
Author

Guilherme Sanches de Oliveira

gui.cogsci@gmail.com

Department of Psychology and Ergonomics

Technische Universität Berlin

Sekretariat KWT-1, Fasanenstraße 1, 10623 Berlin, Germany

Source

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Doing Without Levels

Guilherme Sanches de Oliveira

Department of Psychology and Ergonomics, Technische Universität Berlin

Abstract

Philosophical discussions about agency at different levels—the subpersonal and the suprapersonal levels, or the micro and the macro levels more generally—are characterized by robust, if sometimes implicit, assumptions about individuality and mind, as much as by assumptions about the leveling in question. This essay takes as its starting point the perspective of radical embodied cognitive science, and explores the implications that an embodied, ecological and dynamical perspective on cognition has for how we think about agency. As I propose, this perspective motivates a fundamental shift: by offering a level-neutral understanding of ‘doing,’ the embodied, ecological and dynamical perspective shows that we can do without *levels* in philosophically understanding agency.

Key Words

Agency; embodied cognition; synergies; individualism; levels-thinking

The distinction between mere happenings and true doings is of central importance in the history of Western culture. In the pre-modern, “enchanted” world (Weber, 1919/2004; Taylor, 1989; Dijksterhuis, 1961), nature was teeming with life, and agency was everywhere to be found. In such a world, all events could be full of meaning and, for this reason, also full of wonder. Droughts, floods and winds, for instance, didn’t just happen: they were either agential forces themselves or were the doings of other agents (e.g., rivers, the sky, the sun, deities, etc.), and this meant that the positive or negative effects of these events could be experienced as providential or punitive rather than as simply convenient or inconvenient accidents. This is not the world we live in. In our Western, educated, industrialized, rich, and democratic world (Henrich, 2020; Henrich et al., 2010), the more we became modern, rational and scientific, the more did the world itself grow ‘disenchanted’ and mechanized, intelligible, analyzable, amenable to explanation in terms of how the phenomena observed arise from perhaps unseen but still perfectly natural, non-agential causes. Ours is a world of both doings and happenings. If I arrive home and realize I once again

left the window open and this time rained on my laptop, I feel sorry, but not literally cursed: I know that I am the only one to blame—sometimes it rains, and sometimes it also pours, but that is dumb luck.

Many details of this historical narrative are contested—for instance, maybe the pre-modern and the modern, or the enchanted and the disenchanted correspond not to separate, successive periods but rather to competing yet co-existing orientations toward the world (see Dreyfus & Kelly, 2011; Henry, 2008; Gaukroger, 2008; Latour, 2012; Shapin, 2018; Mishima, 2019). Still, for us today, the distinction between doings and happenings has become straightforward and uncontroversial. And, through our Western cultural heritage, it has, perhaps unavoidably, also become foundational for contemporary philosophical discussions surrounding the notion of agency. Some of the philosophical debates center on questions about whether agency—true doing rather than mere happening—belongs only to the personal level or whether it is to be found in the subpersonal and/or suprapersonal levels as well. In other discussions, the disagreement is instead about whether entities at the micro and/or macro levels, from bacteria to the whole planet, can

reasonably be said to have agency. Rather than taking sides on these debates, my goal in this essay will be to challenge the root of the disagreements. I begin by briefly reviewing examples from the recent philosophical literature to expose two types of assumptions. On the one hand, there are individualist and intellectualist assumptions about agency that, directly or indirectly, inform discussions about whether agency can be found on a certain level or another. On the other hand, these disagreements more fundamentally rely on what I'll describe as *levelist* assumptions, that is, assumptions about the adequacy of the leveling in question, for instance, distinguishing the *level* of individual people from sub- and supra-personal levels, or from micro/macro levels, and so on. Having uncovered these assumptions, I will then show how a radically different conceptual framework at the margins of contemporary cognitive science—the embodied understanding of cognition following from the traditions of ecological psychology and dynamical systems theory—leads to a radically different view of agency. In particular, I will argue that, from its roots in ecological psychology and in pragmatist philosophy, this view challenges dominant assumptions about individuality and mind; and from its roots in dynamical systems theory, especially through the technical notion of ‘synergies,’ the radical embodied view I’m proposing is also neutral with regard to assumptions about the levels typically invoked in the debates about agency. After discussing these two points in turn, I conclude by returning to the bigger-picture issues touched on here in the introduction to further articulate the significance and implications of the view I am proposing, as well as its relation to broader philosophical discussions about levels of organization.

