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THE EVOLUTIONARY APPROACH TO ETHICS: FROM ANIMAL PROSOCIALITY TO HUMAN MORALITY

DANIELE BERTINI
UNIVERSITY OF ROME, TOR VERGATA

Abstract. Evolutionary research on the biological fitness of groups has recently given a prominent value to the role that prosocial behaviors play in favoring a successful adaptation to ecological niches. Such a focus marks a paradigm shift. Early views of evolution relied on the notion of natural selection as a largely competitive mechanism for the achievement of the highest amount of resources. Today, evolutionists from different schools think that collaborative attitudes are an irremovable ingredient of biological change over time. As a consequence, a number of researchers have been attracted by evolutionary studies of human behaviors. Some think that a continuity among prosocial attitudes of human beings and other social mammals (particularly primates) can be detected, and that this fact has relevance for accounting for human morality. Others deny one or the other of these claims, or both. The papers in the present special issue address how these topics impact ethics and religion.

I. SOME ANECDOTAL EVIDENCE ABOUT ANIMAL PROSOCIALITY AND HIGHER ORDER BEHAVIORS

Sofia was my dog. She was a brilliant German shepherd, and had strong protective attitudes towards all the members of my family. When my wife and I had our first child, whose name is Matilde, Sofia had been living with us for four years. During this period, Sofia had enjoyed all our care-giving attention. The experience of caring for Sofia had been like a trial to test whether we could be good parents (sometimes, we still think of Sofia as our first non-human child). At that time, we lived in an apartment. Sofia used to sleep in a comfortable dog cot placed in the kitchen. When we returned home from the hospital with Matilde, Sofia immediately showed curiosity for her. Most importantly, she stopped sleeping on her cot, and began to sleep in front of the door of our daughter's bedroom. We were struck by her behavior, because sleeping on the floor is certainly more uncomfortable than sleeping on a cot. I tried to make her sleep where she had always slept before, but she did not want to do so. She preferred to keep guard over Matilde, although this might cause her some discomfort. At last, we decided to move Sofia's cot from the kitchen to Matilde's room, and, accordingly, Sofia started to sleep in her cot again.

Sofia early became a good playmate to Matilde. Sofia did not like all the games which Matilde did. Matilde often tried to ride her as a horse, and forced Sofia to act as an old lady during Matilde's imaginary tea parties. She usually dressed her up in dolls clothes. As is obvious, Sofia suffered much from these activities. Although she never opposed our daughter's creativity, she tried to escape whenever she could. When she could not escape, and her patience was wearing thin, she whimpered, searching for our help.

Some years later, we had our second child, Leonardo (we also moved our house into a different apartment, and Sofia's cot was now placed in the entrance). While Sofia remained lovingly bound to Matilde, she soon fell in love with Leonardo in a remarkable and peculiar way. Sofia and Leonardo became best friends. Since the time Leonardo began to move autonomously, Leonardo and Sofia spent a lot of time hugging on Sofia's cot. Their favorite activity was to share food. Leonardo used to crawl to Sofia's cot, lay down on it, and then take some kibbles from Sofia's bowl. He sucked on them a little, and then he put them into Sofia's

mouth. He then took took them out of Sofia's mouth, sucked another time, and gave them back to her, and so on (I know: it is disgusting, but we could not do anything to stop them; we could not stay watching them all the time in order to control what they did). They also shared food during our meals. While sitting in his high chair (and later in years too), Leonardo dropped the food he did not like directly into Sofia's mouth. Naturally, Sofia liked our food very much, but she occasionally tried to give it back to Leonardo as they did when playing on the cot. Through their mutual interaction, we had the impression that food sharing was a communicative act for them.

Three important facts are highlighted by these examples. First, animals like dogs actualize prosocial behaviors. According to the consensus view, a behavior is prosocial if an agent benefits one or more individuals (notwithstanding the cost which the action involves).[1] It is a matter of fact that most social mammals, if not all, commonly engage in prosocial practices: biological groups are dynamic units which are bound together by a mixture of hierarchy, prosociality, and competitive attitudes. When Sofia renounced to sleep in her cot in order to keep guard over Matilde, she expressed prosocial action because her behavior benefited our family (which she possibly experienced as her pack) at the cost of her own comfort in sleeping. Second, animals like dogs show a certain degree of tolerance towards individuals acting in a way which they do not appreciate. Tolerance is usually understood as a passive response to a potentially conflicting situation. Evolutionary research provides some evidence that tolerance is a behavioral pattern which is observable in many primates.[2] Individuals expected to react aggressively, contrary to expectations, interact peacefully and do not come into conflict. When Matilde and Sofia played a game together that Sofia did not enjoy, she could have responded aggressively. However, she did not: instead, she often tolerated Matilde's games, and did not show an aggressive disposition toward her (although she did sometimes try to escape the situation without using violence). Third, animals like dogs are capable of developing friendships with other individuals (anecdotal evidence that non human primates enjoy friendship relations in Cheney and Seyfarth[3] and de Waal[4]). Being a friend is a higher order behavior which implies a certain degree of cognitive and relational competence. Higher order behaviors contrast with basic behaviors. The former are not a mechanistic schema of agency, whereas the latter are. For example, while feeding is ordinarily a basic behavior, sharing food is not. The difference in these two activities consists in that feeding is a stimulus-behavior response, while sharing food is a communicative act which expresses some degree of intentionality. Given that higher-order behaviors display at least a certain degree of intentionality, higher order behaviors turn out to be relevant for understanding awareness-driven behaviors, particularly teleological behaviors.

