Agency and Embodiment: Groups, Human–Machine Interactions, and Virtual Realities

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This paper develops a taxonomy of kinds of actions that can be seen in group agency, human–machine interactions, and virtual realities. These kinds of actions are special in that they are not embodied in the ordinary sense. I begin by analysing the notion of embodiment into three separate assumptions that together comprise what I call the Embodiment View. Although this view may find support in paradigmatic cases of agency, I suggest that each of its assumptions can be relaxed. With each assumption that is given up, a different kind of disembodied action becomes available. The taxonomy gives a systematic overview and suggests that disembodied actions have the same theoretical relevance as the actions of any ordinarily embodied human.[1]

1 Introduction

Some believe that groups can be agents. In opposition to this view, others argue that groups lack something that appears necessary for agency: a body.[2] Without a body, a group cannot be an agent because it has to rely on others to act on its behalf. Whether or not groups can be agents has important implications because agency is seen as a precondition for moral responsibility, for example.

What makes this objection against group agency particularly interesting is that the issue rests on a more general question: to be an agent of an action, in what sense does someone need to have a body? This is a question for theories of action. Many theories of action — at least at a first glance —seem to analyse actions in terms of bodily movements (e.g. Davidson, 1971, 49; Haddock, 2005, 164). These theories must be examined with respect to the precise sense of embodiment they presuppose. If they require agents to be embodied in a strict sense that I explain below, they risk unduly restricting their scope of application. Such theories would exclude not only group agency, but several other forms of agency such as agency in a virtual reality or by individuals augmented by robotics or artificial intelligence, for example the action of controlling a drone via a brain–machine interface. The view that agency must be embodied is not implausible. Several authors assign an essential, indispensable, or otherwise special role to the natural human body (cf. Adams and Aizawa, 2008). In contrast, some people hold the view that these new technologies are extensions of our

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[2] A *locus classicus* is Velasquez (1983, 6). For similar arguments see Kelsen (1949, 79), Margolis (1974, 254), May (1987, 113), Tuomela (1989, 471), Copp (1979, 178), Kutz (2000, 104), Ludwig (2007, 376), and Ylikoski (2012, 32). Proponents of group agency recognize this problem as well (Pettit, 2007, 189).

selves. They contend that our agency is malleable and that 'we human individuals, just are these shifting coalitions of tools' (Clark, 2003, 137).

In this paper I argue that agency does not require embodiment in the strict sense. Therefore, embodiment cannot be used to rule out group agency. Instead, actions can be embodied in different ways as exemplified by group agency, human–machine interactions, and virtual realities. I examine the literature to collect different assumptions about embodiment. The full collection of these assumptions characterizes embodiment in its strict sense, what I call the Embodiment View.[3] It consists of the following three assumptions. First, an agent needs to perform an action herself. If a button is pressed, it must be the agent who does the pressing. Second, the performance of an action requires a bodily movement. There cannot be an overt action without a body that moves. Third, a bodily movement involves a movement of the agent's biological body. This last assumption rules out that vicarious movements count as the agent's own movements.

The Embodiment View seems easily refuted in the light of mental actions or omissions. That, however, would still leave so-called overt actions, which essentially involve bodily movements and are neither only mental actions nor omissions. I show that the Embodiment View is false even for overt actions. Yet, instead of rejecting the Embodiment View *tout court*, I suggest that it can help us to structure the different kinds of disembodied actions. As each assumption of the Embodiment View is relaxed, the set of things that we consider to be actions broadens to include actions that are not embodied in a strict sense, such as proxy actions, extended actions, and extended movements. First, this investigation yields a systematic taxonomy of disembodied actions. Second, the rejection of the Embodiment View even for overt actions suggests that the agents of such disembodied actions can be real agents just as any ordinarily embodied human.[4]

The paper is structured as follows. After saying more about the notion of agency in Section 2, I present the Embodiment View in Section 3. I then argue in Section 4 that the Embodiment View in some cases contradicts basic assumptions about agency. Since the Embodiment View consists of three assumptions, I investigate in Section 5 how any one of the assumptions can be given up to escape the contradiction. This gives us the taxonomy of disembodied actions.

