

Acquiring reason

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Abstract

In the last decades, there has been a far-reaching debate about whether reason is a natural power of the human animal or a socio-historical achievement. This paper brings out and criticizes two paradigmatic views of reason entangled in that dilemma: the substantive view which construes reason as a primitive power possessing the basic forms of intelligibility; and the derivative view which traces back reason to non-rational, natural-historic processes. I approach the issue by discussing how Aristotle addresses the underlying predicament in *Metaphysics Theta*. The predicament persuades us to overdetermine or underdetermine our natural potentiality for reason because it ignores what I call Aristotle's main insight: the understanding from which rational capacities are exercised is acquired by undertaking appropriate activities. The measure of rational capacities is neither merely naturally determined nor merely socio-historically inherited but relies on the engagement with the things falling under the purview of the pertaining activities. We must recover this Aristotelian insight, I argue, to avoid succumbing to either the substantive or the derivative view of reason.

1 | INTRODUCTION

John McDowell has argued that we can ease the modern anxiety about the place of mind in nature by reviving the Aristotelian thought that human beings are rational as the living beings they are. This is supposed to mean that we are rational, on the one hand, insofar as we actualize the natural potentialities of our

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species; on the other hand, insofar as we receive a certain upbringing by which we acquire a second nature (McDowell, 1994).

The apparent ambiguity of this argument has sparked a far-reaching debate about whether reason is a natural power of the human animal or a socio-historical achievement. For one thing, it has been argued that we must conceive of reason as a power of our first nature to truly overcome the constricted, modern notion of nature (Boyle, 2012; Kern, 2017b; Thompson, 2013). But this argument begs the question of whether we must think of reason as naturally predetermined or traceable to a natural history: if this were the case, reason would not be truly autonomous (McDowell, 1998; Pippin, 2012). In contrast, it has been argued that we must leave nature behind and insist that our responsiveness to reasons comes only from within socially acquired practices (Brandon, 2009; Honneth, 2012; Pippin, 2008). But this view begs the question of how human animals can engage in rational practices in the first place: if they were not able to do so as the living beings they are, social practices would amount to arbitrarily determined habits (Rödl, 2016).

Grappling with this dilemma is misleading, I argue, insofar as it persuades us to treat our natural potentialities as either sufficient or insufficient for rational activities—that is, to overdetermine or underdetermine reason as a first potentiality of the human animal. I approach this dilemma in the contemporary philosophy of mind by discussing how Aristotle addresses the underlying predicament in *Metaphysics Theta*. Aristotle introduces the predicament under the heading of a sophistic quibble about our natural potentiality for reason. This paper diagnoses the assumptions informing the predicament and explains how we can avoid succumbing to it. I argue that the predicament ignores what I call Aristotle's main insight: the forms and rules governing rational capacities come in the view from within the exercise of pertaining activities.

Aristotle's description of human beings as rational animals has traditionally been taken to entail that reason is a first potentiality of the living beings we are, a potentiality to acquire rational capacities (cf. Kenny, 1975). But in *De Anima* Aristotle states that reason is nothing before we reason: understood as a first potentiality, reason is empty. His central argument, spelled out in *Metaphysics Theta* and the *Nicomachean Ethics*, is that rational capacities are acquired only through the exercise of relevant activities. We are not able to undertake rational activities in the same way we are already able to see and hear, but we actualize reason only by engaging in activities of a rational kind. Now since activities of a rational kind require as such an understanding of the rules governing them, the argument gives rise to what Aristotle calls a sophistic quibble: how could one undertake activities that require the grasp of relevant rules and concepts if one does not yet possess the corresponding conceptual capacities? On a more general note: how could one acquire conceptual capacities without possessing a primitive power supplying from itself the most formal of concepts—the basic forms of intelligibility?

In addressing this question, we are tempted to overdetermine or underdetermine our first potentiality of reason. I would like to distinguish two paradigmatic views of reason in that respect: the substantive and the derivative view. The substantive view holds that the possibility to engage in rational activities requires a predetermined power being the source of intelligible forms. Without a power possessing the intelligible forms in potentiality, that is, a basic scheme coming into effect whenever awakened by experience, the intelligible order of the world would not come in view at all. The derivative view understands reason as a product of processes that cannot be themselves rational in kind but go back to the operations of supposedly more basic capacities such as association and imagination. By denying that human animals possess a natural power for reason, the derivative view reinterprets what appears to be conceptually autonomous capacities in mature human beings: what we come to reconstruct as categories of thought are abstractions from naturally developed and socio-historically constituted habits.

The substantive and the derivative views appear compelling and exhaustive only if we take the predicament posed by the quibble at face value. But to take the predicament at face value is to evade the initial argument leading to the quibble: the argument that the rules or concepts governing rational capacities come in view from within relevant activities. I argue that we can overcome the predicament by recovering Aristotle's insight about the primacy of activity (*energeia*) over capacity (*dunamis*). I take this primacy to mean that the measure of a rational capacity lies in

the activity in which it is acquired and exercised. The understanding from within which an activity is rationally undertaken pertains to the things falling under the purview of that activity, to use a phrase of Aristotle's. Its measure comes from the objective engagement with those things. While we are capable to engage in rational activities only on account of our natural potentialities and while we come to undertake such activities only on account of pre-existing social practices, the understanding we actualize by undertaking such activities is neither merely naturally determined nor merely socially inherited but objectively engaged with the world.

By contrast, the assumption shared by the substantive and the derivative view is that the forms governing human activities are supplied from without the activity itself, by a self-standing apparatus, be it naturally given or socio-historically constructed. This deep-seated assumption about the source of intelligible forms leads us to overdetermine or underdetermine the powers the human animal comes equipped with. Our natural potentialities appear to be either sufficient for rational activities, providing the most basic intelligible forms; or insufficient, being thus subject to an arbitrary formation by socio-historical habits. In both views, the human subject does not appear to be genuinely engage with the world. If reason were a predetermined power, natural or not, it would be self-limiting and thus insulated. If reason were otherwise a matter of inculcated habits, the concepts governing our practices would not be acquired through an understanding of what they objectively are concepts of. In both views, human subjects would be unable to question and revise the conceptual framework they inherit.

Against this, I argue that our natural potentialities allow us to conceptually engage with the objective conditions of our natural and social world without being formally predetermined. The relevance of this argument for the above-mentioned debate in the contemporary philosophy of mind is that it upholds the significance and legitimacy of our conceptual struggles in making sense of the world. By contrast, the substantive and the derivative theory are strategies to evade such struggles by taking our conceptual framework to be either predetermined or arbitrarily constructed.