II. DOES PROSOCIALITY RELATE TO ETHICS?

Now, the importance of these facts relates to the widespread tendency to assume that prosociality, tolerance and friendship are somewhat related to moral agency, and can be considered constituents of morality, or at least, have some impact upon it. For example, folk moral psychology seems to support of inferences from aggressive behaviors to characterization of animal species in terms of evil, and, vice versa, from prosocial behaviors to characterizations of good: while sharks are ordinarily understood as evil animals, dolphins are understood as good animals (it is worth noting that such conclusion makes little sense: dolphins are successful predators as much as sharks are). Furthermore, we are unreflectively led to attribute moral inclinations, moral sentiments and a degree of freedom which subjects these animals to

1 See Frans B. M. de Waal and Malini Suchak, "Prosocial Primates: Selfish and Unselfish Motivations", *Philosophical Transactions of the Royal Society B: Biological Sciences* 365, no. 1553 (2010) and Keith Jensen, "Prosociality", *Current Biology* 26, no. 16 (2016).

2 Anne C.Pisor and Martin Surbeck, "The Evolution of Intergroup Tolerance in Nonhuman Primates and Humans", *Evolutionary Anthropology* 28, no. 4 (2019).

3 Dorothy L. Cheney and Robert M. Seyfarth, *Baboon Metaphysics: The Evolution of a Social Mind* (Univ. Of Chicago Press, 2008).

4 Frans B. M. de Waal, *The Bonobo and the Atheist: In Search of Humanism Among the Primates* (W. W. Norton & Company, 2014).

moral praise and blame on account of their putative ability to perform higher-order behaviors: pets are ordinarily assumed to exemplify such category.

Similar assumptions innervated more than one century and half of research in evolution. Early images of nature in evolutionary theories painted a Hobbesian universe, in which there is no place for teleology, collaboration, or altruistic agency: animals are concerned in a global war. Such renderings of evolutionary findings were thought to be entailed by the claim that the frame of biological change is individuated in a blind mechanism exercising pressure on highly competitive individuals who, in turn, stand in a permanent fight for resources. Prosociality, tolerance, and higher-order behaviors are, at best, derivative facts in a similar world. Evolutionists ignored these behaviors, appearing to have had a kind of blindness toward them, and argued that, given that animals are moved by aggressive and conflictual motives alone, morality does not exist for them as a natural feature.

In conformity with these lines of reasoning, morality is characterized as a humanly originated superimposition on biological nature. The suggestion is that the performance of altruistic and collaborative actions is contrary to nature, because directly opposed to the outcomes of the winning mechanisms in nature.[5]

This framework for evolutionary research was questioned by the pioneering studies of W.Hamilton on kin-selection, in-group altruism, and inclusive fitness.[6] Darwinians who followed Hamilton's program in these years, accumulated massive evidence that prosociality, tolerance, and higher-order behaviors such as friendship are common in social mammals and have evolutionarily positive effects in that they promote the biological fitness of groups. This focus on a few notions supposedly related to morality was sufficient to cause an earthquake in the mainstream evolutionary image of nature as a battlefield of everyone against everyone. As a consequence, morality no longer appears as a non natural occurrence. On the contrary, a great number of contemporary researchers are concerned with making sense of and accounting for ethics as a natural outcome of the morally relevant features which, in turn, are embodied in the biological history of social animals.

However, a non-biologist may feel puzzled about similar assumptions. Generally speaking, morality consists in behaving according to universal norms of duty. I am not assuming a Kantian standpoint here (I do not endorse the autonomy view or any other deontological approach in ethics).[7] Rather, I am simply claiming that, independently of what one may think about the source, the justification, and the frame of ethics, moral evaluations require a commitment to intending to do right actions. It seems uncontroversial to assume that, (even if you believe, as I do, that animals may have moral sentiments and exercise prosocial virtues), they cannot commit themselves to doing the right thing in terms of a self-aware responsiveness to universal norms. Consequently, we might ask, why do prosocial attitudes, tolerant behaviors and higher-order behavioral capabilities relate to morality? After all, prosociality, tolerance and higher order behaviors might also be ingredients of a moral action: nonetheless they could be nothing more than concurrent elements, which are unrelated to the core of the qualifying features of morality.