Taking Agency to a Whole New Level?

In the philosophical literature on collective or joint action, a key question concerns what it means for people to do something together. When three friends lift a heavy couch and move it across the room, or when, say, a mob vandalizes a government building, is what the group is doing simply the sum of individual actions running in parallel with each other, or can we say that the group itself is acting and that there is agency proper at the collective,

suprapersonal level?

Both seem to be live options for contemporary philosophers (see Gilbert, 2000; Miller, 2001; Pettit and Schweikard, 2006; Bratman, 2013). But rather than examining reasons in favour of one option or the other, what I want to emphasize here is the individualist and intellectualist assumptions that typically underlie the two broad types of competing perspectives.

In what we might describe as the standard ‘reductive’ option in this context, individual-level action is taken to be both ontologically and explanatorily prior to, or more fundamental than, action at the collective level. In this view, *action* only properly designates the doings of individuals, such that interaction and joint action are taken to emerge from, and to be best understood in terms of, what individuals do and are like. As is clear from this description, in reducing collective action to individual action, this option by definition amounts to an individualist understanding of agency. What is perhaps less obvious is that this option is typically also characterized by an intellectualist understanding of precisely what, as something belonging to the individual level, action is. In this common view, action is fundamentally the outcome of individual-level mental processes, such as attentional, intentional, and propositional states like beliefs and desires: in contrast with other events that are mere happenings, intellectualists see “human action as the product of individual mental processes” (Harré, 1984, 8). In turn, this intellectualist picture of action at the individual level results in seeing whatever groups do as derived from, and only properly understood in terms of, how individuals think: “To understand how people act and interact, we first have to understand how their minds work” (Elster, 2015, p. 55). One particular manifestation of this perspective can be found in the *methodological individualism* of Weberian sociology, according to which “social phenomena must be explained by showing how they result from individual actions, which in turn must be explained through reference to the intentional states that motivate the individual actors” (Heath, 2020).

The logical alternative to this reductive option in debates about joint action is to reject the ontological and explanatory primacy of the individual level and,

accordingly, to think that groups can perform actions in their own right, that it makes sense to see groups as having agency proper. But this option is no less reliant on individualism and intellectualism. This is because views that allow for true agency at the collective level often do so by attributing suprapersonal but individual-like mental states to groups, such as shared beliefs and collective intentions (see Tuomela, 1992; Bratman, 1993; Bardsley, 2007). So, rather than escaping individualism and intellectualism, this alternative actually maintains both, reconstruing groups as something like a composite, super-individual, but an individual nonetheless, and importantly, one that can have at least some of the same mental attributes that are (assumed to be) characteristic of individual people and that are therefore (assumed to be) necessary for agency, or doing.

Both sides of this debate thus illustrate the importance that assumptions about individuality and mind or intellect can have in philosophical analyses of agency at different levels. Not only that, but these examples also reveal the crucial role of a kind of *levelism* or *levels-thinking* in the debate. After all, it is only possible to affirm or deny the possibility of agency at the suprapersonal level in addition to the personal level if we presuppose that the leveling in question holds, that is, if we take for granted that the personal and the suprapersonal are in fact distinct. In this particular case, the two types of assumptions seem to be intertwined and mutually reinforcing: understanding persons as individuals whose behavior springs from reasons internal to their individual minds motivates seeing persons as being essentially different from their parts (the subpersonal) or any wholes they may be part of (the suprapersonal); conversely, the idea of a layered reality comprising distinct levels sits particularly well with intuitions about what sets us (and our doings) apart from what happens at other levels. And this is so even if you think that collectivities can in fact have some of the same relevant features of individual minds, as in non-reductive cases seen in the previous paragraph—it only makes sense to speak of similarities across levels (here, the personal and the suprapersonal) if you presuppose that those are distinct levels in the first place.

