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ANIMAL NORMATIVITY

abstract

Many philosophers think that human animals are the only normative creatures. In this paper, I will not provide reasons against such a claim, but I will engage in a related task: delineating and comparing two deflationary accounts of what non-human animal normativity could consist in. One of them is based on Hannah Ginsborg's notion of primitive normativity and the other on my conjecture that some creatures may have first-order robust "ought-thoughts", composed by secondary representations about how things should be or about how one should act. Once I have sketched both models, I will focus on identifying some cognitive differences between creatures merely having primitive normativity and those also having robust ought-thoughts. Finally, I will draw a few tentative remarks on the kind of empirical evidence that would suggest that an animal has one or another of these two kinds of normativity.

keywords

primitive normativity, ought-thoughts, secondary representations, animal minds

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1. Introduction

Human beings are normative creatures. We follow practical norms that give us reasons to act in certain ways, social norms that regulate how individuals must act as part of a social group, moral norms that guide the morally required behavior or the correct moral judgements, etc. We also have a capacity to display robust responsiveness to (and an understanding of) norms, as well as a capacity to assess our behavior, and that of others, through a normative lens. Based on these facts, Lorini (2018) has characterized humans as "nomic animals", i.e., animals capable of acting in light of norms. Giovani Conte (2000), in turn, introduces the term "nomotropism" to refer to this capacity that human agents display to orient themselves according to norms.[1]

There is also a widespread consensus that humans are the only normative animals (Brandom, 1994; Korsgaard, 2006; McDowell, 1994; Schmidt & Rakoczy, 2019). However, several recent dissenting voices have defended that some non-human animals can actively respond to norms and even have some understanding of them. Philosophers within this group usually focus on moral norms and moral agency (Bekoff & Pierce, 2009; de Waal, 2014; Rowlands, 2012; Rudolf von Rohr *et al.,* 2011). Nevertheless, Vincent, Ring & Andrews (2019) and Lorini (2018) have suggested a different methodological approach to the problem of animal normativity. They urge us to step back from the debate on whether non-human animals follow moral norms to focus – at least temporarily— on the broader issue of whether some animals have a general capacity to act in light of norms. Following their lead, in this paper I will focus on examining and comparing two deflated accounts of normativity that might be better suited to be extended to non-human animals than other orthodox accounts.

This is the structure of the paper: I will begin by presenting a highly intellectualist model of normativity that I will call *the reflexive model.* According to it, normative creatures must have an explicit grasp of norms *as such,* as well as a capacity to reflect on whether their actions or their motives conform to them (Section 2). This demanding approach does not seem to be a good option for those interested in crediting non-linguistic animals with any capacity to respond to norms and display normative behaviors. But this is not the only possible way of

1 Interestingly, the capacity to act in light of norms may include more than being able to act in ways that conform to them. It can also include the capacity to guide one's behavior according to norms even when one is not actually following them but, for example, trying to break them without suffering the consequences, circumventing them, etc. See Lorini (2018) and Conte (2000).

thinking about such abilities. In Section 3, I will briefly delineate a minimalistic alternative, based on the notion of "primitive normativity" (Ginsborg 2011a; 2011b). In addition to this, in Section 4, I would like to propose a different deflationary account of normativity, based on the notion of "robust ought-thoughts", showing why it is more demanding than primitive normativity but less exigent than the reflective model. This paper's main aim will be, then, to compare and discuss these two deflationary models of what non–linguistic animal normativity could consist in: the "primitive normativity model" and the "robust ought-thoughts model". In each case, I will briefly examine the cognitive differences between creatures having primitive normativity and those having robust ought-thoughts. Based on them, I will draw a few general remarks on the kind of animal behavior that seems to be easily explainable in terms of primitive normativity and the kind of empirical evidence that would suggest, instead, that an animal has robust ought-thoughts.[2] Admittedly, a more detailed analysis of relevant empirical evidence would be needed to conclude that any of these deflationary models can be fruitfully extended to the behavior of non-human species. I will leave such a task for a future occasion. My only aim here is to roughly examine and contrast some theoretical alternatives that those interested in the problem of animal normativity may end up finding explanatory useful.