The problem can be spelled out in the following terms. A long term debate in philosophy of biology concerns whether adaptation-explanations are actually able to explain anything. I will refer to Bence Nanay's narrative of the debate, according to which selective pressure determines which structures of organisms are lost and which survive, but cannot say why the former are unadaptative and the latter are adapta-

5 See Marc Bekoff and Jessica Pierce, *Wild Justice: The Moral Lives of Animals* (Univ. Of Chicago Press, 2009) and Waal, *The Bonobo and the Atheist* for persuasive arguments in support of the ubiquity of this view in evolutionary research, both early and contemporary.

6 W. D. Hamilton, "The Genetical Evolution of Social Behaviour. II", *Journal of Theoretical Biology* 7, no. 1 (1964).

7 See Daniele Bertini, "La critica berkeleiana dell'autonomia morale", in *Berkeley's Alciphron: English Text and Essays in Interpretation*, ed. Laurent Jaffro and Geneviève B. Claire Schwartz (Georg Olms Verlag, 2010); Daniele Bertini, "Incompletezza normativa, inconsistenza normativa e responsabilità dell'agente nell'etica eteronoma", *Lo Sguardo. Rivista di Filosfia* 8, no. 1 (2012); Daniele Bertini, "Moral Heteronomy. History, Proposal, Reasons, Arguments: Introduction", *Dialegesthai. Rivista telematica di filosofia* 19 (2017); Daniele Bertini, "Others matter: The failure of the autonomous approach to ethics", *Dialegesthai. Rivista telematica di filosofia* 19 (2017).

tive. There are two problems with this. First, selection is a cancelling force; nonetheless, the actual state of nature is given by what there is, not by what there is not anymore. Second, while selection produces effects at the level of populations, adaptations are features of individuals.[8]

Apply all this to the relation of prosociality to ethics. Let's suppose that prosocial behaviors, tolerance and higher order behavior capabilities are evolutionary adaptations. Why, then, should these traits explain morality in evolutionary terms? Selection may account for the fact that such traits survived biological changes and substituted other ones (e.g., non-prosocial attitudes). However, it cannot explain why such adaptations are related to behaviors which are committed to the intention of doing the right thing, for instance. That is, prosociality might also be characterized as having the intention of benefiting others; nonetheless, why should the intention of benefiting others be seen as identical to the intention of doing the right thing? Obviously, in many real cases the two things do not coincide. Moreover, prosociality is certainly beneficial to a group, but it may be detrimental to individuals. This means that, even if one accepts that the disposition to act prosocially when the circumstances required such an action is a concurrent feature of ethics, evolutionary explanations may account for how prosocial features were selected, but it is not clear why they came to constitute morality. The point of the matter is how a set of adaptations to benefit others and to behave according to an higher-order modality induced a generalized of intentions to do right things. There is a logical gap at work here between the conditions and the intention of a moral action. To use an image, the mechanical parts of a car can explain how the car moves, but they cannot account for why the car is structured the way that it is.

III. WHAT EVOLUTIONARY SCIENCE SAYS ABOUT MORALITY

The thematic focus of the present issue of the *European Journal for Philosophy of Religion* is to evaluate whether, and if so, how evolutionary research on prosociality contributes to understanding ethics, especially religiously oriented ones, and religion in general. To my view, the most fruitful way to accomplish such a task consists in resisting reacting to evolutionary research according to the perplexities described above, and, instead, trying to understand what evolutionists mean when they think that their works on morality *actually* relate to morality. This implies investigating whether their fundamental assumptions are sufficiently in line with those ordinary notions involved in ethical reasoning that are useful in understanding morality and religion.

In order to begin to take up this task, I will briefly sketch the three general paradigms about the relation of evolution and morality which are attested in the literature. From its very beginning, Darwinism was perceived as directly colliding with traditional religious and philosophical ideas. The reason of this collision can be captured by some peculiar evolutionary claims: nature is not the outcome of a design; living beings cannot be classified by assigning them a place on a chain from lower to higher degrees of perfection; morality is not a natural feature; human beings are not the definitive result of the teleological dispositions of the whole of being. In a sense, the repercussion of Darwin's work on general ideas conforms to and can be positioned within the critical paradigm of the traditional biblical image of the world, which originates in Western philosophy with the appropriation of Spinoza's legacy.[9] In conformity with this interpretation of Darwin's view - which can be partly traced back to Darwin himself-, the traditional Darwinian holds that evolutionism denies the legitimacy of the cognitive and behavioral strength and validity of ethics. Papers by John Lemos and Paul Rezkalla address this topic, and argue for that the content of the traditional Darwinian's criticism of religion and ethics misses the target.

