

MORALITY AND NATURAL SELECTION: A DEFENSE OF EVOLUTIONARY ETHICS

*Juliano Santos do Carmo**

Universidade Federal de Pelotas

Mariana Burkele

Doctoral student in Philosophy at UFPel

Abstract: The main objective of this work is to demonstrate how evolutionary ethics manages to overcome the empirical and conceptual challenges that are imposed on it. Contemporary evolutionary ethics endorses a methodological naturalist perspective, and can be characterized as a theoretical project that seeks to explain human morality from considerations of the theory of evolution. However, for this project to be carried out satisfactorily, it is necessary to overcome the challenges that have traditionally been posed to it, namely, the problem of altruism and the challenges of the naturalistic fallacy and Hume's law. At a first moment, it will be shown that the problem of altruism can be minimized from the theories of reciprocal altruism and kin selection. In a second moment, it will be shown that conceptual problems are minimized from the descriptivist character of evolutionary ethics. Finally, we will argue that, although pertinent challenges have been raised, evolutionary ethics manages to offer strong answers and consolidate itself as an important theoretical alternative and as a scientifically informed philosophical project.

Keywords: Ethics, natural selection, altruism, naturalism.

Resumo: O objetivo principal deste trabalho é demonstrar como a ética evolucionista consegue superar os desafios empíricos e conceituais que lhe são impostos. A ética evolucionista contemporânea endossa uma perspectiva metodológica naturalista, e pode ser caracterizada como um projeto teórico que busca explicar a moral humana a partir de considerações da teoria da evolução. No entanto, para que esse projeto seja realizado satisfatoriamente, é necessário superar os desafios que tradicionalmente lhe foram colocados, a saber, o problema do altruísmo e os desafios da falácia naturalista e da lei de Hume. Em um primeiro momento, será mostrado que o problema do altruísmo pode ser minimizado a partir das teorias do altruísmo recíproco e da seleção de parentesco. Em um segundo momento, será mostrado que os problemas conceituais são minimizados a partir do caráter descritivista da ética evolucionista. Por fim, argumentaremos que, embora desafios pertinentes tenham sido levantados, a ética evolucionista consegue oferecer respostas fortes e se consolidar como uma alternativa teórica importante e, também, como um projeto filosófico cientificamente informado.

Palavras-chave: Ética, seleção natural, altruísmo, naturalismo.

* Professor of the Graduate Program in Philosophy at the Federal University of Pelotas (UFPel).

1. Introduction

In the paper entitled “Evolutionary Ethics: A Phoenix Arisen”, Michael Ruse (1986) proposes a philosophical return to the evolutionist view of ethics, based on methodological naturalism. The adoption of an evolutionary naturalist theoretical perspective implies a radical change in the conception of the investigation domain, as well as in the methodology used in the field of ethics. Morality theorists at a first-order level, traditionally concerned with questions about normativity (such as inquiry into what is morally right and wrong, prescribing the best course of action, the best values to adopt morally, among other issues), must redirect their concerns to a scientific perspective. Morality is seen as a type of adaptation, which shaped human behavior for evolutionary purposes, making ancestral humans more likely to live in groups, as well as contributing to them leaving an ancestral lineage.

This type of investigation is only allowed by the strong contemporary development of areas such as biology, neuroscience and evolutionary psychology. Therefore, at first, it would be interesting to present the contemporary view of evolutionary ethics. To accomplish this purpose, we will initially present the distinction between classical evolutionary ethics, which refers to the initial development of Darwin's proposal, and contemporary evolutionary ethics, which refers to the development initiated by Michael Ruse and Edward Wilson at the end of the 20th century. The central point in making such a distinction is to highlight and justify the growing theoretical, scientific and argumentative strength that this type of view has acquired in its recent development.

Our main objective in this work is to show how the contemporary evolutionist view of morality survives the challenges that would make the project to naturalize morality from the considerations of natural selection unfeasible. To accomplish this goal, we will address two groups of challenges: empirical challenges and conceptual challenges.¹ The main empirical problem that evolutionary ethics needs to face is the problem of altruism. We will offer

¹ To offer a defense of contemporary evolutionary ethics it is necessary to overcome challenges in multiple domains. As a project developed with a naturalistic basis, it is necessary to make an enterprise in at least two different domains: a contemporary scientific domain, with its own problems, and a traditional philosophic domain, also with its own problems. Our goal is to review the select the literature within these two domains, offering what we consider a complete (but not final) defense of contemporary ethics. We consider that a defense of evolutionary ethics must count with the solution (at least in part) of the main problems offered to evolutionary ethics in its two domains: empirical and philosophical (conceptual). If evolutionary ethics can overcome this challenges, so this naturalistic project can offer great data for contemporary ethics.

three possible answers to this problem, namely, group selection theory, reciprocal altruism theory, and kin altruism theory. At the conceptual level, we will show how evolutionary ethics resists the two classic problems that seek to inhibit naturalistic views of ethics: the naturalistic fallacy and Hume's law. Therefore, we will argue that evolutionary ethics is a solid theoretical position.

