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Forthcoming in *Mind*

What makes an event an action rather than a mere happening? What makes us agents rather than non-agents? What does being in control amount to? And in virtue of what are our actions skilled?

These are among the deepest and hardest questions in the philosophy of action. They are also particularly timely, as the field is revisiting them both in connection with a study of intentional action and with a renewed interest in skilled action. In *The Shape of Agency*, Joshua Shepherd aims to offer a novel, and mostly original, perspective on these questions. My discussion will cover three crucial components of Shepherd's views: his theory of controlled behavior (§1), his view of intentional action (§2) and his view of skills (§3).

1. Control

While a lot of contemporary literature in action theory focuses on the difference between intentional action and non-intentional action, in chapter 1, Shepherd takes a step back and asks a more fundamental question: what is an action rather than a mere happening? On the basis of this incipit, a reader might reasonably expect a theory of agency. However, this expectation is soon frustrated since later (chapter 6) Shepherd declares to shy away from giving a novel account of agency. Far from attempting to provide one, Shepherd is merely aiming to offer a 'perspective' on agency and to discuss *some facets* of agency, without attempting a reductive account.

The leading idea is that any action, *qua* action rather than a mere happening, exhibits *some* level of control and that the capability for exercising some level of control is at least necessary for possessing agency. Building on some of his earlier work (cf. Shepherd 2014), in chapter 2-4 Shepherd develops a theory of control and control-exercise that combines a plan view of intentional action (cf. Brand 1986) with a modal account of control. Shepherd's conception of plans (pp. 8-12) is quite liberal: they are representations about how to perform an action that play a causal role in bringing about our actions. Indeed, according to Shepherd, plans come in a variety of representational formats and they are not necessarily propositional. The modal element essential to Shepherd's account of control is introduced *via* a normative gloss: we are told that some behavior is controlled if it succeeds in a set of counterfactual circumstances which ought to be *well-selected* by the theorist.

The resulting theory of control possession is stated as follows, in terms of plans and counterfactual success-rate:

Possession Control. J possesses control to degree DR with respect to some level of content approximation L for a plan-state P in circumstances C if and only if J's success-rate at reaching L across C is DR, C is well selected, and P plays a causal role in J's behavior in every member of C. (Shepherd 2021, p. 17)

As a preliminary remark, note that as stated this account of control entails that *if the theorist fails to well-select the relevant circumstances*, an agent J does not possess control (to any degree). Given that, on Shepherd's view, the capability for controlled actions *is* necessary for agency, it also entails that *if the theorist fails to well-select the relevant circumstances*, J is not an agent. But of course, whether or not J possesses control or is an agent should not depend on whether the theorist happens to select a set of circumstances well! Something has gone wrong. What Shepherd should have proposed *instead* is rather:

Possession Control (FIXED): J possesses control to degree DR with respect to some level of content approximation L for a plan-state P *and with respect to some well-selected set of circumstances* C if and only if J's success-rate at reaching L across C is DR, and P plays a causal role in J's behavior in every member of C.

It does make all the difference whether the well-selectedness qualification appears to the left or the right of the 'if and only if': if the circumstances are not well-selected, **Possession Control** (**FIXED**) does *not* entail that J is thereby not an agent. **Possession Control** (**FIXED**) tells us only that whether J is an agent can be decided only with respect to a well-selected set of circumstances. This more plausible account of possession control seems to fit better with Shepherd's later discussion (pp. 19-20) of what makes a selection of a set of circumstances fruitful and well-selected and so will be assumed in what follows.

With these preliminary remarks in play, I want to discuss two worries about the account of control that Shepherd defends in these chapters—worries that might be fatal when combined.

The first worry is that the appeal to plans in elucidating controlled behavior is potentially regress-inducing. After all, is not planning itself an action? Shepherd's theory of agency says that actions ought to exhibit a sufficient level of control. So in his view, planning, qua action, ought to require a sufficient degree of control, which in turn, given Possession Control (FIXED), requires more planning. Would not this planning require, qua action, a sufficient level of control, and if so, would not it require more planning? And so on. A vicious regress has started. This engenders a dilemma: either Shepherd's theory of control does not apply to planning; if so, it is incomplete. Alternatively, Shepherd's theory of control does apply to planning but it induces an infinite regress. Neither horn is desirable. Of course, saying that planning is not (or is not always) an action would be a way out of the dilemma. But this strikes me as an undesirable move and in any case not something to which a theory specifically tailored to offer a perspective on the intuitive difference between actions and mere happenings should be committed.