Traditional Darwinians enlist biologists, psychologists, sociologists, economists, and philosophers. Typical of the view is the claim that what is at the core of their debunking strategy is the very notion of morality (as well as religion). From a purely biological standpoint, a qualifying feature is the pervasive

8 Bence Nanay, "Can Cumulative Selection Explain Adaptation?", *Philosophy of Science* 72, no. 5 (2005).

9 Karl Löwith, *Sämtliche Schriften, Bd. 9, Gott, Mensch und Welt in der Philosophie der Neuzeit, G. B. Vico und Paul Valery* (J.B. Metzler, 1990).

concern to dismantle any interpretation of prosociality, tolerance and higher-order behaving capabilities in terms of altruism and the theory of mind.[10] Observed behaviors which seem to support the attribution of altruism, collaboration and friendship, not to say of moral inclinations and moral sentiments, are interpreted as misleading, or even as actually selfish, non collaborative and as potentially conducive to open hostility. For example, activities such as grooming, food sharing, consolation after conflicts or joint predating seems *prima facie* to be the outcomes of intentions to benefit others. However, they are not seen as such. Rather, they are explained in relation to a positive balance of costs and benefits (e.g., groomers achieve food and reduction of stress from grooming), as they are non-intentional (they can be accounted for as either mechanistic patterns originated by selective pressures or by-chance responses), and are partially induced by training in captivity.

It is worth noting that traditional Darwinism operates within the assumption that prosociality has some relation to ethics. The fact that social animals do not exercise authentic prosocial behaviors (that is, according to the view that observed prosocial behaviors are adaptions favoring individual fitness), contrary to appearances, supports the view that morality is not a natural feature of the world. As a consequence it does not escape the puzzlement that evolutionary research may have little to say about ethics, at least as it is traditionally understood. While prosociality can be captured as relating to norms of kindness and sociability, morality cannot (e.g., a right action always relates to fairness, which may be exemplified by unkind and asocial actions). Nonetheless, traditional Darwinism devotes some efforts to attacking the idea that primates have a theory of mind. This has an impact and relevance for debates about morality.

The second and the third paradigms in evolutionary research on morality are bound together on account of their respective distance from traditional Darwinism. I will label the former as *Unorthodox Darwinism* and the latter as the *Continuist View*. Both fronts hold that morality (and religions as well) is the outcome of evolutionary mechanisms. However, contrary to traditional Darwinism, they reject the claim that the evolutionary origin of ethics should debunk its legitimacy.

The difference among the two consists in that, while the Unorthodox Darwinian holds that prosociality is a by-product of evolution - which reveals it as having an adaptive value in increasing the biological fitness of social animals, and, accordingly, develops peculiarly in different species-, the Continuist View theorist thinks that any prosocial behavior is related to empathy, and empathy is embodied by either an interspecific mechanism of hormonal regulation or the related mechanisms of different species.[11]

This means that both accept that actions of non human animals which seem altruistic are *really* altruistic in their nature, that is, that the proximal motives of action are altruistic.[12] Nonetheless, they disagree over the meaning of altruism across different species.

Particularly, unorthodox Darwinians hold that prosocial attitudes, tolerance and higher-order behaving capabilities are the evolutionary ground of collaboration; moreover, that they are behavioral patterns established by selective pressures because of their highly adaptive value. Consequently, they are embodied in the biological frame of organisms, and the more two species underwent similar selective pressures and have common origins, the more they possess similar behavioral patterns. This supports the epistemic legitimacy of comparative ethological studies, and provides a mass of materials and evidence for construing a natural history of norms of kindness, sociability, and altruism. Such an history gives a differential overview of how sociality evolved in different species, which peculiar structures emerged, and which genealogical relationships, similarities and dissimilarities exist among different social animals.

In order to give an evolutionary account of morality, the key assumption here is that collaboration is the link between prosociality and ethics.[13] The point is a characterization of morality in terms of col-

10 Cheney and Seyfarth, *Baboon Metaphysics*; Jensen, "Prosociality".

11 James K. Rilling and Larry J. Young, "The Biology of Mammalian Parenting and its Effect on Offspring Social Development", *Science* 345, no. 6198 (2014).