I begin by outlining in Section 2 the context in which Aristotle introduces the quibble in *Metaphysics Theta* and the predicament it expresses: what kind of knowledge must one possess to be able to undertake activities of acquiring knowledge? In Section 3, I address the sense in which reason can be said to be a first potentiality and specify the meaning of reason as faculty, generically describing a kind of capacity, namely capacities that are *meta logou*, conceptually self-conscious. I argue that the *logoi* or concepts governing rational capacities come in view from within particular kinds of activity. This renders the idea of reason as a primitive capacity possessing the most formal concepts empty, disarming the claim of the substantive view. In Section 4, I address the ensuing worry that our natural potentialities are by themselves insufficient to account for the possibility of rational activities. I explain the sense in which it is natural for human beings to actualize reason without reason being naturally given. To that effect, I specify the relevant distinction between natural capacities and rational capacities: while the measure of natural capacities is provided by the interaction of an organism with its environment, the measure of rational capacities is not given in this way.

Aristotle's claim about the primacy of actuality is generally interpreted as referring to the pre-existence of social practices in which a child is initiated. But while socio-historical practices are a necessary condition for the actualization of reason, they do not explain what learning is. The key point of Aristotle's claim is that rational learning requires being engaged in the activity one acquires a conceptual account of—thus understanding, from within that engagement, what rules and concepts amount to. In Section 5, I explain how this entails that the measure of an activity is provided by the activity itself. While this thesis is convincing with respect to skills, it involves a circularity in the case of capacities whose measure is supposed to be provided by an explicit formal account—for example, sciences. How could such a formal account rely on the order of the activity it is supposed to provide the standard of in the first place? I turn to this circularity in Section 6 and argue that what hinders us to recognize its innocence is a conflation of our capacity for concepts and our conceptual apparatus. I clarify Aristotle's argument that we acquire sciences by being engaged with the objective conditions in which the guiding concepts are brought to bear. Section 7 draws implications for our contemporary understanding of reason.

2 | THE QUIBBLE

The concept of a capacity depends on the concept of the activity in which that capacity is exercised. This expresses the logical primacy of the activity over the capacity. Grasping an ability such as housebuilding is grasping what it is an ability for.

Aristotle argues that in the case of rational capacities the primacy of the activity (*energeia*) holds also in respect to generation and time.¹ This is usually taken to indicate the possession of a capacity by another mature human being (Beere, 2009).² In order for a rational capacity to be acquired, it must be preceded by its actuality in another subject, the instructor. For a child to learn a language, the child must be preceded by a mature being speaking a language.

Aristotle indeed mentions this sense of *energeia's* primacy in time (cf. Met. 1049b23-27). But this is not the only sense of its primacy. In a significant passage in *Metaphysics Theta*, Aristotle explains:

Since all capacities are either innate, like the senses, or come by practice (*ethei*), like playing the flute, or by learning (*mathesei*), like the crafts, those which come by practice or by concept (*logoi*) we must acquire by previous exercise (*proenergesantas*) (Met. 1047b31-35).³

The passage claims that capacities acquired by practice or by concept are acquired by previous exercise. Further on in the text, after mentioning the necessity of an instructor, Aristotle argues again that, to acquire a rational capacity, one must first undertake an activity of that kind. It is at this point that Aristotle introduces the quibble mentioned in the introduction:

Hence it seems impossible that a man can be a builder if he has never built, or a harpist if he has never played a harp; because he who learns to play the harp learns by playing it, and similarly in all other cases. And thence arose the sophistic quibble, that one who does not possess a science will be doing that which is the object of the science; for he who is learning it does not possess it. But since of that which is coming to be, some part must have come to be, and, of that which, in general, is changing, some part must have changed (...), presumably the learner too must possess something of the science. At any rate from this argument it is clear that actuality is prior to potentiality in this sense too, i.e., in respect of generation and time (Met. 1049b30-1050a3).

Aristotle introduces this passage by stating that what is generated must be generated by something of its same kind (*touto to eidei to auto*) (Met. 1049b29). The passage reveals that this principle refers not merely to the fact that a rational being begets a rational being, as a musician brings about a musician, but rather to the fact that a rational capacity is acquired through an activity of that same kind. Decisive is not that the learning subject requires another subject possessing the capacity to be learned but that she must undertake relevant activities to acquire the corresponding capacity. Hence, the key argument reads: what is actualized as a rational capacity is of the same kind with the activity by which it is acquired.

Now, this activity must be itself of the same kind with the capacity to be learned, that is, of a rational kind. But an activity of a rational kind requires the conceptual understanding of itself, of the rules governing it. Therefore, the quibble arises: how could one engage in such an activity without possessing the concept of it? Does the activity by virtue of which a specific sort of knowledge is acquired not presuppose a similar sort of knowledge?

If the activity by virtue of which a rational capacity is acquired would be itself the exercise of that capacity, then the capacity to be acquired—the knowledge pertaining to it—would already be possessed. But it is absurd, as Aristotle argues in the *Posterior Analytics*, to assume that one must possess knowledge in the way in which one learns it (PA, 71b6–8). We need to distinguish between what one must possess in order to be able to learn and the knowledge one comes to acquire. Unless we make this distinction, “we shall be faced with the dilemma reached in the

Meno: either one can learn nothing, or one can only learn what is already known” (PA, 71a29–30). What is required for learning cannot have the same form as that which is learned—the condition for knowledge cannot have the form of acquired knowledge.

In seemingly granting that the learner must possess something pertaining to science, Aristotle acknowledges a potentiality that makes it possible for the learner to undertake activities of the sort that are the science in the act without possessing anything of the science. If a child would be short of such a potentiality, then the process by which the child acquires rational capacities would be unconceivable. A child cannot be initiated into a space of reasons, that is, in activities that involve as such an understanding of what they are and why they are exercised, without a potentiality to recognize reasons as such. Otherwise, education would be a matter of inculcating habits without genuinely involving the understanding of the child. The outcome of education would not be a rational being, but another sort of explanation would be required to account for what we falsely hold to be conceptually autonomous beings.⁴

Therefore, a child cannot be short of the appropriate potentiality. While it is tempting to understand this potentiality as a sort of primitive knowledge one must possess to be able to undertake activities of acquiring particular knowledge, I should now explain more why that potentiality cannot contain knowledge, however general. I will then clarify why this does not mean that acquiring reason is a matter of arbitrary formation. The next two steps are meant to loosen the grip of the quibble. The purpose is to come back to Aristotle's insight into the primacy of activity which the quibble evades in the first place.