This complicated intertwining of agency with

conceptions of individuals, intellect or mind, and leveling of some kind or other is not unique to debate about collective or joint action. In the immediate vicinity of the debate about suprapersonal agency, for instance, there is debate in the opposite direction, focusing on whether or to what extent we can speak of agency at the subpersonal level, for instance in the case of attributions of agency to intra-individual entities such as the brain, the ‘heart,’ and sometimes less figuratively, the ‘gut’ (see Kenny, 2003; Alvarez, 2010; Metzinger, 2013; Drayson, 2014; Gilbert, 2016; Hardcastle, 2017; Parke, 2021). Moving farther afield, beyond disagreements anchored in the personal/ subpersonal/suprapersonal distinction, there is also debate focused on micro and macro levels more generally, accordingly asking how small or big an agent can be, from microorganisms such as bacteria (see Dennett, 2017; Di Paolo et al., 2017) all the way up to ecosystems and even the entire planet seen as a single, whole living entity (see Lovelock & Margulis, 1974; Lovelock, 1990; Capra, 1996).

In all of these debates, whether explicitly or only implicitly, the same ties between agency, individuality, mind or intellect, and levels are also present. To be sure, the commitments are varied and they are not always as widely shared among those disagreeing in each case. Consider, for instance, controversy surrounding research on basal cognition in single cells and multicellular microorganisms. The skepticism of many critics can straightforwardly be traced to deep-seated (if sometimes unacknowledged) intuitions that bacteria are too much unlike us—individuals endowed with minds, who act out of reasons—to be seriously considered as having agency proper. Advocates, on the other hand, vary in the degree to which they equate “cognition”—whether basal or not—to information processing and to possessing mental states like beliefs and desires (see Lyon et al., 2021). The same also holds for debate about the Gaia hypothesis, where some critics see a danger in anthropomorphizing the planet, while many proponents have no trouble describing Earth as a living agent endowed with cognition, even if with varying views regarding what exactly this entails (see Clarke, 2017). Both in the case of basal cognition and of the Gaia hypothesis, I expect researchers who challenge dominant assumptions about cognition to

be sympathetic to much of what I will propose in this essay. Still, even in cases where intellectualism is rejected, it is interesting to see the persistence of both individualist and levelist assumptions: in each debate, the disagreement tends to turn on whether the *candidate-agent* (e.g., bacteria, or the Earth) is seen as having the right kind of individuality as well as on whether the level of reality occupied by the candidate-agent is seen as one where agency could possibly exist (e.g., can microorganisms or planets be agents?).

This intertwining of assumptions is thus a common theme across philosophical debates. Asking whether agency is limited to one level or whether it can also be present at some other level(s) presupposes—at least logically, but typically also ontologically—the leveling in question. That is, it takes for granted a view of reality as being organized into at least some number of distinct levels. In turn, disagreements about the prospect of applying the concept of agency to phenomena at the different levels often relies on individualist and intellectualist intuitions that shape how we differentiate true doings from mere happenings—namely in terms of the intelligibility that the former (but not the latter) can have as events emanating from within an individual of some sort.

Both individualism and intellectualism, on the one hand, and the more general levelist worldview, on the other, enjoy great popularity in contemporary Western culture, but they are far from being unquestionable. In fact, these two sets of assumptions are directly challenged by emerging perspectives in embodied cognitive science, with interesting consequences for how we understand agency.

Not Mind in the Body, But the Minding Body

That cognition is embodied is a claim that virtually no cognitive scientist today will deny: after all, as even the most conservative researcher will concede, cognitive states and processes are always necessarily instantiated in some body (of some kind) or other. But this is not what those of us approaching cognition from an ecological and dynamical standpoint mean. Some projects under the broad umbrella of embodied cognitive science aim to elucidate how certain bodily phenomena

sometimes contribute to, or otherwise influence, cognition conceptualized as information processing. These projects thus view the body as an anatomical or physiological unit, a vehicle for mental content, and in particular one with the potential to occasionally alter information processing. In contrast, for those of us doing research in radical embodied cognitive science, it is the “living and lived body” (rather than the anatomical body) that serves as the starting point for theorizing mind and cognition—a move with deep roots in the phenomenological and pragmatist traditions (Chemero, 2009; 2013; Crippen and Schulkin, 2020; see Dreyfus, 2005; Schear, 2013).

This different conception of embodiment explains why our rejection of accounts of behavior in terms of mental representations is not a petty issue. Storing and processing internal bits of information about the external world is necessary if you model the mind as some kind of central processor and organizing principle, separate from the environment, and responsible for controlling an otherwise inert body, making it move and interact with the environment. But the living body is always already active in the world, a realization that motivates seeing mind or cognition as a characteristic of the organism’s ongoing situated activity rather than a separate underlying cause of that activity.