12 David S. Wilson, "Human Groups as Adaptive Units: Toward a Permanent Consensus", in *The Innate Mind*: *Vol. 2: Culture and Cognition*, ed. Peter Carruthers and Stephen Laurence (OUP, 2007); Michael Tomasello, *A Natural History of Human Morality* (Harvard Univ. Press, 2016).

13 Ibid.

laborative attitudes. The main intuition at work is that prosociality has made possible a structured collaboration in the long run, and the peculiar form of such collaboration among humans has developed in universal considerations about the interchangeability of behavioral roles and the necessity of fairness in resource sharing. As a consequence, unorthodox Darwinians have an offer to make: they test an hypothesis which relates morality to the frame of joint agency and groups as adaptive units, namely, collaborative behaviors among fellows (and these behaviors are further related to prosocial attitudes, tolerance and higher-order behaving capabilities). Obviously, not all people interested in ethics will be attracted by such a perspective. Some possibly will react by holding that, after all, this kind of research does not address the normative fundament of morality, namely, the mandatory nature of duty. Nonetheless, there is room in the building of metaethics to be hospitable to this kind of research, and evaluate its effective relevance.

This is one of the purposes of Andrea Lavazza's paper. Given that unorthodox Darwinism deals with studying peculiar biological groups in terms of their own evolutive history, unorthodox Darwinism has some resources and interests to address the origin and structure of human institutions as churches and moral societies. Lavazza provides a critical discussion of Cavalli Sforza's approach to how cultural evolution can account for the establishing of similar structures.

Contrary to this strand of Darwinism, the continuist theorist attributes moral emotions and moral sentiments which are analogous to human beings' ones to social animals. Differently from the unorthodox interpretation of Darwinian theory, the relation between prosociality, collaboration and ethics is captured in terms of the primacy of moral emotions and moral sentiments, which, in turn, promote prosocial attitudes and, accordingly, lead to establishing collaborative patterns of behavior. In the beginning was empathy. The capability to feel as others do, particularly, the capability to understand their sorrows, discomforts, and vital needs, would incline empathic individuals to help, console, and actively try to relieve the sufferings of their fellows.[14] According to this view, the transcendental condition for the emergence of morality in human beings is the biological embodiment of empathy which can be observed across primate groups (although empathy is not an exclusive attitude of great apes: most social mammals show to be empathic, and non mammals as birds are too).

Continuism is plainly a very controversial view. It is attacked by both evolutionary biologists and moral philosophers. On the one hand, evolutionists object that empathy is a complex phenomenon, and experiments designed to the purpose of measuring it, are not theoretically well formed.[15] What seems to be an empathic behavior, can be accounted for in less exotic terms, that is, according to the allegedly consensus view that genes' fight for survival is all that matters in evolution, and such a fight should be depicted as a Gangster war: criminals do not show empathy for one another.[16] On the other hand, moral philosophers who accept the autonomy view (i.e., mainstream moral philosophers)[17] characterize empathy as an heteronomous motive for action: it is unrelated to duty, being concerned instead with helping someone merely on account of their proximity to our existential situation. As a consequence, behaviors based on empathy should not be evaluated as moral at all.

The leading proponent of the continuist view, namely, Frans de Waal, addresses this topic by briefly commenting on Hume's distinction between *is* and *ought*.[18] Although inferences from nature to morality seem to fall into the misidentification to which Hume called attention, morality cannot prescribe what it is naturally impossible to achieve. If *is* does not imply *ought*, *ought* certainly implies *can*. The evolutionary explanation of what we are able to make in normative terms consists exactly in grounding

14 Jessica Pierce, "Mice in the Sink: On the Expression of Empathy in Animals", *Environmental Philosophy* 5, no. 1 (2008); Claudia Rudolf von Rohr, Judith M. Burkart, and Carel P. van Schaik, "Evolutionary Precursors of Social Norms in Chimpanzees:: A New Approach", *Biology and Philosophy* 26, no. 1 (2011); Rilling and Young, "The Biology of Mammalian Parenting and its Effect on Offspring Social Development" de Waal, *The Bonobo and the Atheist*.

