explanation rather than the problem itself. This lack of a conceptual role for knowledge how in the case of basic actions raises the issue (mentioned above) of what knowledge how is, if not basic ability per se. Cath says that Ryleans, i.e. abilitists, "could conceivably maintain that knowing how is a special kind of ability" (15).

I agree and, indeed, I am not entirely unsympathetic to this suggestion.³ However, Cath (on behalf of Ryleans) has now opened up a *prima facie* distinction between abilities and knowledge how, and at the very least abilitists will have to spell out in what way knowledge

² Of course, one could by definitional fiat insist that knowledge how just is ability (and ability is knowledge how) and, therefore, that basic actions manifest knowledge how because they manifest abilities. However, this would be to beg the question.

³ Nor am I entirely unsympathetic to other notions of "executive or practical ways of knowing" mentioned by Cath (16). But again the devil is in the detail. On the other hand, I don't see how an appeal to entertaining a way of doing x under a practical mode of presentation (mentioned by Cath, 16) is helpful, at least if it insisted, as it must be by intellectualists, that this is a form of propositional knowledge.

how is a “special” ability rather than not an ability at all. My suggestion, by contrast, is that knowledge how is not an ability per se but is manifest in the exercise of *some* abilities (but not in the exercise of abilities that consist in basic actions) and, as such, is an aspect or feature of these (non-basic) abilities

Third, I am unpersuaded by the recourse to counterfactual circumstances to deal with cases where subjects apparently know how to x without having an ability to x. The idea relied on here is evidently that knowing how to x entails that one would reliably succeed in x-ing but only in relevant counterfactual circumstances⁴. On my view, as mentioned above, knowing how is a necessary but not a sufficient condition for ability (in the case of the relevant kinds of non-basic action). Accordingly, there are not going to be any circumstances in which the agent has the (non-basic) ability but not the knowledge how. However, there might be circumstances in which the agent has the knowledge how but not the ability. Yet in these circumstances the agent will not reliably succeed in x-ing since the agent does not have the ability to do so in these circumstances. So while there are circumstances in which the agent has knowledge how, but not ability, these are not circumstances in which the agents will reliably x.⁵ Accordingly, *this* recourse to counterfactual circumstances does not demonstrate that my view is incorrect, let alone that there is not a distinction to be made between abilities and knowledge how.

Ability and Know-How

Consider, for instance, the case of the amateur piano player who loses the ability to play simple tunes on the piano when the fingers of her left hand are cut off but, nevertheless, apparently continues to know how to play the piano. The response to this example is to accept that she does in fact lose the ability to play in her current physical circumstances (circumstances in which the fingers on her left hand have been cut off) but retains the ability to play in circumstances in which she has all ten of her fingers—circumstances which will never in fact obtain (let us reasonably assume). This is correct. Likewise, on this view, she no longer knows how to play the piano when the fingers on her left hand are cut off but knows how to play the piano in circumstances in which she has all ten fingers. However, the intuition remains, contrary to this view, that when the fingers of her left hand are cut off she, nevertheless, still knows how to play the piano, despite not having the ability to do so.

Perhaps we should get clearer on what the action with respect to which she has an ability or know how is. It is the ability to play simple tunes on the piano with her fingers (as opposed to her toes) and knowing how to play simple tunes on the piano with her fingers (as opposed

⁴ Hawley, Katherine. 2003. “Success and Knowledge How?” *American Philosophical Quarterly* 40 (1): 19-31.

⁵ Moreover, the above-described recourse to counterfactual circumstances is in danger of undermining the distinction between a person’s possession of an ability to perform a certain type of action and the possibility of a person performing the action type under certain circumstances. In some circumstances, e.g. the absence of a piano, the ability possessed by a person cannot be exercised. So in the counterfactual circumstances in which there is no piano, the piano player cannot play the piano. But, nevertheless, the piano-player still possesses the ability to play the piano in these circumstances in which there is no piano i.e. circumstances in which there is no possibility of her playing the piano.

to her toes). It is agreed that she does not have the ability to play the piano with her fingers in the circumstances in question, i.e. she has lost the fingers of her left hand. Does she, nevertheless, retain her knowledge how to play simple tunes on the piano with her fingers, if she no longer has the fingers on her left hand? Suppose that based on her prior knowledge of piano playing, she quickly adapts to her new situation and within a short time is again playing simple tunes on the piano, and doing so equally well, but now only using the fingers of her right hand.

What is the prior knowledge of piano playing in question? Is it merely propositional knowledge? Surely not. After all her playing relies in part on her prior piano-playing skill embodied in the fingers of her right hand, albeit these fingers now have to adapt to their new, somewhat different and more onerous role. Arguably, therefore, she never lost her knowledge how to play simple tunes on the piano using her fingers, although she did lose her ability to do so. The evidence that she did not lose her knowledge how to play simple tunes on the piano using her fingers consists in the relative ease with which she adapted to playing the same tunes using only the fingers of her right hand.