John Dewey, one of the intellectual predecessors of the contemporary radical embodied perspective, explained these competing views in analogy to linguistic categories. The usual understanding treats “mind” as a noun, that is, a thing—and importantly, a separate thing, whether the separation be defined in terms of substance (*res cogitans*) or defined functionally, as is more popular nowadays. In contrast, we see “mind” as an adverb or verb: “mind denotes every mode and variety of interest in, and concern for, things: practical, intellectual, and emotional,” and further, “It denotes all the ways in which we deal consciously and expressly with the situations in which we find ourselves” (Dewey, 1934/1980, p. 263). So, rather than seeing “mind” as a thing separate from our bodies and responsible for making our bodies act in some way or another, mind is a quality of the embodied activity of a living being interacting with its environment in ways that range from the more to the less attentive, effortful, sensitive and so on. Dewey explains this point:

“Unfortunately, an influential manner of thinking has changed modes of action into an underlying substance that performs the activities in question. It has treated the mind as an independent entity that attends, purposes, cares, notices, and remembers. This change of ways of responding to the environment into an entity from which actions proceed is unfortunate, because it removes the mind from necessary connection with the objects and events, past, present, and future, of the environment with which responsive activities are inherently connected. Mind that bears only an accidental relation to the environment occupies a similar relation to the body. In making the mind purely immaterial (isolated from the organ of doing and undergoing), the body ceases to be living and becomes a dead lump.” (Dewey, 1934/1980, p. 263–264)

This passage is rich enough for a discussion much longer than I have room for. But two points are particularly worth emphasizing. The first, and perhaps most obvious by now, is that this radical embodied perspective offers a direct alternative to intellectualism. Intellectualism construes action as the external, bodily expression of mind as the internal controller, that is, action as the product of a separate underlying cause, an inner agency. But thinking this way presupposes (rather than proves) a clear separation between mind and body, between mind and environment, as well as between bodily activity and meaning: action is executed by the body as the discharge of an internal, mental animating or agential force, but meaning is limited to that mental domain.

Second, and relatedly, the radical embodied perspective also motivates rejecting individualism, and instead emphasizing relationality as the starting point for understanding agency. This emphasis on relations is in line with Dewey’s use of “mind” as “modes of action” and “ways of responding to the environment” that are “inherently connected” to that environment. This idea has been expressed more recently in the motto, “ask not what’s inside your head, but what your

head’s inside of” (Mace, 1977, p. 43). The point is not that we ignore internal processes (or deny their existence) and focus only on external ones. On the contrary, the shift involves questioning the internal-external distinction itself, and moving toward investigating organism-environment relations. This is why the perspective is described as “ecological,” just as in the biological sciences “ecology” designates the study of organisms in relation to the environment, including other organisms (in contrast with, the internalist focus of molecular biology or genetics, for instance). Importantly, the perspective is also “dynamical” because, just as “dynamics” in physics is the study of motion and change over time, a dynamical approach to behavior and cognition studies them as temporally-extended and history-dependent phenomena, thus focusing on how organism-environment relations unfold and change over time. In this perspective, as the founder of ecological psychology James J. Gibson put it, “Locomotion and manipulation are neither triggered nor commanded but controlled,” to which he added that “Control lies in the animal-environment system” (Gibson, 1979/1986, p. 225). That is, our actions are neither simply triggered from the outside (as crude behaviorism would have it) nor are they commanded from within the mind/brain (as is the dominant view today): rather, it is the ongoing relation between an organism and its environment that shape behavior, or that constrain, guide or steer it, in Gibson’s terms. Instead of individualist and intellectualist assumptions about how behavior comes about, relationality is the starting point.

Synergies All the Way Down (and Up)

The ideas discussed so far already suggest a radically different perspective on agency, one that challenges traditional assumptions about the role of individuality and intellect in how we understand action. In this section I will zoom in further to make the difference more explicit and vivid. The focus here will be on how this view of agency relates to the types of levelist-thinking that come up in philosophical discussions about agency, as reviewed earlier: as I propose, this view remains neutral with regard to commitments about any kind of leveling and any distinctions between the ‘personal level’ and anything else, whether smaller or bigger, and

whether internal or external to individual people. Key for this move is the technical notion of “synergy.”