15 J. L. Edgar et al., "Measuring Empathic Responses in Animals", *Applied Animal Behaviour Science* 138, no. 3 (2012).

16 Richard Dawkins, *The Selfish Gene: 40th Anniversary Edition* (OUP, 2017).

17 Bertini, "Moral Heteronomy. History, Proposal, Reasons, Arguments".

18 Waal, *The Bonobo and the Atheist*.

the exercise of morality in the exemplification of inductive generalizations of empathic and collaborative responses to the needs of others. Unpleasant as it might sound, such an approach deserves to be debated, at least by anyone who refuses identifying morality with the autonomous prescription of duty as the framework criterion to evaluate whether an action is moral. For example, contrary to the autonomy view's assumption that normative expectations are a priori constituents of moral subjectivity,[19] normative expectations depend on how much others are inclined to share their evaluative practices towards good and wrong actions.[20] This suggests that whoever cares about modeling morality on the phenomenology of the exercise of ethical attitudes, should have an interest in the continuist view. Although there is room to criticize how evolutionary research on prosociality paints our moral faculty, understanding the underlying features of empathic behavior and its relation to prosociality and collaboration may be a key to enlighten how morality-related practices are exercised (once that morality is conceived in a wide way, that is, how the actualization of the disposition to promoting beneficial actions of others, actualizing norms of kindness, placing oneself in someone else's standpoint, independently of contrary inclination to satisfy only one's own needs). Papers by Roberto Di Ceglie and Andrew Pinsent engage with the continuist view and develop a few problems which can weaken it.

IV. PROBLEMS AND CONCLUSIVE REMARKS

The usefulness of evolutionary research for understanding morality and religion mainly depends on how doubts about its being on target can be answered. The dichotomy between the conditions of a moral action and the intention of performing it, to which I briefly referred to in the second section, provides the grounding milestone of this kind of worries.

Possibly due to my empiricist spirit, I feel particularly sympathetic towards the idea that evolutionary research has something important to say to the present topic. According to my intuition, the more profitable and captivating way to answer the dichotomy problem relies on the principle that *the peculiar manner in which something is exemplified affects the content of exemplification in some way*. Think back to the mereological example of the parts of the car and their unity. While unity cannot be completely accounted for by simply listing the elements of a particular, the peculiar way such a unity is a unity in someway depends on the unique features exhibited by the parts, namely, parts unify peculiarly also on account of their being peculiarly constituted. Now apply this principle to the evaluation of evolutionary research on morality: even if you hold (as I do) that morality is not to be completely accounted for by a natural history of the evolution of its ingredients, the way these ingredients concur to actualizing a moral action determines at least the phenomenology of the occurrence.

The second problem for the relevance of evolutionary research on morality consists in whether prosociality, tolerance, and higher-order behaviors are good candidates for constituting the basic blocks of our ethical concerns. I will be strongly declaratory here: they cannot play any role in accounting for morality to anyone who assents to the autonomous ground of ethics.

Autonomy means that the realm of moral phenomena may have genealogical relations to other things, but their qualifying feature, that is to say, *what characterizes them as moral phenomena*, is not to be individuated in anything other than the reality of morality itself.[21] On the contrary, if you are a friend of heteronomous approaches to ethics (as I am), there is no clear reason to resist the tendency to consider prosociality and norms of kindness and sociability as fundamental expressions of our interests for caring for others, and to evaluate caring for others as a fundamental ethical phenomenon which falls within the core territory of morality.

19 Christine M. Korsgaard, "The Normative Constitution of Agency", in *Rational and Social Agency*: *The Philosophy of Michael Bratman*, ed. Manuel Vargas and Gideon Yaffe (OUP, 2014).

20 Bertini, "Others matter".

21 Bertini, "La critica berkeleiana dell'autonomia morale"; Bertini, "Moral Heteronomy. History, Proposal, Reasons, Arguments".

However, there are a number of problems which block the willingness to approach ethics from an evolutionary viewpoint. Some of these are fruitfully addressed by the papers in the present issue.

The most general problem consists in that evolution is still considered a disqualifying device for moral and religious ideas, particularly according to traditional Darwinism. Theorists assenting to this view hold that evolution and morality (and religion as well) are at odds. That is, in this view, contemporary research on prosociality, tolerance, and higher-order behaving capabilities demonstrates that these allegedly morality-conducive features are proximally altruistic and collaborative motives, but intrinsically selfish and competitive dispositions. Particularly, if morality is an adaption originating from a blind selective pressure, morality is delusive from its own standpoint; since for any action it holds that, once an action is conceived in evolutionary terms, then it cannot pass the test for being moral (on account that its occurrence is not moral, but adaptative, and adaption which originates from blind selection is evidently contrary to morality).

Lemos acknowledges that the conflict between traditional Darwinism and religiously-oriented ethics is irresolvable if it is assumed that randomness is at work in the evolutionary process. However, it is not certain that evolution attests the existence of ontic randomness out there. It may be that what appears to be a chance occurrence, looks like randomness in reason of a poor understanding of all the elements involved.