3 | THE FIRST POTENTIALITY

We make sense of forms of life in light of their characteristic activities. We also understand living beings as having characteristic capacities by being members of their species. For instance, we understand the travel of an albatross as an exercise of its characteristic capacity. But we also understand that capacity as a potentiality an albatross has by nature—by belonging to the species it belongs to. Although we distinguish between this first potentiality as a mark of its species and the individual development of the capacity, we understand this development as the maturation of a potentiality that the individual animal has by nature.

To grasp a living being in light of its characteristic capacities is to grasp it in light of the species or the life-form it instantiates. The capacity to fly, in light of which we grasp the life of the albatross, is a sort of locomotion. Locomotion, like perception, is a kind of capacity—call it “faculty.” Perception as a faculty is actualized in specific capacities like seeing and hearing, as locomotion is actualized in capacities like flying or swimming. To grasp a living being in light of a faculty is to grasp it in light of a genus or kind of life-form. A faculty thus distinguishes a kind of life—for example, perception distinguishes animal life.⁵

We grasp human beings in light of the faculty of reason. As faculty, reason describes a kind of capacity, capacities that can be exercised only from a conceptual understanding of their rules. The faculty of reason—*logos*—does not designate a distinct capacity, say language or reflection, but the fact that the life of human beings is *meta logou*, that is, conceptually self-conscious. Human beings act from an understanding of what they are doing and why they are doing it. To have this faculty is to be rational, a *zoon logikon*, a language-using animal. To be rational is to be able to articulate an account of one's activities. This faculty—*logos*—shapes human life even when an explicit account remains absent.⁶

If reason distinguishes a kind of life, a conceptually self-conscious life, does this mean that reason is also a first potentiality humans have by virtue of being the living beings they are? The distinction corresponds to the twofold question Aristotle addresses at the beginning of chapter III.4 of *De anima*: what distinguishes reason as such and how reason comes about (*ginetai*). In the first sense, reason figures as the faculty of a being that knows (*ginoskei*) and understands (*phronoi*). But of reason in the second sense, the sense of a first potentiality, Aristotle says in the same chapter that it is “in actuality none of the things which are before it reasons” (DA, 429a25). While perception describes capacities that a living being can exercise by already having them, reason describes capacities that a living

being must acquire in order to exercise. But is it not necessary that reason, the faculty shaping human life, is also a first potentiality of human animals, enabling them to undertake rational activities? Of reason in this sense, “before learning and discovering” (DA, 429b), Aristotle says that it is nothing actual: it is not in the way in which other things, for instance a brain, are before we reason. Reason as a first potentiality has no other nature than being potential (DA, 429a21–22).⁷

What would it mean for reason to be a natural disposition for rational activities—to be more than a pure potentiality, to have a determinate nature as a first potentiality? This brings us back to the predicament posed by the quibble: if human beings are by nature able to undertake activities of a rational kind, then they need to possess a primitive power for such activities. If such activities rely on the grasp of relevant concepts, then this primitive power must be a power for concepts. To be able to take in view intelligible forms at all, rational animals must possess the most formal concepts in potentiality. This is what it would mean for reason to have a nature as a first potentiality: to be a dormant power for intelligible forms, waiting to be awakened.⁸

Why does Aristotle insist that reason has no other nature than being potential? We have said that reason resides in the conceptually self-conscious character of human activities. Activities that instantiate the faculty of reason are always exercises of specific rational capacities. Among them we can count capacities such as science, craft, virtue. They materialize in particular abilities like medical science, the craft of housebuilding, the practice of promise. A capacity is conceptually self-conscious, *meta logou*, insofar as it is exercised from the grasp of the order pertaining to that kind of activity. This means that the concept or *logos* from which an activity is rationally undertaken pertains to that specific kind of activity.

For instance, the knowledge pertaining to the craft of housebuilding concerns the activity of building houses and the things falling under its purview. There is certainly a general logic pertaining to crafts, materialized in particular abilities like housebuilding or computer programming. We could find, say, a common method in the practices of medical science and bird science, or provide an account of their logical form. An account of general principles pertaining to those scientific procedures would be an account of their *hexis*, their way of undertaking epistemic activities—a type of rationality. But that does not account for a fundamental scheme presupposed by any engagement in activities of the scientific kind. For that would imply that there is a sort of knowledge, even if purely formal, possessed before being acquired in activities concerning a certain kind of object. If reason describes the character of capacities that are conscious of their rules, and if these rules come in view from within specific kinds of activity, to possess reason does not mean to possess the forms of thought and action beforehand and independently of their employment in specific kinds of rational activity. Reason, the faculty for conceptually self-conscious activities, is actualized only when specific rational capacities are acquired and exercised. I will come back to the scope of this argument in Section 6.⁹

Since this line of argument undermines the substantive notion of reason as a predetermined power for intelligible forms, a pressing worry arises about the sense in which human beings are nonetheless potentially rational—provided that the meaning of reason as a first potentiality is empty. I turn to this worry since its apparent urgency conceals the scope of the Aristotelian insight into the relation between form and activity.

4 | NATURAL POTENTIALITIES

The idea that the first potentiality of reason is empty appears to suggest that our natural potentialities are like those of non-rational animals and, by implication, that our rational life is a matter of social habits inculcated on a naturally undetermined being. If reason is not part of our natural layout, then a mature human being appears to be a mere creature of habit, which does not really act from rules or reasons recognized as such.¹⁰

Now human beings differ from non-rational animals not only in view of the rational life they come to actualize but also in view of their natural dispositions, on account of which a human infant is a potentially rational being and not a mere animal. However, this does not mean that the natural dispositions distinctive of human beings account

for the rational capacities human beings come to acquire. Saying that a human infant is potentially rational on ground of being the living being it is does not mean that a human being is rational on the same ground. The latter would imply that rational capacities consist in the maturation of given natural dispositions. But to assume that our natural dispositions are primitive instances of later developed capacities is extravagant: there are no primitive capacities for medical science, the craft of building houses, or the practice of promising. To put it in a familiar terminology: while our first nature is the first nature of a potentially rational form of life, our second nature is not rational by virtue of our first nature. Reason, the faculty to exercise activities from a conceptual understanding of their intelligible order, is not part of our natural layout.