Synergies are transient assemblages in which different things work together in an adaptive, task-sensitive manner. Also known as coordinative structures, synergies have been described as “functional grouping[s] of structural elements that are temporarily constrained to act as a single coherent unit” (Richardson & Chemero, 2014, p. 40; Kelso, 2009). Two important features of synergies are that they exhibit *dimensional compression* and *reciprocal compensation* (Riley et al., 2011). Roughly speaking, this means that the temporary self-organization (or ‘soft-assembly’) of a synergy enhances performance by simplifying it through the coupling of degrees of freedom in the system (i.e., dimensional compression), and that this process involves function-preserving mutual adjustments between the parts or elements making up the synergy (i.e., reciprocal compensation). An example will make this clearer.

Consider all the degrees of freedom you have in your arm—or better than just thinking about it, try actually stretching out your arm and feeling the many ways you can bend around the joints on your wrist, your elbow and your shoulder. Now suppose you’re walking from the kitchen to your office holding a mug full of hot coffee and trying not to spill it. As you walk, you don’t have to hold your arm totally rigidly: in fact, this would be a sure way to spill the coffee! Instead, there is a certain range of ways your arm can move without tipping the mug too much, there is a space within which the individual parts (the wrist, elbow and shoulder) can vary without compromising performance. Executing this task naturally and skillfully is not a matter of controlling your wrist and your elbow and your shoulder individually, but rather a matter of allowing each to vary within that boundary of safety, or the space within which performance is functional. And this is possible because the mug-holding-arm has soft-assembled into a synergy, a temporary and task-specific system, one that is characterized by dimensional compression and reciprocal compensation. The complexity of the task is reduced rather than multiplied with the combination of the different, interacting components (the different arm segments, along with their different muscles, and so

on). And, with control at the synergy level, each component flexibly adapts to what the other components are doing so as to keep the system within the space of functional variation. So, for instance, if for some reason you open your shoulder too much, then the rest of the system adapts by, say, adjusting the wrist so as to keep the coffee from spilling. More realistically, the synergy is actually larger and includes your legs: if you misstep with your left foot, your upper-body compensates for that disruption by bending your shoulder, elbow or wrist, perhaps even in ways that would have been counterproductive or dysfunctional were it not for the misstep; naturally, if the reciprocal compensation is not enough, the synergy will have been disrupted and it is time to reorganize and start over (e.g., clean the floor and go back to get more coffee).

In the recent scientific literature on human movement (at the interface of psychology, kinesiology, biomechanics, neurophysiology, etc.), there is a wealth of work investigating the role of synergies not only in intrapersonal coordination, as in the example of different parts of the body working together (see Latash, 2008; Profeta & Turvey, 2018), but also in interpersonal coordination. Some of these experiments even use scenarios like the one I mentioned at the beginning, of people working together to carry large, heavy objects, as well as many more cases, such as of dyads walking together and adjusting their gait so as to be able to carry out a conversation (see Riley et al., 2011; Araújo & Davids, 2016; Fusaroli & Tylén, 2016). Curiously, there has been little to no uptake so far of these insights about synergies in the mainstream philosophical literature about agency (e.g., in the debates reviewed earlier), which is why I am drawing attention to them here.

With this technical notion of synergy, the embodied, ecological and dynamical perspective provides a language for describing situated meaningful behavior in a way that is inherently neutral with regard to metaphysical assumptions about levels of any kind. As already mentioned, synergies work at the level of an individual performing a task, but they also apply to couples and larger groups of people working together. In fact, the fundamental level-neutrality of synergies as a lens for understanding agency becomes even more evident when we consider that in all of the examples

mentioned, skillful, functional performance is only possible with the nesting of synergies across whatever levels one might wish to identify for analytic purposes. In the case of the coffee mug, for instance, not only is there a synergy between the different parts of the arm, or between arms and legs, but also between those body parts and (or as parts of) larger orienting systems (e.g. visual) and locomotory systems (e.g., for walking), each of which rely on, and also constrain, nested synergies at the neural level as well (see Anderson, 2014; Dotov, 2014; Van Orden, Hollis, & Wallot, 2012). That is, the synergistic organization of the entire person for functional performance of the task in question is not realized by means of the smaller parts (e.g., the brain, or components within it) controlling the larger parts (e.g., the arm and its segments): rather it involves all of these coordinating with one another, mutually constraining each other, so as to reciprocally compensate for failures anywhere in the system. Put differently, in this perspective agency is characterized by the formation of synergies all the way down and all the way up, from groups of neurons to groups of people and beyond. (After all, the person transporting the coffee mug likely didn't plant the coffee, generate the electricity needed for running the coffee machine, nor make the mug—all of these depend on larger systems comprising relations spanning a much greater spatiotemporal scale than the few minutes it takes to prepare the coffee and drink it locally.)