This observation suggests which direction should be taken for the purpose of defending moral theism. The strategy, moreover, consists in showing the compatibility of religiously oriented ethics and religion in general with Darwinism. This strategy can be pursued by disentangling evolutionary findings from their traditional Darwinians' interpretation. According to Lemos, there are at least four items under which classify the supposed clash of evolution and religion: a) design; b) randomness; c) suffering; d) objectivity of ethics. Design is not a problem, since traditional Darwinism refutes pre-Darwinian design arguments, such as Paley's one, but it is harmless to updated versions of the argument such as Swinburne's one, for instance. Suffering in evolutionary history may provide evidence in support of the evil objection to the existence of God. The great number of groundless evils involved in the competition for the resources, the consequences of random mutations leading to misadaptations, and the losses of organisms, should refute an omnipotent, free and good God (Aguti discusses this topic in detail).[22] Lemos replies this objection by applying the skeptical theist argument (we are not equipped with cognitive abilities capable of understanding God's will, and, accordingly, we are not permitted to evaluate God's morality in terms of our moral criteria) to the evolutionary context: selective pressures on human cognitive abilities have promoted the establishment of capabilities which are seen as useful to survival, rather than being adequate to evaluate God's morality. Consequently, if skeptical theism suffices to answer the problem of evil, evolutionary skeptical theism shows that evils in natural history do not fuel the opposition of evolution and morality.

According to Lemos, the last item requires the most detailed analysis. The objectivity of ethics, namely, its normative validity, is evidently the core challenge set by traditional Darwinians. In Lemos' view an Aristotelian account of morality (i.e., the good for an entity is to actualize their own nature at highest degree) allows for a defense of ethics which proceeds side by side with the naturalization strategy advanced by evolutionary research. Differently from traditional Darwinism, such naturalization does not conflict with a substantive understanding of morality.

Rezkalla addresses similar concerns, but develops his answers by systematically focusing on the coincidence problem, that is, how it is possible that ethics, religiously conceived, and adaptive morality which originated from blind and contingent processes, come at last to coincide. To my mind, it is difficult to overestimate the importance of a similar discussion, because it gives voice to the landmark problem about the relevance of evolution for understanding morality (i.e., the dichotomy of intention and conditions), by formulating the issue in evolutionary terms. In this sense, Rezkalla goes to the heart of the topic. I do not know whether his reasoning against the most notable arguments found in the literature will be persuasive.

22 Andrea Aguti, "Animal Suffering as a Challenge to Theistic Theodicy", *International Journal of Philosophy and Theology* 78, no. 4–5 (2017).

However, he suggests a number of exit strategies from objections about religious ethics which evolutionists raise.

If traditional Darwinism is not to be assumed as the only legitimate interpretation of evolution, research on prosociality, tolerance and higher orders behaviors have the opportunity to illuminate the nature and the frame of morality and religion. Unorthodox Darwinians insist that human evolution has generated the existence of groups as adaptive units, and basically relies on the promotion of prosocial attitudes as tools for increasing the biological fitness of groups' members. Morality and religion play a positive role in such a promotion, and can be characterized as a mean for adaptation in light of their favoring the emerging, the establishment, and the universalization of prosocial attitudes and norms of sociability.

Lavazza shows that, given a similar interpretative context, evolutionary studies shed light on the dynamics of change within institutionalized religions. Particularly, they unveil an inner feature of any religious tradition, that is, their constitutive changing nature. Differently from the institutional perspective's assumption that changes in religions are generated by a one-to-many spreading of ideas (e.g., institutional authorities' declarations determine the rise of new doctrines and practices), evolutionary analysis of cultural institutions seems to attest that the cause of changes is an adaptive mechanism which spreads many-to-many. This suggests an evaluation of the nature of religions which clashes with the traditional understanding of them: while it is assumed that religions are conservative bodies of knowledge whose unity is substantive, and such that changes in them are due to individuals or movements which can be treated as discrete entities (i.e., groups which accept an univocal worldview), evidence from evolutionary reasonings should incline scholars to approach religions as social phenomena which are exposed to a simultaneous plurality of different beliefs, practices, and actualizations of ideas.

What a religious tradition is at present, is the outcome of the selective social pressures the tradition has undergone.

According to Lavazza, this can be explained in the following way. Environmental socio-historical conditions favor a variety of different alternative practices. Such practices intercept the multiplicity of diverse ways of life within one and the same society. For example, after the introduction of divorce in Italian legislation, Catholics have accessed the possibility to divorce. As it was natural to expect, a number of Catholics, but not all, decide to divorce. A novelty in legislation has then produced a change in the social situation, and this change is reflected in a multiplicity of behavioral traits among Catholics. Now, according to the traditional doctrine, divorced people should not take part in the Eucharist. However, divorced and non divorced people live side by side within the Church. As a consequence, some priests behave in conformity with doctrine, whereas others decide to impart the Eucharist to divorced people. This means that the Papal declarations about the possibility under certain circumstances to allow divorced people to take part in Eucharist are not the cause of change. On the contrary, they are simply evidence that a change has already occurred in society.