Take language, for instance. We say that human beings are language-using animals. By this we mean not only that they generally speak a language but that they essentially are beings capable of speaking a language. In what sense is language a first potentiality of human life? Language is a generic concept: any human being learns and speaks a specific language, like English or Japanese. No human being has the distinct inborn capacity to learn English or Japanese. Now we could be tempted to postulate a primitive, generic capacity for language. But it is questionable whether we can identify what holds of language in the generic sense, that is, what holds both of English and Japanese, with a natural disposition: whether a formal account of languages in general can be reified as a distinct innate capacity. This would imply that an individual comes in the world with a preformed linguistic organ, entailing an inbuilt schematism waiting to be awakened.¹¹

As the human organism is such as to enable us to learn a language, a human infant is potentially rational insofar as it has natural dispositions that enable her to develop conceptually self-conscious capacities. But this does not mean that the rational capacities we come to acquire have an equivalent among our natural dispositions. A human infant is potentially a doctor insofar as she has natural potentialities that allow her to learn medical science one day, but not insofar as she has a primitive capacity for medical science. While the activities by which rational capacities are acquired are possible on account of our natural dispositions, they are not exercises of such dispositions. In learning a language, I am not exercising a natural capacity for language possessing in potentiality what has first to be acquired. Nor can I explain learning a language in terms of the exercise of more basic, non-linguistic dispositions like using the vocal cords. Such dispositions are of a different logical order: I cannot explain what it is to learn mathematics in terms of new neuronal connections. The act of learning is the exercise of the capacity to be acquired by learning—and not the exercise of a more basic, natural disposition.¹²

Now one could point out that the link between our natural dispositions and rational life cannot be accidental; human beings are not merely potentially but essentially rational. This means that it is not by chance that humans learn a language and lead a conceptually articulated life; or that they build houses, make sense of natural regularities, attempt to heal the sick, and establish norms to get along with each other. Even if we insist that natural dispositions do not entail the knowledge we acquire by learning, we know that the natural dispositions of the human species are potentialities of a rational being by virtue of the knowledge we have of the activities they allow us to undertake. As Michael Thompson (2008) has argued, we determine the life-form we instantiate by virtue of the knowledge we have of our self-conscious life from within—this is not knowledge we obtain by an empirical account of the human organism. Hence, so the argument goes, we can infer the potentially rational character of our natural capacities from the self-conscious character of our rational capacities.¹³

This argument appears to challenge the Aristotelian distinction between capacities we have by nature—capacities we exercise because we have them, such as sensory capacities—and rational capacities—capacities we acquire by engaging in corresponding activities (cf. NE, 1103a26-32). If we can determine the human organism as the organism of a potentially rational being by virtue of having actualized a rational life, what is the point of drawing a line between our natural potentialities and the rational capacities we come to acquire? What is at stake in the Aristotelian distinction between natural capacities and rational capacities?

First, the distinction between natural and rational capacities is not a distinction between capacities explainable in terms of an empirical account of an organism and capacities that cannot be so explained. We also perceive and study the organism of a non-human animal in light of its characteristic activities. Giving an account of the natural

dispositions of an organism independently of what kind of activities they are dispositions for is not an account of such dispositions. For instance, giving an account of the organism of an albatross independently of flying as its characteristic activity would not be an account of that organism. The wings of an albatross do not merely happen to serve for a certain manner of flying, even if there is a state in which the hatchling does not yet fly; a frozen in time image of an organism is not the concept of an organism. Natural capacities, while informing an empirical account of the organism, cannot be accounted for as such in the empirical terms of a natural science. Therefore, the distinction between natural and rational capacities does not coincide with the distinction between first and second nature, if first nature is to mean, as McDowell (2004) proposes, that which can be accounted for by natural sciences.

Second, the Aristotelian distinction cannot simply mean that we do not have rational capacities by birth. An albatross is equally not born with the capacity to fly but acquires it by practice. Being a kind of organism is for both humans and albatrosses not a sufficient condition for the development of their characteristic capacities. The distinction between natural and rational capacities is thus not a distinction between innate and acquired capacities.

Third, the distinction also cannot mean that rational capacities do not belong to the human species in the same way that the capacity to fly belongs to the albatross species but are rather specific for the human life-form in the broader sense of a socio-historical subjectivity.¹⁴ For the sense in which rational capacities do not come by nature cannot be a sense in which they are somehow foreign to our species, straining and transforming our animal nature from without. This is a main point of Aristotle's refutation of the quibble: the change occurring in the learning process cannot be understood as an alteration. This would conjure up the image of a fantastic transition: a natural being short of potentialities for concepts would have to turn into the opposite state of a rational being. If the process by which we acquire rational capacities were not natural for our life-form, we could never make sense of how such a being can be initiated in the conceptual realm. Learning a language does not come unnatural to a child. Therefore, the purpose of the Aristotelian distinction is not to contrast the way in which rational activities belong to our life-form with the way in which the characteristic activity of a bird belongs to its life-form.¹⁵

What is then the relevant sense in which rational capacities do not come by nature—and, by implication, the relevant contrast between rational and non-rational life-forms?

A capacity entails a measure of the activity in which it is exercised. The measure of the capacity to fly is determined by the constitution of an organism placed in a certain environment. In this sense, the capacities of an animal are bound to its species. By contrast, the measure of housebuilding is not simply determined by the constitution of the human organism placed in its environment. If, in exercising an activity rationally, we have a concept of the rules we are following, those rules are not provided by our natural layout. Our capacity to articulate rules enables us to follow rules that go beyond the necessities of our species. Thus, the measure of rational activities is not grounded in the potentialities we come with by being the animals we are. In this sense, rational capacities are not bound to the human species. Even if the human species draws a boundary for the activities we can undertake, as housebuilding responds to some natural necessities, the measure of conceptually self-conscious activities is not simply given by the placement of our organism in a certain environment.¹⁶

The distinction between natural and rational capacities therefore lies in the fact that the measure of rational capacities is not determined by the natural dispositions required to engage in rational activities but comes in view only from within the relevant activities. In the next step, I explain what this means. I hope to have so far shown that pondering if our natural potentialities are sufficient or insufficient in providing the rules of rational activities only evades the Aristotelian insight into the primacy of activity in the way those rules come in view.