2. The reflexive model

According to a long Kantian tradition, nomic animals do not only act because they have some psychological motives to do so. Rather, they can also act in a certain way because the abide by a norm. Now, how should such a capacity to act in response to a norm be understood? This is how advocates of this model will likely respond: for an agent's action A to be a case of responsiveness to a norm, she must represent the norm, acknowledge its legitimacy, correctly infer (or somehow recognize) A as the action prescribed by it and, finally, do A, because it is the behavior that the norm prescribes (Okrent, 2018).

Korsgaard (2006) proposes a slightly different version of this account. According to her view, normative creatures do not merely act guided by their psychological motives but, rather, they are capable of gaining control over their impulses by inspecting them and judging whether there are good reasons in their favor. Moreover, such a capacity is what distinguishes humans from other animals. In fact, using a term coined by Harry Frankfurt, Korsgaard claims that non-human animals are mere "wanton": they just act on their uppermost instinct, desire or emotion. Human animals, on the contrary, have a capacity for normative self-government that allows them to adopt a reflexive distance from their motives and ask themselves whether they should follow them or not.

In brief, according to the reflexive model, normative creatures must be capable of: i) explicitly thinking about norms as such and ii) taking norms as objects of further thoughts (in order, for example, to consider them as legitimate and to assess whether their behavior conforms to them or not). Additionally, in Korsgaard version, they must be able to: iii) have second-order thoughts about the adequacy of some of their motivational states in light of those norms. Then, these creatures must not only be capable of making normative judgements about the world or their actions. They must also be capable of making similar judgements about their motivational states and the grounds that they have to follow them (or not).

It seems difficult to extend such a restrictive view of normativity to non-human animals.[3]

2 Even though I think that these are general models that one may apply to explain different kinds of nomic behavior in non-human animals, my brief discussion of empirical examples will focus on behavior suggesting a capacity to act in light of social norms. A more encompassing treatment of these issues should include how these two deflationary models could be extended to evidence suggesting responsiveness to other types of norms.

3 Even if one is not interested in the issue of animal normativity, it is possible to find compelling criticisms against such models in Kornblith (2012) and Rowlands (2012).

After all, it is highly controversial whether there are non-human animals that have second-order thoughts or reflective capacities (Bermúdez, 2003; Rowlands & Monsó, 2017), and even those philosophers and scientists who think that humans are not the exclusive possessors of such capacities are only willing to attribute some of them to a few non-human species. However, there are other less demanding conceptions of normativity. The next two sections will be dedicated to exploring two deflationary alternatives of this sort.

3. The model of primitive normativity

Let us turn, then, to the two deflationary models of normativity that I will be interested in discussing and comparing. A central notion in the reconstruction of such models is that of "implicit norms". Implicit norms play a key role amongst those interested in defending minimalistic accounts of normativity (Andrews, 2014) and attributing at least a basic capacity to understand and follow norms to (some) non-linguistic animals (Bekoff & Pierce, 2009). However, the notion of implicitness that is associated with norms in these debates can be interpreted in several ways. According to one use of the notion, something is implicit when it is unarticulated or not verbalized (Brownstein, 2018). Since animals lack language, it is clear that, if they have some understanding of norms, it will be implicit in this sense. There are, nevertheless, other ways of understanding implicitness that are relevant to our discussion. One may think, for example, that those creatures that merely have a non-representational capacity to discriminate behaviors conforming to a norm from those deviating from it have an implicit understanding of this norm. After all, they lack any explicit representation – whether articulated in a public language or mentally represented– of the norm's content.

In this vein, Hannah Ginsborg (2011a; 2011b) has coined the notion of "primitive normativity" to refer to a kind of normativity that does not depend on conformity to an antecedently recognized rule or norm. According to Ginsborg, this basic kind of normativity consists in an awareness of the appropriateness of a response to a specific context that does not depend on the antecedent grasp of a rule or norm determining that response as correct rather than incorrect. The creature endowed with this kind of normativity has a minimal understanding of what is appropriate to do, without needing neither to explicitly represent the norm that guides her action nor to put it into words.