2 Agency over Actions

I make only minimal assumptions about agency in order to investigate the common stance that different theories of action take towards embodiment and not rule out certain theories of action from the beginning. My focus is on agency as a relation between an agent a and her action x — which contrasts with 'being an agent', a predicate. This relational notion of agency is interesting for two reasons. First, agency in this sense is often assumed to be necessary for moral responsibility. You are responsible only for the things over which you have agency, that is, for your own actions and omissions. Second, agency over actions (the relation) seems necessary for

[3] The sense of embodiment, which is the topic of this paper, is different from that of cognitive science (that cognitive functions are not restricted to the brain) and robotics (that design of robotic functions exploit body-world interaction loops).

[4] This only defends the *possibility* of group agency. Further requirements for agency, most importantly that of having a mind, are left unaffected by rejecting embodiment as a requirement for agency.

agency *simpliciter* (the predicate), that is, for being a person who has rights and duties.

A minimal way of characterizing what different theories of action have in common is describing the agency relation '*a* is an agent of *x*' formally. This agency relation has two formal properties that will be relevant for the present argument. First, there must be at least one agent for each action. I call this first property *Closure* because, figuratively speaking, it says that the realm of agency is closed in the sense that there are no freely dangling actions that have no agent associated with it. It should be noted that this assumption is compatible with joint or collective actions that have more than one agent. Second, only *Intentional Systems* stand in the agency relation. There is no action without mental states. Rather, each agent has beliefs, desires, intentions, or some other kind of mental state. I leave open what it is to believe, desire, or intend something and I also make no assumption about the kind of mental state that is involved in acting, or about the way in which it is involved.

> *Minimal Characterization of Agency*.
> The relation *a* is an agent of *x* holds between individuals *a* and actions *x*, such that
>
> **Closure**: for each action *x* there is at least one agent *a*, and
> **Intentional Systems**: each *a* has mental states.

The Closure assumption is plausible. It seems to be a conceptual truth that there cannot be an action without an agent. Likewise, the Intentional Systems assumption is plausible as well. In one way or another, actions (intentional or unintentional) must be related to an agent's mental states. No action can come from an agent who does not have any mental states at all. Of course, the two assumptions provide only a terse characterization of agency and they fall far short of a conceptual analysis. Yet, between different competing analyses of agency, these two assumptions form common theoretical ground.

3 The Embodiment View

Take a moment to conjure up examples of agency. The actions that come to mind, such as pouring milk into your coffee, or shutting the door, are likely to involve bodily movements. One might be tempted to think that performing a bodily movement is necessary for being an agent of an action. Yet there are cases that disprove this as a general claim. There are *mental actions*, such as making a decision, adding numbers, or imagining a tree, that involve changes in the agent's body but not bodily movements, that is, there are no changes in the macroscopic spatial region that the body occupies. There are also *omissions*, such as not helping a friend or not attending a meeting. Most omissions do not involve bodily movements (Moore, 2010). But virtually everyone believes that there is a distinct third kind of actions in addition to mental actions and omissions, namely, so-called *overt actions*. In contrast to mental actions and omissions, overt actions are taken to essentially involve the movement of a body (Taylor, 1966, 61; Mele, 2003, 5). What makes an action an overt action is precisely that it involves the movement of one's body. It is this specific kind of action that seems to fit to the Embodiment View.

When analysing a concept, we often begin by examining paradigmatic instances of the *analysandum*, that is, of the thing we want to analyse. The paradigmatic instances of agency are actions that usually involve bodily movements. Although there are only few arguments for this claim, many passages in the literature

can be understood as taking this observation to suggest that agency is embodied. In what follows, I consider some of these passages to investigate how agency and embodiment are related. The resulting view might be overly strong, but it will serve the purpose of forming the basis of the taxonomy of disembodied actions. To be clear, I do not aim at giving a charitable interpretation of the literature. Rather, my point is that the authors below can be — and in some cases have been — understood as claiming that agency requires embodiment.

A prominent statement, which many take to express the view that agency is necessarily embodied, is found in Davidson (1971, 49): '[A]ll primitive actions are bodily movements.' This is an identity claim. Davidson contends not only that actions *require* movements, but that actions are *identical* to movements. Moreover, Davidson states that the movements to which actions are identical are movements *of the body*. Smith (2012, 396) defends the same idea.[5]

Although it is far from clear that Davidson would subscribe to this view, some understand his expression 'bodily movement' to mean the movement of not more than one human body. Hence, Ludwig (2007, 376), for example, deploys Davidson's quote in an argument against group agency.

Among the theories of agency that identify actions with movements of the human body, Davidson's is but one view on offer. A competing identity theory distinguishes between different kinds of bodily movements and contends that actions are identical to one particular kind of bodily movement. For example, Haddock (2005, 164) writes: '[A] physical action is a bodily movement, and *physical action* is a determinate of the determinable *bodily movement*.'