Where there is action there are synergies. The technical notion of a synergy is neutral with regard to the nature of the system in question as well as to the nature of the elements that make it up—whether human or not, biological or not, big or small—because it merely identifies criteria that, when in place, reveal that elements of some sort are temporarily working together sensitively, adaptively and functionally in relation to a task. The nature of the task and its timeframe can vary widely, and we could even say that a person is a big synergy of nested synergies that work together (well enough) for decades. Individualism and intellectualism lead to construing “agency” as some kind of inner, mental cause of action that underlies and commands bodily performance from within. But the fluid, transient nature of synergies ensures that no robust notion of

individuality is required for, nor entailed by, the presence of a synergy. Similarly, the self-organizing, emergent nature of synergies makes it possible to speak of function-sensitive performance without falling prey to intellectualist assumptions. And finally, synergies also make it possible for the embodied, ecological and dynamical perspective to remain noncommittal with regard to levels of any kind. Synergies can exist at any spatial scale, from the micro to the macro and beyond, and they can also comprise relations unfolding at any temporal scale, from the fastest to the slowest events. As a scale-free phenomenon, the formation of a synergy can be identified wherever the conditions are met, independently of commitments to any way of dividing up reality—be it robust conceptions of hierarchical levels of organization, or more pragmatic levels of explanation or analysis. In this way, the embodied, ecological and dynamical perspective motivates thinking that wherever there is a synergy—that is, the temporary assembly of a goal-oriented, or task-constrained, coordinative structure—there is also action.

Conclusion

In philosophy of science, the idea that the world is made up of discrete levels of organization has been tied to debate concerning the differences between distinct scientific disciplines: in this view, as Von Bertalanffy describes it, “Reality (...) appears as a tremendous hierarchical order of organised entities, leading, in a superposition of many levels, from physical and chemical to biological and sociological systems” (Von Bertalanffy, 1950, p. 164; cited in Oppenheim & Putnam, 1958). Despite the decidedly rational, scientific flavor of this modern framing, the same general “levelist” way of thinking has enjoyed different incarnations throughout history, with previous versions including, among others, the medieval idea of the “great chain of being” (Eronen & Brooks 2018). The philosophical literature on the status of levels of organization is vast, and includes those who suggest that the world does not come in hierarchical layers and that no notion of level is philosophically or scientifically useful (Potochnik 2021; see also other contributions in Brooks, DiFrisco, & Wimsatt, 2021). I am sympathetic to this suggestion, as I agree that the existence and

usefulness of scales for measuring objects and events of different sizes and durations—from the smallest to the biggest, from the fastest to the slowest—does not entail a hierarchical layering of all of reality into discrete levels of any sort. This is also to agree with James, Dewey and other pragmatists, who, time and again and in different contexts, warned against the fallacious reification in which we turn the categories we have developed for making sense of the world into what we believe to be concrete underlying causes. In line with this pragmatist critique, to use Susan Oyama’s words, “The biological, the psychological, the social, and the cultural are related not as alternative causes but as levels of analysis” (1985/2000, p. 93)—yet, if so, the risk of confusion with metaphysically weightier notions of levels of organization might be a good reason to avoid speaking of “levels” at all, perhaps even levels of analysis or explanation in many cases (see, e.g., Potochnick 2021, forthcoming, Potochnick & Sanches de Oliveira 2020).

These points I am bringing up now do not follow from what I have discussed in this essay. This is intentional. In my assessment, the particular types of levelist thinking at play in philosophical debates about agency—the focus of this essay—are only implicitly related to these discussions about levels of organization in philosophy of science. Disagreements about the possibility of agency outside the personal level—including the subpersonal or suprapersonal levels, or the micro and macro levels—have by and large gone on without explicit consideration of whether the relevant intuitions about agency might be tied to unspoken commitments to metaphysical assumptions about the structure of reality—much like in this essay I managed to talk about the former without touching on the latter until now. But this gap between the two literatures is regrettable.