Ginsborg explicitly attributes this kind of normativity to human infants. She invites us to imagine that a child who has not yet mastered color concepts learns, by following the example of an adult, how to sort green objects in one pile and blue objects in another pile. It does not seem adequate to attribute to this child the capacity to grasp a rule like *place all the blue objects in one pile and the red objects in another,* since, by hypothesis, she lacks at least some key concepts – color concepts— that are constitutive components of the rule's content. However, it would not be adequate either to describe her as being merely *caused* by the blue and red objects to sort them in two piles. Rather, it seems that "a normative claim is embedded in her behavior" (Brownstein, 2018). The child has learned, by her previous interactions with the adult, how to act. She is motivated to act in such a way and she experiences the appropriateness of it. She is aware that the blue objects "fit" in one pile while the red objects "fit" in a different one. Furthermore, the child would probably become upset if she found out that she had mistakenly left a red object in the blue pile and would experience the inappropriateness of her response.

Kristin Andrews and colleagues have given their own twist to the notion of primitive normativity in order to extend it to non-human animals (Andrews, 2014; Sultanescu & Andrews, 2013; Vincent, Ring & Andrews, 2019). Basically, they add a social dimension to Ginsborg's proposal. In their view, animals that have primitive normativity must be capable of distinguishing in-group from out-group members, and they must have a sense of *how we do things around here* that does not depend on grasping and conforming to antecedently recognized norms or rules.

One may wonder, at this point, whether we should credit creatures that have this kind of primitive normativity with any kind of normative thoughts. Ginsborg herself seems to think that these creatures need to be capable of entertaining *some* thoughts about their actions, with contents like *this is appropriate*, *this fits*, or *this belongs*. These contents seem to be part of the "sense of appropriateness" that accompanies their actions. Moreover, she claims that to have such contents, they must also have "the capacity to entertain a concept of normative fit, which we might label as the concept *ought* or *appropriate"* (Ginsborg, 2011a, p. 252).

What follows from Ginsborg's characterization of primitive normativity, however, is that such contents do not represent an explicit general norm. Rather, they only involve the attribution of a property like fitting, belonging, etc., to the response that the creature is currently giving (like "*this is appropriate"* or *"this fits").*

It could be argued that, since the creature is conscious of her response being appropriate to a context, she also has to represent that context which, as Ginsborg suggests, will occasionally include her preceding responses in similar circumstances (cf. Ginsborg 2011a p. 241 and p. 244). Now, even if this were the case, the creature endowed with this primitive kind of normativity would only have to represent two things: i) how she has acted in the past and ii) whether her current responses are appropriate or not (given these past responses). Yet, she would not need to have a general and explicit representation of how one should act, or about how things ought to be, different from her representations of how things are.[4] Arguably, then, having primitive normative thoughts requires, at most, only a very limited capacity to normatively asses what is happening in the thinker's "here-and-now". After all, primitive normative contents only need to refer to what their owners are currently doing (or to the behaviors that they are observing in others). Creatures having these thoughts may, then, be incapable of anticipating what ought to be the case in the future, in a counterfactual situation, etc. They do not need such fancier abilities in order to apply their primitive concept of "being appropriate" to what they are presently experiencing.[5]

The notion of primitive normativity may be useful to account for some intriguing examples of animal behavior. Still, assessing its explanatory value is a complex task that requires establishing what kind of non-linguistic behavior would indicate that an animal has this kind of normativity and giving reasons to think that such behavior cannot be better explained in non-normative terms. Providing these criteria and reasons exceeds the scope of this paper. However, I would like to finish this section by presenting one illustrative example of a behavioral pattern that seems, at least initially, to be nicely explained by primitive normativity.

Several primatologists have defended that chimpanzees have proto-social norms regarding the treatment of infants. As they report, infants are usually given deferential treatment by adult members of chimpanzees' communities. They are allowed to jump over adults, to steal food or tools from them, etc. Moreover, when an adult chimpanzee behaves in an aggressive way towards an infant, this usually leads to an uproar of protest by adult females and can even cause some third-party intervention (de Waal, 1996; Rudolf von Rohr *et al.,* 2011; 2015). This kind of non-verbal evidence is considered to be particularly revealing because it involves the reaction

4 Besides, as mentioned above, creatures having these contents may lack the appropriate concepts to categorize the actions that they sense as appropriate. That is why, one may conjecture, we find demonstrative expressions referring to those actions in the linguistic articulation of such contents (e.g., "this fist" or "this belongs").