This particular brand of identity theory, called the disjunctive theory, is defended by Haddock (2005), McDowell (1996, 90), and Melden (1956, 523). The idea is that there are on the one hand *mere movements*, which are *not* actions, and on the other hand *agential movements*, which *are* actions. An individual performs an action if and only if she performs a bodily movement of this particular second kind.

Although these authors do not explicitly define what they mean by 'bodily' in 'bodily movement', the expression could be taken to mean that an agent's body has a particular kind of make-up, for example, that it is biological. Some authors state this explicitly.

> [A]n agent is an entity that has a body and can make that body move in various ways. ... [O]nly creatures which have a biological origin are self-movers (Steward, 2012, 16–18).

> Persons have (biological) bodies and perform bodily actions in contrast to collectives. ... [A] collective is not a self-sufficient agent (e.g., in the sense of being capable of performing basic bodily actions) (Tuomela, 1989, 471).

But the expression 'bodily' could be understood in at least two different ways. A body could be individuated narrowly or broadly. On a *narrow individuation* 'body' is understood as one's biological make-up. In contrast, on a *broad individuation*, an object counts as a body independently of its make-up and whatever object is used for bodily functions is a body. I will return to this functional view of the body later. Many philosophers subscribe to the functional individuation of the body. As we will see, doing so is one way to avoid the problem that I am going to describe.

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[5] Davidson (1971) adds that 'bodily movement' should be interpreted 'generously' such that 'such "movements" as standing fast, and mental acts like deciding and computing' should also count in order not to rule out mental actions or omissions (cf. Smith 2012, 389).

But for the moment, we must not dismiss the view that the body is individuated narrowly. Many people deny that 'body' should be understood functionally. Some deny this because they reject the functionalist proposal at large and see agency instead as a restricted and distinctively human phenomenon.[6] Others reject the particular kind of functionalism that underlies the broad individuation.[7] Moreover, as we will see later, while individuating the body broadly is a good response to some cases, other cases require a different response. In these cases, there is a place for individuating a body narrowly.

Between the passages above, we can see some overarching themes that come down to several key claims. Whether or not the authors have in fact made these claims or not, claims to this effect might be attributed to them and have been relied on to promote arguments against group agency (cf. Tuomela 1989, 471; Copp 1979, 178; Kutz 2000, 104; Ludwig 2007, 376; Ylikoski 2012, 32). I use these claims to define the Embodiment View as the following three necessary conditions.

> *Embodiment View*.
> **E1.** *a* is an agent of *x* only if *a* performs *x*.
> **E2.** *a* performs *x* only if *a*'s body moves.
> **E3.** *a*'s body is individuated narrowly (as, for example, the biological body).

The first assumption of the Embodiment View requires that an agent performs her actions herself. By 'performs' I understand roughly what we colloquially refer to with 'does'. This assumption rules out doing and agency may come apart. The second assumption expresses the view that performing an action requires an agent's body to move. This is the condition by which many attempt to distinguish overt actions from mental actions. The third assumption specifies that by 'body' we mean the biological body or that the body is individuated narrowly.

Paradigmatic cases of agency meet all three conditions. If I pour milk in my coffee then my biological body moves (E2 and E3 are true) and I perform the action myself (E1 is true).

The theories that I have discussed in this section analyse overt actions in terms of bodily movements. In addition, there is a different family of theories that analyse actions as mental entities such as willings, tryings, or volitions (Prichard 1949; O'Shaughnessy 1973; Hornsby 1980; Ginet 1990). These theories are not committed to the Embodiment View and hence are not susceptible to the following argument.

4 Agency Without Embodiment

Sometimes cases arise that pose a problem for the Embodiment View (cf. Moore, 2010, 32). In this section, I will use a counterexample to argue that the Embodiment View is not true for all actions, and that it is not even true for all overt actions. In particular, I argue that the Embodiment View contradicts the minimal characterization of agency introduced in Section 2. Since we want to hold on to these basic assumptions about agency, the Embodiment View must be false. I develop the

[6] In addition to Tuomela (1989) and Steward (2012), I think here of Taylor (1966), McDowell (1996), Hornsby (2004), and Mayr (2011).
[7] An example for this group are Adams and Aizawa (2008). See the related debate about the Extended Mind Hypotheses (Clark and Chalmers, 1998).

contradiction by amending a case involving an overt action that the Embodiment View initially is able to handle.