It might be replied to this that in playing the same tunes on the piano with her right hand she is playing the piano in a different way and thus, on my account of knowledge how, using a different technique. Therefore, she did in fact lose her knowledge how to play the piano or, more precisely, she lost her knowledge how to play the piano in the two handed way. However this reply does not vitiate my argument. For it remains the case that she used her prior knowledge how to play the piano to quickly adapt to her new situation; she relied on this prior knowledge how in order to successfully play the piano one-handed.

So what is going on here? As is the case with the actions themselves, the ways of performing the actions in question have different levels of descriptive specificity. Thus: she plays the piano using her fingers (as opposed to her toes); she plays the piano using the fingers of one hand only (as opposed to using the fingers of both hands); she plays the piano using the fingers of her right hand only (as opposed to using the fingers of her left hand only). Accordingly, knowledge how to play the piano has different levels of descriptive specificity, e.g. she knows how to play the piano using her fingers (relatively low level of specificity), she knows how to play the piano using only the fingers of her right hand (relatively high level of specificity). Thus our piano player retained her knowledge how to play the piano with her fingers when the fingers of her left hand were cut off and this prior knowledge how, to reiterate, explains how she could so quickly adapted to playing the piano using only the fingers of her right hand.

A final point on this issue. Notice that it remains the case that when the piano player loses the fingers of her left hand she loses the ability to play the piano; she has knowledge how to play the piano using her fingers but not the ability to play the piano. Nor does she have the ability to play the piano using her fingers at this point in time. However, it might be claimed that when she comes to have the knowledge how to play the piano using her right hand only, i.e. in the right-handed way, she also has the ability to play the piano using her right hand only. However, this use of the term ability smuggles in knowledge how; it is an ability to perform an action (playing the piano) *in a certain way* (using one hand only). That is, it is an ability the description of which includes the reference to the knowledge how component (so to speak) of that ability.

Examining Joint and Individual Abilities

Let me now turn to Cath's criticisms of my account of joint abilities. Cath focuses on two examples of mine. The car-pushing example which I use to illustrate the distinction between joint abilities and conjunctions of individual abilities, and the tango dancing example which I use *inter alia* to demonstrate that at least some joint abilities do not reduce to conjunctions of individual abilities. Cath asks whether or not I would endorse the view that joint abilities could be reduced to a package of interlocking individual abilities. However, Cath also argues that my tango dancing example fails to demonstrate that (at least some) joint abilities cannot be reduced to conjunctions of individual abilities. Let first consider the car pushing example.

A, B, C and D jointly push the car to the petrol station. Neither C nor D acting alone would be able to push the car to the petrol station, i.e. neither has the individual ability to do so. However, acting jointly C and D could push the car to the petrol station. Accordingly, C and D have the joint ability to push the car to the petrol station. By contrast, A and B are each possessed of the individual ability to push the car to the petrol station. Accordingly, if A and B were to jointly push the car to the petrol station this joint action would involve the exercise of a conjunction of individual abilities but not a joint ability.

Note that joint actions are actions directed to a collective end; an end each of the participants in a joint action has, and each has interdependently with the other participants. The collective end in this example is that the car reach the petrol station. C pushing the car cannot achieve this end, nor can D pushing the car achieve this end. Of course, if C pushes and D pushes the car will reach the petrol station. However, this might be the summation of two individual actions, i.e. C intentionally pushing the car and D intentionally pushing the car. It does not follow that C had the end of the car reaching the petrol station or that individual D had the end of the car reaching the petrol station. Moreover, C knows that if he pushed the car it would not reach the petrol station; so C does not have the individual end that the car reach the petrol station merely by means of C pushing the car; C knows that C's pushing alone will not even budge the car. Likewise for D. So C will only have as an end that the car reach the petrol station if D has this end (and similarly for D), i.e. their ends are interdependent and, further, C will only have this end if C believes D will push the car (having as an end that the car reach the service station) (and similarly for D) i.e. their actions are interdependent (internally, so to speak, as opposed to merely causally and externally).

So it is not a mere conjunction of actions, it is a joint action. Moreover, whereas a conjunction of their individual actions might (in theory at least, i.e. leaving aside the issue of coordination) have as a consequence that the car reaches the petrol station, this would not be an outcome that either had as an end, (whether that be a mere individual end or a collective (and, therefore, interdependent) end), i.e. the car reaching the petrol station would be an unintended consequence of the conjunction of their individual actions.

In light of the above, what am I to say in response to Cath's question about interlocking individual abilities? Let us first get clear on interlocking actions. Clearly the above-described conjunction of individual actions which do not constitute a joint action are not interlocking

in the sense of being directed to a collective end. On the other hand they ‘interlock’ causally in the sense that qua causal factors they jointly produce an unintended consequence. But this is not a sufficiently strong sense of interlocking.