2. Establishing Evolutionary Ethics

Contemporary evolutionary ethics is a naturalistic perspective on ethics, which has as its starting point the view that natural selection can explain, to some extent, human moral behavior. We consider this theoretical conception in opposition to the classic conception of evolutionary ethics, proposed by Herbert Spencer. We can understand contemporary evolutionary ethics as a vision of human morality derived from sociobiology². Sociobiology³ was a view originally advocated by Edward Wilson in “Sociobiology: The New Synthesis” (1975), in which the author states that “Sociobiology is defined as the systematic study of the biological bases of all social behavior.” (WILSON, 1975, p. 4)⁴. Thus, sociobiology is related to the emergence of evolutionary

² Several authors endorse an evolutionary perspective of human morality. Among them, Gilbert Harman (1977), Michael Ruse (1986), Allan Gibbard (2003), Sharon Street (2006), Richard Joyce (2006), among others. In general, anti-realist positions within the scope of metaethics have a tendency to endorse an evolutionary perspective of morality. For the purposes of this work, however, there is no intention to deepen the specific development of evolutionary ethics by these authors, but only the systematization of common points to evolutionary ethics as a project of naturalization of ethics.

³ We can take sociobiology as a great project within biology domain. For this work purposes, we can say that sociobiology englobes in its project evolutionary psychology (one of the most well-succeeded parts of the sociobiology project).

⁴ When it emerged, sociobiology was the target of several criticisms and controversies. Philip Kitcher (1985), for example, launched one of the strongest criticisms of what he called “pop sociobiology”. Kitcher considered that “pop sociobiology” was not a serious academic study, like a study of environmental ecology done in academia, but a shallow study of human behavior, which was intended for a general audience, from writings for newspapers and outreach books. The consideration of shallow study is justified by three central points: (1) there is an exacerbated genetic determinism in the view of pop sociobiology, as it considers that certain traits of behavior occur because there are certain genes that cause certain types of behavior; (2) pop sociobiology ignores learning and culture in the acquisition of various human traits, as it generalizes all traits to their supposed genetic origin; (3) pop sociobiology has an exaggeratedly adaptationist conception. For, pop sociobiology considers that certain traits of human behavior are direct adaptations, disregarding by-products of other adaptations, in addition to other possible explanations for human behavior. However, as will be addressed in the next sections of this paper, we will show how more recent views in the field of biology allow us to avoid all the criticisms posed by Kitcher to the initial view of the evolution of morality. For further discussion of this point, see: Kitcher (1985) and Driscoll (2018).

ethics contemporary by making it possible to consider human moral behavior from a biological basis.

Theorists who endorse an evolutionary view of ethics need not necessarily endorse the ontological naturalism of moral properties⁵. We consider as an ontological naturalist position the naturalist moral realism, proposed in the scope of metaethics. Naturalistic moral realism is a group of theories that endorse at least two theses: (1) moral facts exist and (2) moral facts can be described in purely natural terms. Although authors disagree about how moral facts can be described in purely natural terms, all naturalistic realists endorse the possibility of such a description (RAILTON, 1986; BRINK, 1989).

Commitment to an evolutionary view of ethics does not imply any commitment to the nature of moral facts. Therefore, evolutionary ethics is not a kind of ontological theory. However, it is indispensable for evolutionary ethics to endorse methodological naturalism. Thus, the central point, common to all theorists who endorse an evolutionist view of ethics, is to consider that philosophy and science are in continuity. Science (in this case, biology) can offer answers to traditional philosophical problems. According to Wilson (2002), “scientists and humanists must consider together the possibility that the time has come for ethics to be temporarily removed from the hands of philosophers, and to be biologicalized.” (WILSON, 1975, p. 562).

The main feature of evolutionary ethics is to endorse that human morality is “innate”⁶, and that we can explain the emergence of such a feature from the theory of natural selection. This conception refers to Darwin's classic view about sense or moral conscience, present in *The Descent of Man*:

I fully subscribe to the position of those authors who maintain that, of all the differences between man and the lower animals, *moral sense or conscience is by far the most important* (...). Any animal endowed with well-marked social instincts, such as the affection between parents and offspring, *would inevitably acquire a moral sense*

⁵ Usually, even authors who endorse evolutionary ethics end up endorsing anti-realist positions within the scope of metaethics, denying the existence of moral facts constructed in the realistic perspective. For example, Sharon Street (2006) endorses an evolutionary view of ethics, and a constructivist (anti-realist) perspective, and Michael Ruse (1986), endorses an evolutionary view of ethics, and an error theory perspective on metaethics.