5 Similar considerations apply to Andrews and colleagues' understanding of primitive normativity. Even though they give the notion a social twist, creatures with this kind of normative sensitivity only need to have contents referring to particular present actions: those that "we" do around here. But they do not need to be capable of thinking about how their group ought to behave in counterfactual situations, what they ought to have done in the past, etc.

of uninvolved bystanders. Consequently, it can be excluded "that the reactions in question are simple responses to the violation of individual interests but rather are based on more generalized expectations about 'how one ought to behave'" (Rudolf von Rohr *et al.,* 2011, p. 3). Now, arguably, chimpanzees need not have in mind a general normative content such as "one must not hurt infants", to react as they do. Alternatively, they may have acquired, by previous experiences, the disposition to respond to aggression towards infants with an awareness of its inappropriateness. Such a primitive sense of what is appropriate or not seems sufficient to explain their reactions. Although I will not be able to do so here, I think that one may provide similar accounts of other behavioral patterns that animals display in social contexts, such as the disposition of some species of non-human primates to break fights amongst others, their protests against unequal divisions of goods, etc. (de Waal, 2014). Once again, a primitive capacity to be aware of the appropriateness/inappropriateness of some particular actions (performed by them or by others) may be all that is needed to account for such evidence.

4. Multiple models, secondary representations, and robust "ought thoughts"

In this section, I will propose an alternative model of responsiveness to norms that is more demanding than the one based on primitive normativity, yet less stringent than the reflexive model. Let us begin by returning to the explicitness or implicitness of norms. According to a widespread way of understanding explicitness, something— a thought, a feeling, a content— is explicit when its owner is aware of it (Brownstein, 2018). Furthermore, it is usually claimed that such awareness of a thought, a content, etc., requires reflexively turning towards those mental entities and transforming them into the objects of second-order thoughts. Extending these ideas to norms, the advocates of the reflexive model claim that nomic creatures must have mental representations of the norms that they follow (Okrent, 2018), and they must be capable of taking such representations of norms as objects of further thoughts in order to evaluate whether their actions, or their motivational states, accord with them or not.
Imagine now, on the contrary, that some creatures lack both the concept of norms and second-order thoughts about their motivational states. They are neither capable of explicitly thinking about their representations *of norms as norms*, nor of acknowledging them as legitimate or illegitimate, assessing whether their motivational states, or their actions, accord with those norms, etc. There is a sense in which their understanding of norms, if they have any, must be implicit. What I would like to suggest here is that these creatures may still have some explicit representations of how one ought to behave in different situations, such as: "one ought not to hurt an infant", "one ought to defend one's kin", etc. Moreover, they may also have a practical capacity to use such representations to guide their behavior, even if they are not capable of explicitly thinking about them *as norms*. From now onwards, I will refer to those mental states that explicitly represent how things ought to be as "robust ought-thoughts".
Even if they do not involve the capacity to have second-order thoughts, or to reflect about norms as such, "robust ought-thoughts" still impose some substantive cognitive requirements. In order to think about what ought to be the case, a creature must be capable of representing more than what is actually present. In this sense, having ought-thoughts is similar to thinking about how things could be, how they will be, or how they were. What all these thoughts have in common is that they involve an ability to detach oneself from what is happening in the immediate environment. Thus, creatures that have robust ought-thoughts must possess quite sophisticated abilities to represent what is not actually the case, but ought to be.[6]

6 One may find a similar suggestion in Vincent, Ring and Andrews (2019). According to them, an ought-thought: "...is a cognitive modality much like mental time travel or counterfactual thinking. Thinking about what ought to be

To better understand the cognitive capacities involved in having robust ought-thoughts, I will focus on the influential account of the evolution of human infants' representational capacities developed by Josep Perner. According to Perner (1991), during the first two years of their lives, infants only have one model of reality composed by primary representations whose main function is to represent how the world is. By the time they turn two, however, they acquire secondary representations "decoupled" from reality— i.e., children do not confuse them with their primary representations of how things actually are. Secondary representations allow them to entertain multiple offline models with different functions: representing how things were in the past, how things will be in the future, how things could be in a counterfactual situation, etc. In this sense, they free them to think beyond what they have perceptually experienced. Finally, the acquisition of secondary representations enables the emergence of a host of abilities, such as the capacity to understand hidden displacements, means-ends reasoning, pretense, empathy, some basic capacities to interpret external representations, mirror self-recognition, etc.