> **Twin Jim.** Twin Jim wants to break the window of an old garden shed. He picks up a stone, throws it, and the window breaks.

The case satisfies Closure, because there is an agent (Twin Jim) for the action (breaking the window). The case also meets the Intentional Systems assumption, because Twin Jim is a young human adult without any cognitive impediments. Finally, the Embodiment View applies because Twin Jim has a biological body (E3) that moves to perform an action (E2), which Twin Jim does himself (E1). Hence, Twin Jim meets all of the above necessary conditions to be an agent of breaking the window.

But imagine a variation of the Twin Jim case. Suppose Jim uses a brain–machine interface (BMI) to control a robot just as he can control his arm. The required technology is already available (Nicolelis and Lebedev, 2009; Ifft et al., 2013; Nair, 2013).

> **Jim.** Jim wants to break the window of an old garden shed. He has a ball-shooting machine that he can control via a BMI with his mind. The machine fires and the window breaks.

The only difference between the cases of Twin Jim and Jim is how the event is brought about. Twin Jim uses a stone to break the window, and Jim uses a ball-shooting machine. But a change in tools should not make a difference as to whether or not there is an action. According to the minimal characterization of agency, Jim *is* an agent of breaking the window. Yet according to the Embodiment View, Jim is *not* an agent of breaking the window. This is a contradiction. Consider the argument in its deductive form.

> *Argument Against the Embodiment View.*
> 1. *x* is an action. (By symmetry to *Twin Jim*)
> 2. There must be an agent of *x*. (*Closure*)
> 3. Either Jim or the machine is an agent of *x*. (Hypothesis)
> 4. The machine is not an agent of *x*. (*Intentional Systems*)
> S. Therefore, Jim is an agent of *x*. (From 1. – 4.)
> 5. Jim's biological body does not move. (Hypothesis)
> 6. Jim is *not* an agent of *x*. (From 5. and *Embodiment View*)
> C. A contradiction. *Embodiment View* is false. (From S. and 6.)

This argument is valid, but is it sound? Assumptions 2 and 4 are the minimal characterization of agency that I have taken for granted. The remaining assumptions need to be defended against objections.

The first assumption is supported by symmetry considerations. Since breaking the window is an action in the case of Twin Jim, it must also be an action in the case of Jim. But one might object that the two cases are different. Twin Jim breaks the window, but Jim only fills the machine with stones and thereby brings about the window breaking. Breaking the window is an action in the case of Twin Jim, but it is only a consequence in the case of Jim.[8]

This objection lacks an argument for why breaking the window is not an action in the case of Jim. The objection seems to assume that there is at most one

[8] I am indebted to Daniel Stoljar for raising this point.

action in each case. But I see neither a compelling argument nor a clear intuition to support this assumption.

The third assumption is that either Jim or the machine is an agent of *x*. One might object that this disjunction rules out a third alternative, namely that both together are an agent of breaking the window. It might be a joint action.

But there cannot be a joint action between Jim and the machine. Each participant in a joint action must have beliefs, desires, intentions, or some kind of mental state and the machine has no such state. For the same reason for which it cannot be an agent, the ball-shooting machine cannot participate in a joint action.

The fifth assumption states that Jim's body does not move. Whether this is true is a matter of definition. According to the Embodiment View, 'body' refers to the biological body (E3). By 'movement' I understand a change in the macroscopic spatial region that the body occupies. Forming an intention or undergoing a change of brain states does not count as a movement. Hence, Jim's body does not move. Yet one might object that, in fact, Jim's body does move. He has to position the machine and fill it with stones.

However, Jim could position the machine and then decide not to break the window. There seem to be two actions here: making preparations and breaking the window. Jim's body moves when making preparations but it stands still when breaking the window. With respect to the latter action, assumption 5 is true.

Agency is not necessarily embodied as the counterexample of Jim shows. The seemingly overt action of breaking the window, by changing how it is brought about, violates the Embodiment View.

5 Three Kinds of Disembodied Actions

The Embodiment View consists of three claims. To avoid contradicting the minimal characterization of agency in cases like that of Jim, which of these three claims should we give up? I suggest we should give up all of them. Not all at once, but one after the other.

It turns out that the Embodiment View conceals distinctions that can be useful for our thinking about actions. Iteratively giving up each of its claims makes room for kinds of disembodied actions that we may encounter now or in the near future. They are proxy actions, extended actions, and extended movements and they correspond to relaxing the first, second, and third claim of the Embodiment View respectively. The typical examples of each kind involve groups, human–machine interactions, and virtual realities, respectively. Short of arguing that there actually exist instances of each kind of disembodied action, I offer a taxonomy and illustrate each kind of disembodied action.

