

Is the mental more automatic than the bodily? On an apparent asymmetry between bodily and mental agency

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Some philosophers consider mental and bodily agency to differ in both nature and scope. This is because most mental (as opposed to bodily) processes are said to be automatic and ballistic: they arise spontaneously and run to completion without the agent's direct control.¹ Accordingly, while bodily action is *direct* because we can directly try to produce bodily behaviour (e.g. we can try to walk to the supermarket), mental action is merely *indirect* because we can only indirectly "try to bring it about" that we produce mental outcomes (e.g. we can only try that we bring it about that we intend to go to the supermarket). Thus, top-down control over mental processes works *offline* (agents can only 'set the stage' for relevant mental processes to arise) whereas top-down bodily control can work *online*.

A key upshot of this 'asymmetry view' is that there is a capacity to intentionally exert direct, top-down control and guidance over bodily processes, whereas there is no such capacity for the mental realm. I argue here that this is false, not because we do have such direct top-down control capacities for mental processes, but rather because we lack direct top-down capacities *also* in the physical realm.

We can see that agentic control over mental and bodily processes is indirect by looking at the phenomenon of effort. The distinction between controlled and automatic processes is often drawn by portraying controlled processes as effortful and automatic processes as effortless (e.g. Evans, 2010). But what is effort?

According to the popular "strength model" (Hagger et al. 2010), we experience mental effort after using a scarce and depletable cognitive resource. Effort's function is to steer us away from critical depletion. But difficulties in identifying said resource, and methodology and replication problems plaguing "ego-depletion" studies (Friese et al. 2018), highlight the need for alternative approaches. An increasingly influential alternative model explains effort as the experiential counterpart of 'subpersonal' calculations of cognitive control's expected costs. More generally, the model explains cognitive control allocation via subpersonal routines that calculate the "expected value of control" [EVC] (Shenhav et al. 2013). EVC calculations produce an overall cost-benefit assessment of control's expected value by aggregating information about the agent's goals, as well as the rewards gained and the cognitive costs incurred in previous type-similar situations. Agents register this assessment via metacognitive feelings like mental effort.

EVC models account for mental agency's indirectness: subpersonal calculations, not agents, directly determine the direction and amount of mental effort expenditure. Now, the asymmetry account suggests that there should be noticeable differences between the mechanisms subserving mental effort (activated e.g. while intentionally trying to remember something hard to retrieve) and those subserving bodily effort (activated e.g. when intentionally lifting a heavy weight). But they largely coincide: motivation and reward for both motor and cognitive effortful tasks are processed by the same striatal mechanism (Chong et al., 2017; Schmidt et al. 2012), and the same cortical region (dorsal anterior cingulate) plays a key role in determining both mental and physical effort exertion (Botvinick & Braver, 2015).

¹ Proponents include Strawson (2003) and Mele (2009). For a distinction between 'automatic' and 'ballistic', see Mandelbaum (2015).

This suggests that effort, both physical and mental, is mediated by subpersonal calculations of control's costs and benefits, like those modeled by EVC theory. Which points to an underlying analogy between bodily and mental effort that challenges the asymmetry account. This ultimately suggests that top-down agency is mainly offline and indirect both in the bodily and the mental realms. Top-down agency mostly consists in altering EVC's inputs so that effort is allocated to the execution of processes we as agents care about.

What consequences does this have for our conception of automaticity? Researchers have recently argued that automatic processes can be intelligent, and thus not antithetical to agentic control (e.g. Brownstein & Madva, 2012; Fridland, 2014). If the indirect view of agency defended here is right, then most online bodily and mental agentic control works by means of automatic error-detection and -correction mechanisms. I argue that this automatic control functions by means of metacognitive feelings (like e.g. the feelings of effort, fluency, and error) and provide one bodily case (skillful action) and one mental case (recollection) as examples of how this feeling-based, automatic online automatic control would work.

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