Perner thinks, however, that, at this stage, children do not have yet the more sophisticated capacity to meta-represent or to represent representations as representations. They treat their different models of reality as different kinds of "situations" – past situations, future situations, as-if situations, etc., — but they do not explicitly understand them as representational models. They will not acquire meta-representational capacities until they are three or even four years old.

Suddendorf and Whiten have extrapolated Perner's distinctions to debates in animal cognition, arguing that we have good evidence that great apes have secondary representations that allow them to display a range of remarkable skills, similar to those of two-year-old infants, in tasks like mirror self-recognition, understanding hidden displacements, pretense, empathic behavior, interpreting pictorial representations, etc., (Suddendorf, 1998; Suddendorf & Whiten, 2001).[7] As Suddendorf and Whiten (2001) admit, we should not expect different species of animals to deploy secondary representations exactly in the same realms as humans or in the same ways as humans. That being said, I would like to suggest that some animals lacking meta-representational skills may still have a specific kind of secondary representations allowing them to represent how things *ought to be*. These "robust ought-thoughts" should be understood as explicit first-order representations about non-actual ideal situations. Since they are about what is not actually the case, it is possible for the thinkers of such thoughts to use them as models or standards of correctness, allowing them to normatively guide their current actions by contrasting what they actually do with what they should be doing or how things actually are with how they should be. However, if ought-thoughts are to function as normative standards, they must have some additional features. Let me roughly present some of them.

The first thing to point out is that ought-thoughts are supposed to have the same kind of general deontic contents that norms have and, presumably, it must be possible to use them, just as norms are used, to guide our behavior. But, if this is so, these mental states should

the case –like thinking about what happened in the past, what might happen in the future, and what might be the case under various circumstances— is a cognitive mode that requires the thinker to do more than represent what is currently the case" (pp. 58-59).

Although I find this passage illuminating, it is hard to reconcile it with the notion of primitive normativity that they defend. In line with my previous arguments, I do not think that the demanding ought-thoughts that they are referring to in this quote are needed for primitive normativity, but I do think that they are required for the more robust type of normativity that I sketch in this section.

7 As Suddendorf and Whiten (2001) remark, there is also some evidence suggesting that other animals, like dolphins, dogs, parrots and monkeys, may also have secondary representations.