So much for the first worry. The second worry is that the upshot of understanding control in terms of modal success and (a thin notion of) planning is that Shepherd's view predicts control where there is none. Consider the following scenario: Alvin has to buy a ticket in a lottery organized by his father in law, so as not to displease him. But the price of the huge lottery is so

undesirable that Alvin does not want to win it. Aware that the odds are too low, he is confident that he will lose the lottery. From what Shepherd tells us about plans (pp. 8-13, pp. 50-2, pp. 114-5), Alvin does have a plan to lose the lottery by buying a lottery ticket, for he has a representation that plays a causal role in buying a losing ticket. Moreover, given that the odds of winning are so slim, in the great majority of the counterfactual circumstances, Alvin will lose the lottery. So both the plan condition and the modal condition are satisfied. Thus, Shepherd's account predicts that Alvin's losing the lottery is controlled. And yet, if we have *any* strong intuition about control, it is precisely that (fair) lottery outcomes cannot be under our control.

Nothing here depends on the choice of the (lottery) case. The problem is general: for any event that is incredibly likely to happen, *provided that the agent desires that event to happen in a certain way and their desire plays a causal role in the happening*, Shepherd's theory predicts that the event is (sufficiently) under the agent's control. But this is incorrect. As the lottery example illustrates, mere happenings (i.e., non-controlled behavior) can *both* be caused by our desires and have a robust modal profile.

The culprit is surely Shepherd's thin account of control in terms of counterfactual success. Shepherd addresses this very question where he discusses cases of 'easy success' (chapter 3.41) and at pp. 59-60 (where he discusses Mele and Moser (1994:62)'s dice roll case which is similar in some respects to my lottery case). Here, Shepherd suggests that he is happy to bite the bullet. It might be replied that some bullets are simply too deadly to bite. Good reasons ought to be given to even take the risk. What reasons does Shepherd give? At p. 60, he asks "what reliable control amounts to if it is not simply a high propensity to succeed". Immediately after, Shepherd explains that one cannot require more than reliability for control. After all, Nash the reliable shooter is sufficiently in control of shooting even if sometimes he misses. Granted. Nobody should impose *perfect reliability* as a requirement on control. But it does not follow that we should endorse Shepherd's theory of control despite the obvious counterexamples; far from it. The lesson to draw from all of this is that an account of control ought to entail reliable success without entailing perfect reliability, while at the same time explaining the (strong!) intuition that we have no control over a lottery result (over and above the act of buying a ticket).

Could Shepherd have provided a more robust account of control, without abandoning the core of his dispositional account in terms of plans and counterfactual success? One option would be to emphasize the *agential* nature of planning. If only actions can be planned, and if control requires planning, a lottery loss cannot count as controlled behavior since it cannot involve planning. And yet this solution is not available to Shepherd, since embracing a more explicitly agential view of planning will only exacerbate the regress worry I have started with.

2. Intentional action

Let me move to discuss Shepherd's account of intentional action, developed in Chapters 5 and 6. According to Shepherd, intentional action requires sufficient control and accordance with a good plan (section 5.4). However, it does not require knowledge or even belief. In this Shepherd (pp. 70-81) graciously engages with some of my work (Pavese 2018). Here, I have argued that

controlled action requires sufficiently modally robust belief and on this basis, argued that controlled action requires knowledge of the means as well as practical knowledge of what one is doing when doing it (cf. also Pavese 2021). In this sense, I embrace an 'epistemic' theory of control, as I understand control in terms of knowledge. This epistemic theory of control was proposed by me in an argument for intellectualism about knowledge-how, on the plausible assumption (which Shepherd is happy to accept (p. 70)) that intentional action requires knowledge-how. The epistemic theory of control has a lot of virtues. One virtue is that it delivers the right result in lottery cases (as that discussed in §2): since one cannot know, in a fair lottery, that one is going to lose (e.g., Williamson 2000, Hawthorne 2004), I correctly predict that lottery losses are not within our control.