Those who, as reviewed in the beginning, emphasize the ontological and explanatory primacy of the personal level, seeing the doings of individual human beings as necessarily different from any other events (mere happenings), would do well to consider whether this position rests on unacknowledged presuppositions about the world itself as being hierarchically layered in such a way as to give individual human beings some kind of distinctive, higher ontological status. Perhaps arguments in favor

of some conception of levels of organization, once explicitly engaged with, would help strengthen arguments in favor of these “personal-levelist” views of agency.

And, of course, the same goes for those who question the primacy of the personal level and advocate for a notion of agency that extends to other levels. Being clearer on what, if anything, makes for distinct levels of organization in the first place could provide support for arguments in favor of seeing levels other than the personal as being levels where agency can exist. And as a further possibility that I see as particularly promising, arguments against levels of organization could help undermine the intuition that agency must in principle be limited to individual human beings—it could, for instance, cast doubt on the assumption that there is some basic fundamental fact about reality that makes the doings of individual humans radically different from other events in nature, including events within individuals and events that individuals participate in.

As a suggestion in this direction, briefly consider how a pragmatist critique of levelist thinking in general, as outlined above, can be extended to a critique of this particular type of levelism anchored in the idea of the “personal level.” Recent work on many fronts emphasizes the porosity of the “personal” and the blurriness of all boundaries given our constitutive dependence on what we might otherwise describe as belonging to other “levels,” both lower and higher (see, e.g., Yong, 2016, Spivey 2020). For some researchers in psychology and cognitive science, the atomic, isolated individual is a myth because people are inherently constituted by transactions with others in context, just as much as they are constituted by all that makes up their organic bodies (see discussions in, e.g., Morgan 2017, Danziger 1997, 1990). These and related perspectives suggest that even the personal level—conceived of in contrast with subpersonal and suprapersonal levels—is not as metaphysically secure as it might have seemed. Taking this into account, the pragmatist realization is: the fact that we have come to settle on an analytical pattern that divides up reality into these discrete layers (however useful this pattern may be) does not entail the ontological reality of the leveling in question outside and independently from our ana-

lytical practices. If anything, it would seem like the best we can hope for is to revise and adjust our analytical practices the more we learn about how the world works, including ourselves.

But this pragmatist critique of levelism in general is just a suggestion, and for the purposes of this essay’s argument, it does not have to be conclusive nor even very compelling. After all, the perspective on agency I have put forward is explicitly neutral with regard to any assumptions at all about levels. The arguments of those who see agency as belonging only to certain levels and the arguments of those who want to extend it to other levels ultimately are as strong or as weak as their assumptions about the levels in question. In contrast, approaching “agency” through the lens of an embodied, ecological and dynamical understanding of cognition works independently of whether the world is organized into levels or not. Rather than beforehand stipulating that reality is made up of distinct levels and then debating which of these levels can or cannot include agency, the perspective I am proposing offers, through the technical notion of synergies, a level-neutral language for understanding, and empirically investigating, the characteristics of end-oriented, or task-constrained, functional performance.

The embodied, ecological and dynamical perspective helps to elucidate the relation between action at the individual and collective levels, yet instead of positing either as the ontological and explanatory starting point, this view applies at the different scales and highlights their interdependence—as much as it applies to phenomena outside the subpersonal-personal-suprapersonal axis. As such, this perspective has the potential not only to contribute to traditional philosophical debates about agency, but also to help us address new questions and make sense of novel problems. This includes, for instance, questions about human-machine interaction, as this perspective gives us empirical criteria for determining when that’s merely tool use, and when it’s true joint action; and it potentially also applies to understanding joint epistemic action, for example in research teams, when people engage in knowledge-producing action together, at the group level. In the approach I’m proposing, in any of these cases we

would be looking for dimensional compression and reciprocal compensation as markers of the dynamics of a synergistic system.

Philosophical debates surrounding the notion of agency tend to be informed, whether explicitly or implicitly, by moral conceptions of agentive responsibility, conceptions belonging to a worldview centrally concerned with blaming and punishing or praising and rewarding—and perhaps more so with the first pair than with the second. In contrast, an embodied, ecological and dynamical perspective starts from a naturalist standpoint, one that doesn’t take for granted a morally motivated distinction between doings and happenings, and that doesn’t presuppose a fundamental separation between human individuals and the rest of nature. Perhaps this makes it uniquely positioned to turn around and inspire a radically different type of moral theorizing—but this is more than I have room to explore here.

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