The kinds of disembodied action differ in which attributes they ascribe to whom (Table 1). First, who is an *agent* of the action? Second, who performs the *action*? Third, *whose body* moves in performing the action? As one embodiment claim after another is given up, more and more attributes are ascribed to the agent.

Table 1: Overview of different kinds of disembodied actions; *a* stands for an individual and *b* for a tool or another individual.

	Agent	**Action**	**Movement**
(¬E1) Proxy Action	*a*	*b*	*b*
(¬E2) Extended Action	*a*	*a*	*b*
(¬E3) Extended Movement	*a*	*a*	*a*

5.1 Giving Up E1: Proxy Actions

The first kind of disembodied actions are *proxy actions*. We make room for this kind when we give up the claim E1 that an individual has to perform an action herself. There can be an agent *a* and an action *x* such that *a* is an agent of *x* despite not performing *x* herself. Instead, some other *b* performs *x* on *a*'s behalf.

The idea of proxy actions is by no means new. In *Leviathan*, Hobbes (1651, Ch.16) draws a distinction between the 'author' and the 'actor' of an action. He gives the example of an attorney representing a client in a court case. Feinberg (1970, 222) describes a proxy agent as someone who is 'the mere "mouthpiece" of his principal. He is a "tool" in much the same sense as is a typewriter or telephone'. Similarly, Copp (1979, 177) defines 'secondary actions' as 'cases where persons may properly have actions attributed to them on the basis of actions of other persons'.

It should be noted that the idea of proxy actions by itself does not yet disprove the Embodiment View because there are accounts of proxy actions that satisfy E1. For example, Ludwig (2014) requires an authorization of *b* by *a* to perform *x* on *a*'s behalf. Hence, there is something *a* does, even in a proxy action. In contrast, my taxonomy characterizes proxy actions differently. An individual *b* may perform an action *x* without being an agent of it while another individual *a* may satisfy the conditions for agency for *x*. Agency here could consist in *a* giving her authorization, but it could consist in something else as well. This makes room for alternative accounts of proxy actions in terms of agency instead of authorization – but I leave open how 'agency' would be defined by such accounts.

> *Proxy Action*.
> Any *x* is a proxy action if and only if there is an *a* such that *a* is an agent of *x* but *a* does not perform *x*.

Several candidates for proxy actions come to mind. For example, a spokesperson performs a proxy action when delivering a statement on behalf of the president (cf. Ludwig, 2014). The president might be an agent of delivering the statement without performing the action herself. Because E1 is given up, performing an action oneself is not a necessary condition of being an agent of it. Delivering the statement is an action of which the president is an agent, but which is performed by the spokesperson.[9]

For another example of a proxy action, consider a case of coercion. Suppose that a mafia commander forces a subordinate to steal a diamond ring. The commander exerts force in such a way that the subordinate is not morally responsible for the stealing. The subordinate performs a proxy action and steals the diamond ring on behalf of the commander. What makes this a proxy action is that the commander is an

[9] I do not rule out that in addition to the president the spokesperson is also an agent of some action.

agent of the stealing and he can be held responsible for it, even though he does not perform the action.

With this definition of proxy actions in hand, we can now also see the possibility of group agency more clearly. Groups could never perform their actions themselves because they do not have bodies of their own. Group actions would be proxy actions but, since embodiment is not necessary for agency, they would be actions nonetheless.[10] An individual who acts on behalf of a group might perform an action without being an agent of this action and without being responsible for it.[11]

5.2 Giving Up E2: Extended Actions

The second kind of disembodied actions are *extended actions*. We make room for this kind when we give up the claim E2 that a bodily movement is required to perform an action. There can be an agent *a* and an action *x* such that *a* is an agent of *x* and *a* performs *x* herself but *a*'s body does not move in performing *x*. Instead, it is the body of another individual or tool that moves in the course of performing *x*.

> *Extended Action*.
> Any *x* is an extended action of an *a* if and only if *a* performs *x* but *a*'s body does not move in performing *x*.

We find an example of an extended action in the case of Jim. He performs this action himself (E1 holds), and when his body is individuated narrowly (E3 holds), his body does not move (E2 fails).