Shepherd thinks instead that epistemic theories of control, intentionality, and knowledge-how are not plausible, for two main reasons. The first reason is that Shepherd thinks that since intentional action or knowledge-how do not require a belief, a fortiori they do not require knowledge. The first putative counterexample Shepherd (p. 71) gives to a belief requirement on intentional action is Mele's (1992, 147) case of somebody hearing a knock at one's office door and answering the knock. Mele argued that in this case one does not necessarily form a belief about answering the knock, though intending to answer it. Notice, however, that this is a counterexample to a belief requirement only if weak cognitivism about intentions (the view that intentions only require beliefs of sort) is false. But while one might have reservations about strong cognitivism (the view that intentions consist *entirely* in beliefs of sort, cf. Marušić & Schwenkler 2018), weak cognitivism is much less controversial and Shepherd is not entitled to assuming its falsity in this context. Indeed, if one's intention to answer the knock on the door involves the belief that one will, or is likely to, answer the knock on the door (as weak cognitivism would have it), Mele's example is not at all a counterexample to a belief requirement on intentional action. The other alleged counterexample (p. 71) to a doxastic requirement on intentional action is that of somebody who does not believe he can clench his fist but can do it, intuitively, intentionally (cf. Setiya 2012). Note that this counterexample succeeds only if one assumes that only full beliefs can amount to knowledge. Plausibly though degrees of belief can amount to knowledge too (probabilistic knowledge, to be exact, cf. Pavese 2020). So it seems to me that both of Shepherd's counterexamples to a doxastic requirement on intentional action fail.

Shepherd's discussion in Chapter 5 also attempts to undermine one of the main motivations I gave for a belief requirement on knowledge-how—i.e., the observation that skill and knowledge-how can be improved by verbal feedback and that belief revision seems to provide a helpful model for understanding how verbal feedback can improve one's knowledge-how (Pavese 2018). Against this point, Shepherd objects that not every skill improves through verbal feedback:

When a young Borg spends hours volleying a tennis ball to himself off of a garage door, he seems to be building his base of abilities to intentionally hit the ball in various ways. But there is no verbal feedback offered. (Shepherd 2021, p. 73)

This discussion misses the point. The point has *never* been that the only way of improving a skill is through verbal feedback. Rather, the point is that any skill that is worth the name *can* (= is susceptible to) improve through verbal feedback. So the real question is *not* whether the only way for young Borg to improve is from verbal feedback (obviously it is not!); the real question is whether young Borg *could* have improved at tennis if he had also taken some lessons.

When it comes to answering *this* question, Shepherd's discussion would have benefited from being more informed by the psychological literature on evolution and the development of skills. This literature strongly suggests a positive answer. In evolutionary psychology, it is a given that the teaching of general and causal truths enhances the acquisition and transmissibility of pretty much any skill that deserves the name. For example, Morgan *et al.* (2015) argue that the teaching of general concepts such as that of platform edge contributes to the development and transmissibility of Oldowan stone knapping techniques. The same is true for the studies that have been done on skill acquisition in developmental psychology. The impact of verbal feedback has been shown to significantly affect the acquisition of wide ranging kinds of skills, from basic motor skills (e.g., Sullivan *et al.* 2008; Al-Saud *et al.* 2017), to more complex sport skills such as swimming and tennis (cf. Zatoń & Szczepan 2014, Hebert & Landin 1994), yoga skills and manual therapy skills (Chang *et al.* 2020), surgical skills (cf. Porte *et al.* 2007; Flinn *et al.* 2016), and musical skills (Duke & Henninger 1998), etc. Given the massive empirical evidence at our disposal, one would have wanted from Shepherd some evidence to back up his claim that some skills cannot be improved through verbal feedback.

Shepherd's second line of argument (pp.75-81) against an epistemic theory of control and intentional action is that intentional action cannot require knowledge, since it does not even require true beliefs. According to Shepherd, plans do not need to be true or accurate. He even goes on and (p. 81, also fn. 8) implies that knowledge also is not required for plans, since in 'systematic' Gettier cases, where subjects have true, justified beliefs that do not amount to knowledge, agents might nonetheless act intentionally.

Here Shepherd's discussion could have engaged more with the examples given in the literature that show that true beliefs and knowledge are indeed required for both knowledge-how and intentional action. Consider, for just one example, Susie who is reliable at annoying Joe, not because, as she believes, he is annoyed by her smoking but just because he is annoyed by her tapping on the packet, which she always does when she smokes. She does not intentionally annoys Joe, despite having a plan, because her plan involves a false belief (Hawley 2003). Moreover, is it really true that in Gettier cases, agents might nonetheless act intentionally on their Gettiered belief? Evidence to the contrary claim abounds. Consider the following variant of Chisholm's 'sheep in the field' case:

Deer Hunting. Artemis, the goddess of the hunt, spies what appears to be a deer. She expertly notches her bow, aims, and releases her arrow. It turns out that she was aiming at a lifesize papier mâché statue of a deer—one that had been constructed so artfully that it

would fool even the most discerning eye. But, as luck would have it, a deer was standing directly behind the cervine statue. Artemis' arrow passes directly through the papier mâché sculpture and into the hapless deer. (Beddor and Pavese 2021, p. 5)

Artemis successfully shot a deer. But she did not do so intentionally. An epistemic theory of control and intentional action delivers the correct verdict. Artemis' action is not under her control since she does not *know* that she is shooting a deer (for more examples, see Pavese 2021). Indeed, in some recent experimental studies, Pavese *et al.* (manuscript) found that in a variety of cases involving epistemic luck (i.e., Gettier's cases, lottery cases, Russell's broken clock case, and Dharmottara's desert mirage case), people's inclination to ascribe both intentional action and knowledge-how is *severely* undermined. Even intuitions side with an epistemic theory of intentional action.

3. Skills

In chapter 7, Shepherd develops an account of skill. According to Shepherd, one is skilled at a domain task, just in case one can exercise sufficient control over that domain, relative to sufficiently good plans:

SKILL: Skill at some domain D, for an agent J, consists in sufficiently high success rates for J according to D's standards for success, where J's successes occur in virtue of J's facility at plan construction and J's control over behavior. (Shepherd 2021, p. 125)

Just Shepherd's account of control, this account of skill faces an immediate regress challenge: is not the facility to form plans *itself* a skill? If so, given SKILL, would not it require a further facility to form plans—i.e., the facility to form plans to form plans? Ironically, Shepherd's anti-intellectualist view of skill is exposed to a regress threat similar to Ryle's regress challenge against the intellectualist.

Thus, not much is gained from dropping the knowledge component of skills. Indeed, something arguably is lost. A distinctive feature of skilled agents is their ability to adjust to a variety of novel situations. Indeed, skilled agents' capacity for novel behavior is exactly what distinguishes skilled agents from highly reliable automata. As current work in cognitive psychology suggests, this feature of skills turns out extremely difficult to explain without appealing to knowledge. The Novel Tool Test (cf. Goldenberg 2013) studies how subjects who are expert in performing a task by using a certain tool (e.g., to unscrew a screw using a screwdriver or eating a yogurt with a spoon) can succeed at performing the same sort of task with a novel tool (e.g., unscrew a screw using a coin or a blade instead of a screwdriver; eating a yogurt using a fork). According to the most prominent theories, subjects who pass the Novel Tool Test do so by generalizing from their knowledge of general causal-functional properties of familiar tools. In this way, one might, e.g., come to the conclusion that any object providing a blade with the same properties as the screwdriver might replace the screwdriver, and therefore, if

necessary, one can also unscrew a screw with a coin or a knife. This sort of productive reasoning is conducive to finding new solutions in new situations. But as cognitive psychologists are well aware, the capacity to engage in this sort of reasoning is rooted in the agent's functional knowledge of tools and their functions. On the basis of these findings, it is dubious that a knowledge-deprived agent would be able to exercise their skill in a variety of different circumstances. So if the capacity for novel behavior is an essential feature of skills, knowledge ought to play a constitutive role to play in skill.

Now, very briefly at pp. 164-5, Shepherd seems to concede that knowledge is important for agentive excellence for it provides greater flexibility in unusual circumstances. And yet, Shepherd wants to deny that knowledge plays a *constitutive* role in guiding skillful behavior. Because of this, he is led to deny *the* distinctive feature of skilled agents. Moreover, by failing to recognize the constitutive role that knowledge plays in guiding skillful behavior, and by adopting a 'thoroughly architectural' approach (p. 3), Shepherd simply forgos an adequate explanation of the capacity for novel behavior. For while his dispositional/modal explication of skill might be able to *predict* such capacity (by requiring that the counterfactual circumstances in which one's success rate is measured include novel circumstances), it is doomed to fail at *explaining* it, since his account abstracts from the constitutive features of one's skill that ground one's counterfactual success.

4. Conclusion

At points, the book would have benefited from engaging more with the relevant empirical literature. At others, discussions of alternative views (such as the gradability discussion at pp. 133-7) could have been more charitable.

On the whole, it is an engaging book, with lots of interesting examples and inspiring anecdotes, one which is not afraid to tackle the most fundamental questions in the philosophy of action and which outlines a mostly original theory of controlled behavior, of intentional and skilled action which deserves to be discussed in its own terms. I cannot say I am ultimately convinced by the shape Shepherd has given to agency. But there is a lot to learn from this attempt.*

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