share at least some key features with norms. One of them is the agent-independent or general character of norms (Christen & Glock, 2012; Rakoczy, 2015; Roughley 2019; Schmidt & Rakoczy 2019). A norm prescribing that one ought not to hurt children, for example, is a general standard that applies to any agent in equivalent circumstances. It can be argued that the contents of ought-thoughts will have to be general and agent-independent as well, representing not only how the thinker ought to behave, but, also, how others in equivalent circumstances must do it. Consequently, thinking such contents will involve having some expectations on the behavior of others and, probably, manifesting that these expectations are unfulfilled when one finds out that the others do not behave as they ought. All this goes well with the idea that one kind of privileged evidence to focus on, when studying animal normativity, are behaviors suggesting that animals react in a negative way when some group norms are violated (Christen & Glock, 2012; Mertens, 2019; Rudolf von Rohr, *et al.* 2011; 2015).
Another key feature of norms is their *normative force* (Rakoczy, 2015; Rowlands, 2012; Schmidt & Rackozy, 2019). Norms exert a "normative grip" on us; they require or demand actions of a certain kind in certain contexts (Roughley, 2019). However, at the same time, it is always possible to violate them. Once again, to function as action-guiding norms do, ought-thoughts should share those features, *binding* the thinkers to act in a certain way (even though it must be also possible for them to act otherwise). Ought-thoughts must, then, motivate their owners to act in such a way as to satisfy their contents. In this sense, it can be claimed that, like other motivational states, ought-thoughts must have a world-to-mind direction of fit: when things are not as they represent them, it is the world the one that should be changed, not the thoughts' contents (Cristhen & Glock 2012; Searle, 2004).
Finally, some philosophers credit norms with an additional property: they must give agents reasons to act in certain ways that are independent of their particular interests and desires (Korsgaard, 2006). Arguably, ought-thoughts must also share this feature. Thus, creatures that have ought-thoughts should sometimes face a conflict between these thoughts and their desires or interests. They must also be capable of acting as their ought-thoughts indicate, even when their desires or preferences do not motivate them to do so. They must be capable, for example, of acting in a specific way A, despite not having any individual desire or interest to do A, just because they think that is what they ought to do; they must be capable of refraining from acting as they desire because their ought-thoughts prescribe not to act in such a way, etc.
If these considerations are correct, having robust ought-thoughts amounts to having representations of the content of norms that can be used to guide and evaluate behavior.
Now, it seems that if ought-thoughts are to guide a creature's behavior, she must treat them as norms. However, *treating* some contents as norms is not the same as reflexively *thinking* about them as norms. The former is a practical capacity to be guided by how one thinks that things ought to be, which requires putting to use two different kinds of first-order thoughts (i.e., thoughts about how things are and thoughts about how they should be). But it does not require a meta-representational ability to think about our motives as motives and to judge whether we should follow them or not. Neither does it require taking our representations of norms as objects of second-order thoughts in order to acknowledge them as norms, to explicitly judge whether our actions accord with them, etc. In a sense, then, the kind of normativity that comes tied to putting to use ought-thoughts is not as demanding as the one described by the reflexive model.
At this point, one may ask: where does the difference lie between creatures having only primitive normativity and creatures having robust ought-thoughts? Let me give a rough answer to this question. As seen above, creatures that merely have a capacity for "primitive normativity" only need to be able to represent some actual responses as "appropriate" or "fitting" in light of their previous responses. Thus, they may be only capable of representing

what they are currently experiencing or have experienced in the past, and they need only be capable of normatively reacting to their representations of how things are right here and now. In contrast, creatures that can think robust ought-thoughts must also be capable of representing non-actual ideal situations and of using such representations as general standards to guide their behavior.

Now, it seems to me that having such decoupled models or standards makes a host of new capacities and responses possible. Let me suggest here just a few examples:

a) *Inventing new normative responses*: Having robust ought-thoughts allows a creature to imagine or invent different kinds of responses, and to think of them as the responses that ought to be given in certain contexts. Afterwards, she may use these representations as standards to guide her behavior when actually trying to perform these new actions, or when evaluating the performance of others. Imagine, for example, that a kid invents a new game and stipulates that several innovative responses constitute different "moves" in that game. It seems to me that when, later on, she tries to play the game with others, she will need to have (at least) some robust of ought-thoughts representing those actions as the "correct moves" and use them to guide her responses, and to evaluate those of others.
b) *Performing complex instrumental actions*: It has been argued that to perform complex instrumental actions, it is necessary to have:
    i) a goal state representing how things ought to be;
    ii) the capacity to mentally manipulate the components of the present situation so that they match the goal state and the ability to identify those sequences of actions that can take us from the present situation to the ideal one;
    iii) the capacity to enact the identified sequences of actions.
c) *Interpreting external representations as models of how things should be*. Creatures with robust ought-thoughts should be able to use them to interpret external representations — pictures, maps, scale models, etc., — not as representations of how things are, but as representations of how they ought to be. Then, they may use these external devices to guide their actions with the purpose of changing their environments so that they approximate the represented ideal situation. The small kid following a Lego blueprint seems to be in command of this kind of ability.