What might count as interlocking actions in a sufficiently strong sense yet weaker than that involving a collective end would be if C and D in the above example both had the individual end of the car reaching the petrol station but these individual ends were not interdependent. However, this seems unlikely since C knows that he cannot push the car to the petrol on his own so he will not have this end unless D pushes the car. Likewise for D. On the other hand, C might have this end if he believes D will push the car, even if C does not believe D will push the car with this end; perhaps D just likes pushing cars for the fun of it.

In this latter scenario there is a one-way interlock, i.e. C’s action (and individual end) is dependent on D’s action but not vice-versa. Of course, if D pushes the car having as an individual end to cause the car to reach the petrol station but, likewise, does not care if C has this end just so long as C pushes the car, then there is a two way interlock of actions, i.e. there is interdependence of actions. However, there is not direct and strong interdependence of ends (strong collective ends), since each would have his individual end even if the other did not, just so long as the other performed the action of pushing the car. There is, however, indirect, weak interdependence of ends (weak collective ends). For if neither C nor D would push the car unless he thought it would realise the end of causing the car to reach the petrol station, and this is a matter of common knowledge between them, then C knows that he will only have the end of the car reaching the petrol station if D has this end and vice-versa for D.

Since neither C nor D can push the car to the petrol station acting on his own, both one-way and two-way interlocking actions (whether these latter involve strong or weak collective ends) involve the exercise of a joint ability.

Cath asks if I would accept this principle: “whenever two or more agents possess a joint ability to Φ their possession of that joint ability can be fully analysed in terms of a combined set of relevant individual abilities possessed by those agents to perform *other* distinct actions that constitute sub-actions involved in Φ -ing” (18). In our above example, C and D each have the individual ability to push on the car but not the ability make it move. Moreover, their individual actions are sub-actions of the joint action of pushing the car to the petrol station and the combination of these individual actions brings it about that the car reaches the petrol station. Neither the description of the individual ability of C to push on the car, nor the description of C’s individual action of pushing on the car, includes a reference to the end of the car reaching the petrol station since C does not have the individual ability to perform an individual action of pushing that has as its end the car reaching the petrol station (or even of the car moving).

What Cath might have in mind is are abilities to coordinate. Perhaps these are instances joint abilities that are reducible to interlocking individual abilities. In my article I canvas the possibility that abilities to coordinate might be conjunctions of individual abilities rather than joint abilities. However, I do not suggest that they are joint abilities which are reducible to conjunctions of individual abilities. Rather they are one thing or the other thing; but not

both. However, the issue of coordination is raised in the tango dancing example. Let me now turn to that example.

A and B are dancing the tango; a joint action. The collective end is that A and B stand in a certain relation, R, to one another; A has this end, B has this end and A having this end is interdependent with B having this end. Moreover, this is a strong collective end; indeed it is an end in-itself. A would cease to have this end if he believed B did not have it and vice-versa. Therefore, A would not have this end if he thought that B was merely going through the motions of performing her dance steps without having R as an end; likewise for B. This end that each has is not the individual end of A that A stand in some relation, (call it R1), to B or the individual end of B that B stand in some relation, (call it R2) to A. Why is R not R1 (or R2)? Firstly, A could have R1 without having R (and, likewise, B could have R2 without having R).

Consider, two boxers, A and B, in a boxing match both of whom are right handed and adopt the orthodox stance, i.e. each leads with his left hand punch while continually moving to the right of his opponent to avoid his opponent's right hand punch (the right hand punch being more dangerous). A has an end to stand in the relation, R1, to B. For his part, B also continually moves to the right of his opponent, A, to avoid A's right hand punch. B has as an end to stand in the relation, R2, to A. The consequence of A having the end, R1, and B having the end, R2, is that for much of the boxing match, and looked at from above, the movements of A and B, taken together, constitute circular movements in an anti-clockwise direction. However, this consequence while predictable is not one that either A and B is aiming at. Indeed, A would prefer that B *not* move to B's right in response to A's move to A's right since that would enable A to, firstly, evade B's left hand punch without exposing A to B's right-hand punch and, secondly and simultaneously, strike B with, for instance, a left hand body punch. Likewise B would prefer that A not move to A's right in response to B's move to A's right. Accordingly, that the two boxers move in a clockwise direction in this manner is not a manifestation of a joint ability, although this outcome is an unintended manifestation of a conjunction of individual abilities.

Let us now return to the tango and imagine that neither A nor B has as an end that they stand in the aesthetically pleasing dynamic relation, R, constitutive of the tango. Rather, each does not want to put a foot wrong (i.e. A has individual end, R1, and B has individual end, R2), while hoping the other will make a mistake (i.e. A hopes B does not achieve B's end, R2, and B hopes A does not achieve A's end, R1) and, therefore, be blamed by the audience for ruining the dance. In the event, each does not put a foot wrong (i.e. A achieves R1 and B achieves R2) and the audience views the dance as being a successful, if somewhat stilted, performance. However, neither A nor B had as an end that it be a successful performance; R was not an end of either A or B. Accordingly, their performance is not a manifestation of a joint ability rather it is an unintended manifestation of the conjunction of their individual abilities.