5 | THE PRIMACY OF ACTIVITY

I have mentioned that the primacy of actuality over potentiality is generally taken to refer to the pre-existence of social practices: rational capacities can be acquired insofar as they are possessed by other mature human beings. If rational activities require the grasp of their intelligible order, the measure of such activities is seen to reside in the

mature individuals possessing the corresponding capacities. This reading of Aristotle mirrors a general assumption in the philosophy of mind. In Wittgenstein's *Philosophical Investigations* we find the thought that to be able to follow a rule consists in having been trained (*abgerichtet*) to react to a sign or context in a particular way (Wittgenstein, 2001, §198, §206). The process of learning seems to be explained by the standard the capacities of mature human beings provide: the first acts of a child are guided by the example of other subjects in which the concept of a certain kind of activity resides (Kern, 2017a).¹⁷ There is also an intellectualist rendition of this pedagogical process, according to which learning consists in attaining the conceptual account—the “rational formula”, as Ross translates *logō*—of an activity by didactic instruction.¹⁸

The pre-existence of social practices constitutes a condition for the acquisition of rational capacities but does not account for the relation between form and activity Aristotle calls attention to. To be sure, engaging in rational activities is possible against the background of historically developed capacities, which are codified in conceptual accounts residing within a community. But the essential point I want to highlight is that such conceptual accounts rely on the engagement in the activities they codify. This engagement is a prerequisite for both teaching and learning. Let me briefly elaborate on this point.

In the normal and ideal case, the teacher provides instruction by virtue of having been engaged in the activity she provides an account of. For all sciences and capacities, Aristotle writes in the last book of the *Nicomachean Ethics*, “it is manifestly the same people who both transmit the capacities in question and are engaged in the corresponding capacities—for example, doctors and painters” (NE, 1180b33–35). The explicit account of an activity relies on the understanding one has acquired by having exercised that activity: this means to have learned what it objectively requires of oneself, to have experienced how it can be well exercised in light of the demands of the activity itself.

Likewise, children are instructed in what they are essaying, as they are acquiring concepts for what they are then and there taking an interest in. Gilbert Ryle has glossed on this aspect of learning, which he considers to be distinctive of “capacities of mind.”¹⁹ There are propensities which we pick up by rote without having to understand what we are doing—for instance, the habit of going to sleep on one's right side or walking upright. But one cannot acquire a rational capacity without employing an understanding of what one is doing: repeating a series of words in the same conditions cannot count as having learned a language. As with skills more generally, acquiring a rational capacity involves learning to exercise it in different conditions: knowing the right thing to do in various situations. Skills, crafts, sciences, and virtues differ in this respect from merely mechanical propensities, even if the latter are necessary for the acquisition of the former. In exercising a skill, we are following a rule, whereas mechanical propensities are a matter of mere regularity allowing for a sheer dispositional account. But being disposed to react in a certain way under certain conditions is different from following certain rules under certain conditions.²⁰

Distinctive of a rational capacity—say, of a craft like housebuilding—is the acquisition of a general knowledge to be applied in the particular exercises of that capacity. But such knowledge is not so much a matter of having received an instruction on how something is done as a matter of having acquired an understanding of how it is done by doing it. I cannot individuate the general knowledge pertaining to a rational capacity without having acquired it in appropriate activities. But I also cannot undertake appropriate activities without understanding the rules pertaining to that kind of activity. This is why a rational capacity cannot be explained merely in terms of a “custom”, as Wittgenstein appears to suggest: for if to understand a sentence means to understand a language and to understand a language means to master a technique (Wittgenstein, 2001, §199), then to acquire such a technique cannot be a matter of mechanical training but requires understanding what one is being trained in. A technique is a rational capacity in the sense in which it is acquired and exercised from an understanding of its rules.

Aristotle's insistence that experience is necessary and constitutive for the proper possession of a capacity turns on his decisive thought that the measure of a capacity relies on the order of the activity itself. Being experienced in a certain activity means to have a better understanding of the work (*ergon*), that is, the order proper to that activity: “For those with the relevant experience in each thing judge the works involved correctly, and they comprehend through what or how the works are brought to completion and what sorts of things are in harmony with what”

(NE, 1181a20–24). The account provided by the teacher appeals to the order of the activity itself: the rules articulated by the didactic instruction express a way of dealing with the objective coordinates of that activity. The objective coordinates are, to use a phrase of Aristotle's, the things that fall under the purview of that activity: "that activity is best that belongs to what is in the best condition with a view to the most excellent of the things falling under its purview" (NE, 1174b18–20). For instance, housebuilding is concerned, among other things, with light, ventilation, and the quality of the materials, as the house to be built must stand. The objective coordinates of dwelling and building help me understand that constructing a house on sand is foolish and that precluding a natural source of light is impractical. This is decisively different from merely following convention. Since the instruction appeals to a standard lying in the activity itself, the pupil has the possibility to readjust the account of the teacher in accordance with the measure provided by that activity.²¹

The proper possession of a rational capacity resides thus in a clear understanding of what belongs to the order of the activity concerned and what is right in respect to that order. Aristotle frames this thought in the first book of the *Nicomachean Ethics*, in the so-called *ergon* argument passage: "any activity is well performed when it is performed in accordance with the excellence proper to it" (NE, 1098a15–16). It is not difficult to see how this plays out in the case of skills. Take swimming for instance. One learns to swim only by being confronted with the objective demands of being in the water—one cannot learn to swim just by listening to verbal instructions. Acquiring the capacity to swim does not mean to learn a formula of how swimming is done but resides in undertaking activities pertaining to swimming before one acquires the capacity to swim and engaging with the objective conditions in which swimming is done.

Since the measure of swimming is provided by the objective coordinates within which an organism can move through water, swimming does not require a conceptual account of itself—even if human beings can articulate such an account. But how does the thought that the excellence of an activity rests on itself and on its objective coordinates apply in the case of capacities that rely as such on a conceptual account of themselves? Hegel once used the analogy that, as one cannot want "to learn to swim before venturing in the water," one cannot want "to know before one knows": demanding a rational formula of what knowledge is in order to know would be analogous to "an attempt to swim without going in the water" (Hegel, 2010, §10). However, while we can make sense of the struggle of someone trying to swim without having the required skill, let alone a conceptual account of it, we can hardly make sense of the exercise of a conceptually mediated activity without the possession of the relevant concepts—how one could make an addition without having the concepts of number and addition, promise without the required notion, or build houses without having in view what a house is supposed to be. That being so, how could the example of swimming work as an analogy for capacities like sciences and virtues?²²

6 | FORMS

The thought that the conceptual framework establishing the measure of a rational activity relies itself on a measure determined by that activity appears circular. There is no medical science without a palette of concepts delimiting the objects and methods of that science, as there is no political life without concepts—norms and institutions—shaping social practice. If the intelligible order of such activities is mediated by a conceptual apparatus, how can the conceptual apparatus itself rely on the order of that activity?