The paper then provides an exemplification of how evolutionary research can give conceptual instruments to think about morality and religion. As Lavazza claims, it is fully exploratory, and is the possible point of departure of a trajectory which leads to an empirical and new understanding of these phenomena. The value of such an enterprise consists in the capability to promote the discovery of otherwise difficult to see features of the objects involved (for example, change and internal plurality as constitutive features of religions).

It is plain how similar approaches are subject to criticism from different viewpoints. For example, Unorthodox Darwinism assumes that the same selective-pressure model is at work in biological and cultural evolution. Although researches within this paradigm are able to differentiate among the peculiar ways by which the same natural mechanism produces different adaptations in different species (e.g., different collaborative strategies in different species of primates), the assumption that natural selection operates on the variability and mutation of traits remains identical in both domains of experience. Lavazza briefly recalls a few dissymmetries between natural and cultural evolution, and how these may constitute a problem.

Controversial as it is, the continuist view is the target of further criticisms. Di Ceglie deals directly with the main question of the present issue, namely, whether prosociality can be considered a form of

altruism, and has anything to do with ethical behaviors. His paper develops a few difficulties for whoever accepts that evolutionary research on animals is able to cast light on human matters. Briefly, even if prosociality is understood as an altruistic motive for action, this kind of altruism would be of a different quality from human altruism. The main reason is that animals engaging in prosocial practices lack intentionality, at least according to the strong reading of the notion, which is involved in accounting for human behaviors. Di Ceglie argues that when an animal and a human being perform a similar course of actions, for example, food sharing, they apparently exemplify altruistic behaviors. That is to say, the course of actions originates benefits for others at some cost to the agent in both cases. Nonetheless, similarity is only superficial because while human beings do perform their acts intentionally, animals do not. Departing from this conclusion, the observation of the social interactions of social animals does not appear to have any relevance for understanding human behaviors, in spite of the similarities which can be detected.

A related problem consists in whether there are reasons for considering animal prosociality a real form of altruism. According to Di Ceglie, altruism has a long history, and mainly relates to religious matters. In Western societies, Christianity has played a primary role in spreading the necessity of such a behavior in ethical life. It seems reasonable then to assume, at least if you agree with Di Ceglie's interpretive claim about the relation of Christianity and altruism, that what is meant by the notion is deeply rooted in what Christians thought about the matter. Now, a significant part of Christian altruism is self-sacrifice. However, it does not seem that animals are able to actualize behaviors that entail self-sacrifice. Accordingly, the kind of altruism which is targeted by evolutionary research does not converge with altruism in human morality.

Nonetheless, Di Ceglie holds that a partial continuity between animal prosociality and human altruism is available. This goes beyond the methodological problems affecting the conceptual engineering of the hypotheses which are tested by evolutionary research. Christian theology has indeed the resource for defending the view that prosocial, altruistic and selfish behaviors are on sale at the same marketplace. Continuing from this thought, prosociality can be considered a biological form of altruism only in an equivocal manner. Such predicative ambiguity may be legitimately used to account for prosocial behaviors only in the context of a non naturalist worldview which admits the possibility of removing the evolutionary impediments to altruistic actions.

The value of the paper is to provide detailed and clear criticisms to the continuist claim. On my view, Di Ceglie's objections may be (and must be) answered. A careful study of his arguments highlights the costs of the continuist standpoint and clarifies the problems implied by the principles which justify it.

Also Pinsent develops an innovative criticism of continuism. His argument is highly original and innovative. Eating is an action which might constitute a common ground between animals and human beings. As such, evolutionary research on eating could provide evidence for the continuist view. Contrary to expectations, the more animals' habits toward food are scientifically compared with human ones, the more broad the gap between the two clearly becomes. This gap is fruitfully investigated by applying the outcomes of scientific researches and findings in philosophy of mind. Pinsent's main claim is that human beings eat in conformity with favoring I-you relations, whereas animals do it not.

Returning to my anecdotal evidence about the communicative interactions between Sofia and Leonardo, I am tempted to say that Pinsent is too quick in his conclusion. However, Pinsent's argument might be restated after addressing how differences in animals' and human beings' eating reflects their different communicative, cognitive and higher-order behaviors. It seems clear to me that Leonardo was able to interact with Sofia by sharing food with her because he did not conform to the typical human manner of eating when he behaved that way. Possibly, he was able to do this on account of being a young child, who had not yet fully exemplified a uniquely human eating behavior (he ceased to share food in Sofia's way as soon as he became older, although he continued to feed her human food).

In my view, reasonings of this kind demonstrate how far evolutionary research on prosociality can push open-minded inquirers of morality, religions, and typically human attitudes and behaviors[23].

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