Extended actions are common in human–machine interactions. A machine may move as the agent performs the action while the agent's body is perfectly still. For example, as in the case of Jim, an agent may control the movements of an artefact using a BMI. With extended actions, human agency is no longer limited to its natural environment, but instead may extend into the virtual domain (cf. Clark, 2003, 122). When you use a BMI to control a mouse cursor on a screen or even your virtual self in a virtual reality, you perform extended actions. In their respective virtual environments, these are overt actions even though your body does not move in performing them.

Another prevalent example of extended actions is remotely controlled military drones. Suppose the pilot can control the drone's movements by programming tasks such as flying a patrolling pattern or reacting to unexpected ground activity. These movements of the drone may be seen as actions that the pilot performs. Similar examples of this sort include driving the Mars exploration rover or, given their high degree of automation, piloting a modern commercial airplane (Clark, 2003, 25).

5.3 Giving Up E3: Extended Movements

The third kind of disembodied actions are *extended movements*. We make room for this kind of action when we give up the claim E3 that the body is individuated narrowly as the biological body. There can be an agent of an action *x* who performs *x* herself and her body moves although her biological body remains stationary. The

[10] I write 'would be' because I leave open whether groups are agents. Even if agency does not require embodiment, it still requires a mind.

[11] There might be two actions: one of the group and the other of the individual. The individual might perform both actions while she is the agent of only one but not the other.

agent's body moves only in the sense that there is a distinct object *b*, which is individuated as part of the agent's body, and it is only this *b*-part of the agent's body that moves when the agent performs the action.

> *Extended Movement*.
> A movement of *a* is extended if and only if there is an action *x* such that *a*'s body moves in performing *x* but *a*'s narrowly individuated body does not move.

Applied to the case of Jim, this would imply that the machine is a part of Jim's body. This seems implausible because the ball-shooting machine is not connected with Jim's biological body in the right way. But perhaps parts of a body do not need to be connected. Instead, one could contend that the body is just those objects under an agent's control, regardless of how the agent is connected to them (Armstrong, 1968, 146).

One common class of extended movements is when artefacts augment the biological body. A prevalent case is the use of prosthetic limbs that are controlled via a BMI. If a prosthetic is permanently attached to an agent's biological body and if its use is transparent to the agent (moving the prosthetic is something the agent can just do), then it is plausible to think that it forms a part of the agent's body. To the agent it may even feel like the limb is a part of her body (Botvinick and Cohen, 1998). In another class of extended movements, an artefact not just augments but temporarily replaces an agent's body.

> **Avatar.** Jake is a paraplegic. There is an artificial humanoid body into which he — and only he — can log in. This body is his avatar. During the time in which he is logged in, Jake perceives everything as if he were the avatar. He controls the avatar's movements and has no conscious awareness of his biological body.

It could be argued that Jake has two bodies, his biological body and his avatar body, which he controls at various times. When the avatar-body moves, these are movements of Jake's body. Already with existing virtual reality technology, agents may feel like they themselves *are* the avatar that they control (Lenggenhager et al., 2007; Pomes and Slater, 2013). Setting aside various issues about consciousness and personal identity, the Avatar case is another example of an extended movement.

6 Conclusion

In this paper I argued that agency need not be embodied and I offered a systematic taxonomy of three different kinds of disembodied actions (Table 2). First, others can act on behalf of an agent. These actions are proxy actions. Second, the movements of others can form the actions of an agent. For example, the patrol pattern that the drone flies is an action of the pilot who controls it remotely. These are extended actions. Third, the movements of others can be movements of an agent herself. An artificial or virtual extension can qualify as part of an agent's body, and accordingly, these actions involve extended movements. This taxonomy results from relaxing each of the three claims underlying what I have put forth as the Embodiment View. It allows us to distinguish these different kinds of actions systematically.

Table 2: Overview of different examples of disembodied actions.

Kind	Examples
Proxy Action	*Group actions*: Spokesperson, Coercion
Extended Action	*Human–machine interactions*: Drones (BMI-controlled)
Extended Movement	*Virtual Realities and augmentation*: Avatar, Prostheses

In the first half of this paper I developed the Embodiment View and argued that it does not even hold true for so-called overt actions (which contrast with mental actions and omissions). Although some authors could be understood as holding the Embodiment View, this view is relevant not because of who holds it, but because of the arguments that depend on it.

Most prominently, the Embodiment View rules out the agency of groups. If agents must be embodied, then groups are not real agents. By arguing that agents do not need to be embodied, I have defended the possibility of group agency. Group actions are a specific kind of disembodied actions. They are proxy actions, which individuals perform on behalf of the group.

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