This circularity is central to the primacy of activity in acquiring reason. Struggling with this circularity, I argue, is based on a conflation between our capacity for concepts and our conceptual apparatus. Before I discuss this conflation, I would like to briefly outline the innocence of the circularity. This lies at the heart of Aristotle's *ergon* argument in the *Nicomachean Ethics*: the fulfillment of a rational life consists in the good exercise of activities of a rational kind. If what it is to play the lyre well is determined by the activity of playing the lyre, the excellence of conceptually self-conscious activities (*energeian kai praxeis meta logou*) is determined by the exercise of activities of that kind (NE, 1097b25–1098a18).

To begin with, the sense in which human beings grasp the intelligible order of their activities is not a sense in which they possess an explicit account of the rules governing them. It is only a philosophical tendency to assume that the explicit account of reason—what human thought articulates when it turns toward itself and discovers that its activity is governed by conceptual rules—is a prior condition of rational activity as such, that is, to mistake a logical achievement for a genetic requirement.²³ This is to assume that the philosophical work of articulating the categories that come to bear in thought and action is at once registering the formally predetermined character of a first potentiality for reason. But the articulation of formal concepts is possible against the background of having been engaged in activities in which they come to bear. Formal concepts come to bear on our experience of the world insofar as they come in view from within that experience. Proving their objective, that is, necessary character for our experience of the world does not prove that they are a genetic requirement. To be able to make an addition, I need to understand what I am doing but I do not need to have an explicit account of the nature of numbers and addition. I grasp the required concepts along with the exercise of the activity in which they are brought to bear. I learn what numbers are by being engaged in activities in which quantity comes into play. The concept of addition attains the meaning it has by virtue of the activities in which it is acquired.

Aristotle advances such arguments with reference to medical science and political art. At the end of the *Nicomachean Ethics*, he highlights that “physicians too do not appear to come into being as a result of reading treatises,” but such treatises appeal to and seek to articulate the knowledge exercised in and acquired through the concrete practice of that science (cf. NE, 1181b2–6). The concepts pertaining to medical science come in view through the engagement with the things concerning the human body. There is an objective order entailed in that engagement which cannot be traced back to the one-sided contribution of a conceptual apparatus but is meant to be grasped by such an apparatus. By the same token, Aristotle complains about the belief, practiced by the sophists, that political art could be taught by those not experienced or engaged in political activities (NE, 1181a1–3). His decisive argument is that one acquires the political art by “living together with others in a political community” (1181a12–13). The knowledge pertaining to political art is knowledge that one acquires by being confronted with the objective coordinates of living together among others: the concepts that regulate that living together gain meaning through the engagement with the things that fall under the purview of social life.

These are examples of the Aristotelian innocence with respect to the circularity between a conceptual apparatus enabling a kind of rational activity and the activity providing the measure of that apparatus. I understand this circularity to mean that the concepts of a science bring together and spell out what is disclosed through the practice of that science: what scientific concepts grasp belongs to the order of the things falling under the purview of that disclosing activity. Frege once framed the bafflement about this circularity as follows: “language is supposed to have made reason possible, but how could humans have invented language without reason?” (Frege, 1972, p. 89). To dispel the apparent paradox, Frege points to the “circle” involved in the study of nature: observing the regularities of nature is possible on account of certain technological instruments, while these instruments are in turn possible on account of an already acquired knowledge.

I have mentioned that the struggle with this circularity—how could concepts come in view from within the activities they are supposed to make possible in the first place—rests on a conflation between our capacity for concepts and our conceptual apparatus. To equate that capacity with a conceptual apparatus means to conceive of the concepts governing our activities as coming into effect from without exercising them—either from a preformed power of the subject or from a self-standing socio-linguistic community. In this picture, rational activity is a coming together of an empty determining form on the side of the subject and a determinable content on the side of the world. The picture further forces our understanding of reason into the dichotomy between the substantive and the derivative view. In the substantive view, reason figures as a primitive power entailing an apparatus of the most formal concepts. In the derivative view, the conceptual realm figures as a matter of natural-historically derived habits: justifying the objectivity of conceptual rules appears to be a rationalizing reconstruction alien to the way in which habits of our thought are in fact generated.²⁴

To be sure, our capacity for rules and regularities is actual only in the form of a conceptual apparatus. But a conceptual apparatus is logically distinct from what concepts are meant to grasp and regulate. For instance, medical concepts are meant to objectively engage with health and disease: since what they articulate is dependent on our bodily condition, we must allow for a capacity to amend and revise the medical concepts accounting for health and disease. Thus, our capacity to take in view rules and regularities must be distinguished from the codification of such rules and regularities, which is an achievement of that capacity. If we conflate our capacity for concepts—taking in view rules and regularities by objectively engaging with the world—and our conceptual framework—the notions and theories codifying rules and regularities—, then we cannot make sense of how our conceptual apparatus is objectively engaged with the world. Only insofar as the forms by which we make sense of the world come in view from within the exercise of activities in the world, can the objectivity of our epistemic and ethical concepts be vindicated.

7 | CONCLUSION

I have argued that we should recover the Aristotelian thought that, if human beings are able to exercise activities from an implicit understanding of what these activities are, the understanding pertaining to such activities is itself acquired by exercising them. Aristotle's insight is that rational capacities take their measure from the exercise of relevant activities: the concepts governing rational activities express the engagement with the things objectively falling under the purview of those activities.

This innocent thought is obstructed by this quibble: how could we exercise rational activities in the first place if we did not have the required capacities? The quibble persuades us either to presume that we must already possess a formal conceptual scheme to be able to engage in conceptually self-conscious activities; or to assume that, in the absence of such primitive knowledge, the conceptual apparatus enabling our experience of the world is instilled in us as a matter of socio-historically derived habits. Grappling with the quibble, we are tempted to misconceive our natural potentialities either as overdetermined or underdetermined, that is, either as more than potentially rational or less than rational. This dilemma is symptomatic for contemporary debates on the relation between reason and nature, I have claimed.