What this cursory enumeration suggests is that creatures with robust ought-thoughts are not merely aware of the appropriateness/inappropriateness of present responses: they can also represent ideal situations that they have not previously experienced, compare what is happening with what should happen, think about how to change a current situation so that it approximates an ideal one, etc. Then, it seems that, if we are interested in attributing robust ought-thoughts to non-human animals, we need to move beyond evidence showing that they can give normative responses to particular present behaviors. What we should look for, instead, is evidence suggesting that they have general representations about how things ought to be, or how agents ought to behave, in different times, contexts, etc. Now, it seems likely that animals having such general representations should be able not only to assess their current behavior (or that of other creatures) as appropriate or inappropriate, etc., but to have normative expectations about how they, or others, must act in the future, how they, or others, should have acted in the past, in counterfactual situations, etc.

But, do we have evidence of the existence of such normative expectations about the past, future or counterfactual behaviors? There is no clear answer to this question. There is some observational evidence of animals that seem to punish others for things that they have done in the past. De Waal (1996), for example, tells the anecdote of two adolescent female chimpanzees who one night refused to return to their sleeping quarters at Arnhem Zoo. Now, the rule at the zoo was that no chimpanzee would receive food until all of them had entered the building,

and hungry chimpanzees usually showed hostility to latecomers. That night, the adolescent chimps were given a separate room to prevent reprisals. However, the next morning, the whole colony chased them and aggressively bit them, presumably, in reprisal for their past behavior.

Arguably, such a delayed "punishment" cannot be easily explained in terms of a primitive normative awareness of the inappropriateness of adolescents' actions, since they took place in the past. At least in principle, it seems easier to explain "delayed punishment" if we credit the chimps with a general representation about how everyone ought to enter the building on time at night, or something like it, that they can compare with what actually happened, in order to conclude that the latecomers behaved badly and have to be punished. One may also attempt to explain, along these lines, other evidence of dogs refusing to play with other dogs that have "cheated" in the past by being aggressive to them during playful interactions (Bekoff and Peirce 2009) and of chimpanzees delayed retaliation after aggressive encounters with others (de Waal and Lutrell, 1988). However, the available data is admittedly quite scarce and it is possible to think of less demanding ways of explaining it.[8]

Another (to my mind more promising) strategy would consist in looking for evidence that non-human animals can succeed in the kind of complex tasks mentioned in a)-c) – i.e., complex planning, the use of external representations as models or standards, the invention of new rules or normative practices, etc. The problem, of course, is that we seem to lack such evidence. We have some impressive evidence of long-term planning in the animal kingdom, especially in great apes (Mulcahy & Call, 2006; Osvath, 2009), corvids (Raby *et al.,* 2007) and monkeys (Bourjade *et al.,* 2012). But we still need to examine it carefully and, probably, run complementary studies, to establish whether such planning involves not only secondary representations but, more specifically, thoughts about how things ought to be or how one ought to behave. Similarly, some studies indicate that some chimpanzees can use scale models and photographs as sources of information about their referents. They can, for example, use the information provided by such external representations to locate hidden objects in a room (Kuhlmeier, Boysen & Mukobi, 1999). Yet, this only shows that chimps can use external representations as models of how things are. What we would need is evidence that they can use external representations as models of how things ought to be.[9] This would be the case, for example, if these animals could use maps not to find out the actual location of things, but, rather, to represent where they should put them in a room.

To sum up, it seems that if we want to credit non-human animals with robust ought-thoughts, we need to obtain a kind of evidence that is still scarce or lacking. Discussing the notion and comparing it with other ways of understanding animal normativity might be of help, however, to guide future empirical research. More generally, it appears that there is also a lot of philosophical and scientific work to do in order to establish whether we should attribute *any* normative responsiveness to non-human animals, and how this responsiveness should be understood in each case. Here, I have limited myself to sketching two alternative models on how to think about animal normativity that need to be further discussed, both theoretically and empirically.

8 One may think, for example, that when some animals misbehave, they are immediately "marked" or "categorized" by others, who find their current behavior "inappropriate", as animals that one should attack, avoid playing with, etc. This categorization is what will cause their negative reactions towards them later on. If this were the case, no comparison of their past-behaviors with an independent robust ought-thought would be needed to explain the evidence under discussion.

9 Once again, using something as a model (of an ideal situation) is different from representing it as a model. The former involves only a practical capacity to use the information about an ideal situation that the model provides in order to guide ones' behavior. The latter involves explicitly representing the model as a model.

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