I have first argued that, while our natural potentialities enable us to undertake activities of a rational kind, they are not capacities for specific rational activities. If our natural potentialities were primitive capacities subject to maturation, the power of reason would be limited by its predetermined character: we could hardly make sense of a genuine engagement with the world and of the possibility of meaningful revisions of our conceptual apparatus. To avoid this implication, that is, the substantive view that our mind is pre-programmed, we must stress that our potentiality for knowledge does not entail knowledge, even if our natural potentialities are of a distinct kind—potentialities of the homo sapiens. We do not need to overdetermine our natural potentiality for reason to make room for the fact that our natural capacities allow us to take in view rules and regularities.

Second, I have argued that a socio-historically inherited conceptual apparatus cannot account by itself for what it is to be a rational being, that is, a conceptually autonomous being. To be sure, conceptual frameworks are the result of a socio-historical development. But the precedence of social practices rather speaks for the primacy of activities in the development and acquisition of our capacities, both phylogenetically and ontogenetically.²⁵ We acquire concepts by exercising the activities concepts are meant to regulate and take hold of. This means that conceptually codified rules point to the inherent measure of those activities. If this were not the case, human beings would be captive to a parochial normative framework and not able to question, revise and get the better of the conceptual frame they inherit. The very idea of reason as a capacity that enables us to move with a certain licence in the conceptual realm would be inconceivable. Hence, while the conceptual frameworks by which we come to make sense of the world are socio-historically transmitted, they rely as such on the objective engagement with the world. To overcome the derivative view that reason is a matter of arbitrarily constructed norms, we must insist that, while our natural potentialities do not entail a preformed apparatus seemingly required for the acquisition of knowledge, they do enable us to objectively take in view rules and regularities.

If we thus free ourselves from the bafflement about our natural potentialities, we can recover the Aristotelian insight that we acquire concepts by being engaged in the activities in which those concepts are brought to bear—by understanding the objective coordinates those activities are concerned with. Spelling out the regularities of natural phenomena is not independent of the objective conditions of our epistemic activities. Regulating the aspects of our living together is not independent of what there is to regulate: social norms do not merely create the social condition we live in, but they shape it by responding, for better or worse, to the objective coordinates of our social condition.

However, the objectivity of reason does not provide a warrant for the concepts governing our epistemic or social activities. As there are many ways in which we could build houses and various ways in which we make sense of natural regularities, there are many ways in which humans conceptually navigate and regulate their living together. But it is essential to stress that our conceptual struggles are objectively engaged with the coordinates of the human world precisely to uphold the significance and legitimacy of such struggles. The substantive and the derivative theory are strategies to evade such struggles because the conceptual apparatus is taken to be either given or arbitrarily constructed. But the question of how to make a better sense of nature's regularities and the question of how to better navigate, practically and socially, the *conditio humana* is possible because the conceptual framework we start with is testimony to the fact that we have already been engaged with the world.²⁶

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ENDNOTES

- ¹ For a convincing argument why *energeia* should be understood as activity, paradigmatically an exercise of a capacity, in contrast with its translation as actuality, whose counterpart is mere possibility, cf. Kosman (2013).
- ² In his commentary of *Metaphysics Theta*, Jonathan Beere (2009) argues that the primacy of *energeia* in time refers to a human being in actuality that produces a human being in potentiality, “which then, if all goes well, develops into another being in *energeia*” (Beere, 2009, p. 291). With respect to learning, Beer argues that the primacy of *energeia* refers to the active power of the instructor, while the child possesses a passive power, being the patient in the process of acquiring capacities (Beere, 2009, p. 292). I will argue that this rendering does not address what Aristotle says about the acquisition of a rational capacity, namely that a child learns insofar as she engages in activities of a rational kind without possessing the corresponding capacities. The child is also a patient in relation to the activity she undertakes.
- ³ I have adapted the translation. It is striking that Ross translates “*logo*” as “rational formula” (see Section 5).
- ⁴ Rödl (2016) develops this argument and insists that the idea of a change of an animal into a person is incoherent. The notion that education consists in the impression of habits on a child fails to recognize the capacity required for the acquisition of habits of a rational kind, namely the consciousness of a concept or rule as such.
- ⁵ I am thankful to the anonymous reviewers for encouraging me to clarify the relation between a capacity like flying and a faculty like locomotion, and how this distinction applies to the faculty of reason.
- ⁶ On the rendition of the Aristotelian concept of *logos* as a capacity to grasp and generate accounts cf. Moss (2014).
- ⁷ Aristotle's remark that reason is nothing independently of being informed by what it thinks equally applies to mature capacities for thought—not only to the potentiality characterizing a human infant. My emphasis on a first potentiality of reason is justified because Aristotle makes that remark in the context of raising the question of how reason comes about, speaking of its potentiality before learning and discovering (DA III.4). My emphasis is meant to underline that reason as a faculty is nothing independently of the capacities in which it is actualized; nothing apart from the activities in which some intelligible forms or others come into play. I owe this clarification to John McDowell.
- ⁸ The predicament is old and familiar since Plato: the forms which reason uncovers when it turns towards the conditions of intelligibility cannot be seen to belong to the realm of change which they make intelligible in the first place. If forms were under the sway of change, there could be no reliance on the order of being they appear to disclose. Forms must have a certain kind of independence in respect to the realm they make intelligible; and if forms are disclosed as such through a distinctive capacity, then philosophy sees itself challenged to articulate the relation of that capacity (*nous, intellectus, reason*) to the realm of change.
- ⁹ I argue in Section 6 that the articulation of formal concepts is a logical achievement, possible against the background of having been engaged in activities in which they objectively come to bear, and should not be understood as spelling out a

genetic requirement, as if the potentiality for reason would be formally predetermined. I can provide a formal account of categories (*eidai*) because I have seen (*eido*) them in my experience of the world. If, by the time an individual properly engages in a science, she must have acquired general knowledge about the world, that is, a range of formal concepts and more particular concepts relevant to that science, this only strengthens the Aristotelian point that any sort of knowledge is appropriated by being engaged in specific activities.

- ¹⁰ The notion of the human as a “mere creature of habit” implies that habits are mechanically acquired propensities which do not demand an understanding of what they are about, like sleeping on one’s right side. I am here ignoring that this is not an adequate concept of human habits. I assume that, while nail-biting might be a mechanically acquired propensity, the habit of brushing one’s teeth presupposes that one understands what one is thereby doing.
- ¹¹ While I cannot properly contest here Chomsky’s hypothesis (cf. Berwick & Chomsky, 2016), I would like to point to Tomasello (2003), who argues that, while human beings must be biologically prepared to acquire a language, they are not born with a determinate, formal pre-language, as it were. Tomasello explains that learning a language presupposes natural potentialities or learning mechanisms—like shared intentionality and pattern-finding—that are more complex than those traditionally thought to be available to children, namely association and induction. It was the assumption of scarce means of learning, Tomasello contends, that rendered Chomsky’s hypothesis of an inborn universal grammar compelling.
- ¹² For a similar argument concerning the acquisition of language being the exercise of the capacity to be learned, cf. Conant (2020). Rödl (2018) captures this by saying that sciences as second powers do not spring from a first power of knowledge. If the power of knowledge were a first power to know anything determinate or to acquire second powers, then its determinate nature would limit what it can apprehend: what can be known would depend on a given character of the subject. The fact that our potentiality to acquire sciences is empty reflects the objectivity of our capacity to know, Rödl rightly argues. I argue in Section 6 that the sense in which a particular science springs from itself, as Rödl puts it, is the sense in which its measure is provided by the kind of activity pertaining to it.
- ¹³ The idea that our natural capacities are as such of a rational kind has been coined as a transformative theory of reason and opposed to an additive theory (Boyle, 2016). This distinction concerns the relation between intellectual and sensory capacities: while the additive theory conceives of intellectual capacities as higher capacities added to the lower capacities we share with non-human animals, the transformative theory maintains that our natural capacities—desire and perception—are pervaded by reason. I cannot discuss the relevance of this distinction in this paper. I only remark that both additive and transformative theories can be understood either as substantive—if they take the intellectual principles added to or pervading sensibility to be self-standing and given—or derivative—if they take the addition or the transformation to be brought about by habituation. Hence, the transformative theory of reason faces the dilemma presented at the beginning of the paper: whether our natural capacities are always already rational or transformed by a process of upbringing. This clarification is indebted to a remark from an anonymous reviewer.
- ¹⁴ Michael Thompson (2013) has protested the classical contrast between human life and rational existence, portrayed as “second nature,” “Geist,” or “Dasein” and seen to be shareable by humans, Martians, and Angels. Thompson rightly argues that, when we restrict the human to a category of nature while going about portraying a philosophically ethereal subjectivity, we are being misguided by a constricted idea of nature. But the fact that we are rational only as the living beings we are still does not mean, I contend, that we actualize rational capacities just by being members of the human species—because, as I argue in the following, the measure of human activities is not provided merely by their placement as living beings in an environment.
- ¹⁵ By this, I only mean that we do not have sensible reasons to presume that human animals are short of the potentialities required to undertake activities of a conceptual kind. In the frame of the Aristotelian psychology, the thought that actualizing reason is a characteristic human activity could also be rendered as follows: reason as the principle of human life is a first actuality (*entelecheia he prote*) determining the potentialities of our organism and the changes our life-form goes through. The change (*kinesis*) involved in the learning process is thus itself the exercise of a characteristic human activity, of an *energeia* of a higher order. For a clear exposition of this notion, cf. Lear (1988). I avoid this generic description of human upbringing because it could be taken to allude to a dormant power guiding our upbringing and being awakened in the process and thus to advocate a substantive theory of reason.
- ¹⁶ Rational capacities rely on dispositions, processes, routines that are not the object of conceptual awareness. But this does not undermine the spontaneity of rational capacities, as if the dispositions and processes they rely on were sabotaging operations behind our back. They are instead constitutive for the exercise of reason. cf. Haase (2017).
- ¹⁷ Andrea Kern (2017a) argues that the standard of a rational capacity is provided by another subject possessing the capacity: the learning subject performs acts “dependent on the exercises of the relevant capacity of another subject to which the learning subject responds” (Kern, 2017a, p. 265). Kern (2017b) elsewhere qualifies this by insisting that the learning subject must already possess the kind of capacity to be acquired: a human infant must already be a rational being. The

predicament is again illustrative of the dilemma of overdetermining or underdetermining our natural potentiality for reason.

- ¹⁸ One might believe to find support for this rendition in a passage at the beginning of the second book of the *Nicomachean Ethics*, where Aristotle distinguishes intellectual virtues which “result mostly by teaching” from moral virtues which are the result of habit. But Aristotle immediately specifies what teaching means by stating that an intellectual virtue “requires experience and time” (NE, 1130a15). For an intellectualist rendition of knowledge-how in terms of propositional knowledge cf. Stanley and Williamson (2001).
- ¹⁹ cf. Ryle (2009, p. 130): “trying to comply with the teaching is part of trying to do the thing, and as the child learns to do the thing, he also learns to understand better and apply better the lessons in doing the thing”.
- ²⁰ I am grateful to an anonymous reviewer for urging me to specify the role that habituation plays in the acquisition of skills and to clarify the relation of skills to mechanical propensities.
- ²¹ I thank an anonymous reviewer for pushing me to explain why the rules governing the capacities we acquire cannot be reduced to what we have been taught. The argument is that the instruction itself draws upon a measure lying in the activity itself. In learning the craft, the disciple does not merely imitate the master but learns how to be creative in exercising that craft, in the light of what objectively pertains to that activity.
- ²² On a detailed discussion of the analogy between skill and virtue cf. Annas (2011).
- ²³ Ryle (2009) describes this tendency as a para-mechanical dramatization of didactic talk and attributes it to modern epistemology: the explicit account we give of the rules governing rational behavior is hypostatized as a condition of that behavior and as a parallel ongoing mental process. The more general logical achievement I have in mind is the articulation of the categories of rational activity as such, that is, the formal concepts that come to bear in thought and action, in a distinctive activity, namely philosophy, which is aimed not at particular capacities like counting or promising but at the faculty of reason. The specific nature of this activity is another topic.
- ²⁴ The derivative view begs the question of how these reconstructive capacities are possible in the first place. One must either consider the reconstructive capacities to be themselves the result of a non-rational process, which would strip them of any legitimacy; or take them to be somehow given, which would again open a chasm between our being in the world and our reconstructing rationality.
- ²⁵ On related hypotheses in recent evolutionary developmental biology cf. Tomasello (2018).
- ²⁶ This work was funded by the German Research Foundation (DFG)–Project 424457659 and carried out during my stay at the University of Pittsburgh. I want to thank John McDowell for his insightful observations and discussions. I am grateful to the friends who commented on earlier versions of this project, to Robert Brandom, Susan Haack, and my peers at the Toronto conference on the concept of reason in 2019. I am thankful to the anonymous reviewers for their helpful criticism and suggestions for improvement.

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