⁶ According to Joyce (2016), stating that a given trait is innate means stating that the trait has at least one of these characteristics: “(...) the trait is present at birth, the trait was not learned, the trait was determined by genes rather than environment, the trait developed robustly even in a variety of environments. [...] the trait exists because it was selected by the process of natural selection – that is, the trait is an adaptation. Another possibility is the essentialist view, which holds that innate traits are typical of the species: it is present in all members of the species, or at least in 'normal' members.” (JOYCE, 2016, p. 123).

or conscience, once its intellectual capacities were as developed as those of man. (DARWIN, 1871, p. 120, emphasis added)⁷.

Contemporaneously, the Darwinian conception of the moral sense was expanded and called the moral faculty. The moral faculty is the cognitive capacity that human beings have to form moral beliefs, issue moral judgments and act motivated (according to) these moral judgments⁸. The central thesis of the evolutionary view of ethics is called “moral nativism”⁹. According to moral nativism, we understand the moral faculty as an adaptation¹⁰.

Therefore, we understand the moral faculty as a trait that has remained in human beings because it has increased the reproductive ability of direct ancestors who possessed this trait. In other words,

⁷ Although Darwin believed that morality is a distinctively human characteristic, that is, a behavior that could only have arisen in humans, contemporary evolutionary theories believe that non-human animals can also have moral behaviors. This is justified from the understanding of the evolutionary process no longer from a perspective centered on DNA, and on specific characteristics of a given species, but from the perspective of extended synthesis, which seeks to analyze a much broader range of phenomena than just DNA, such as phenotypic plasticity and inclusive inheritance. The central point of the extended synthesis is to show that there is “(...) a pluralism of processes involved in the causal explanations of evolution.” (CHESCHIM, et. al, 2016). This perspective is based on recent discoveries, which contradicted the classic view centered only on DNA. If the DNA-centric view were sufficient to explain all interspecies variation in nature, it should be the case that phylogenetically distant organisms should also be genetically distant. However, research in molecular biology showed that many phylogenetically distant organisms were not genetically very different. Therefore, what causes the differences between organisms, several times, is not the DNA. If the requisite of morality are environmental factors, which act at the phenotypic level, then it may be the case that non-human animals also possess moral traits. An empirical example of this point is the observation of morally qualified behaviors and structures in the relationship between wolves. For further discussion of these points, see: Cheschim (2016) and Silveira (2019).

⁸ Authors who endorse an evolutionary perspective of ethics are divided on the scope of action of natural selection. According to some authors, who endorse a softer view (JOYCE (2001, 2006), natural selection has only shaped the capacity for us to make the moral judgments that we do. However, according to other authors, natural selection has not only shaped our ability to make moral judgments, as well as the content of those moral judgments (STREET, 2006), from conscience/moral faculty.

⁹ There is an intense philosophical discussion about how we should interpret the influence of biology on morality. For some theorists, defenders of moral nativism, the moral faculty was a direct product of natural selection (JOYCE, 2006, 2014; MIKHAIL, 2011). For the competing view, the moral faculty is a by-product of other non-moral adaptations (VLERICK, 2005; PRINZ, 2008). As this question cannot yet be resolved empirically, it is necessary to make a choice for theoretical adequacy to the arguments in question.

¹⁰ There is a variation of evolutionary moral nativism, called developmental nativism, proposed by Sripada and Stich (2006). In general terms, the moral nativism of development points out that, although the moral faculty is related to the genetic load of human beings, certain types of environmental input are necessary for this faculty to emerge. This type of nativism will not be addressed in the work in question because we consider that evolutionary moral nativism is more compatible with the Evolutionary Dismantling Arguments. For further discussion of this point, see: Joyce (2014) and Sripada and Stich (2006).

(...) Moral nativism in the Darwinian context is the thesis that the ability to make moral judgments is a human adaptation: the reason we classify the world in moral terms (good, bad, right, wrong, etc.) is because doing so it helped our ancestors make more babies than their competitors who lacked the moral trait. (JOYCE, 2014, p. 527).

Understanding ethics in evolutionary terms is based on the notion of altruism. More specifically, theorists seek to understand how altruistic behavior was consolidated as a type of adaptation, perpetuating itself over generations. The choice of the term altruism occurs because this term is used to classify behaviors of different species of animals (humans and non-humans) that guarantee cooperation. Cooperation is essential for the reproductive success and survival of the species. However, it is necessary to point out an essential distinction, namely, the distinction between biological altruism and psychological altruism¹¹. According to Sober (1988), there are three distinguishing features of what to consider biologically altruistic behavior: (1) “reproductive benefits” are the only criterion; (2) presence of mind is not (necessarily) a criterion; (3) a cost/benefit analysis and a comparison between actions is always part of the “reproductive benefits”. This type of altruism is usually assigned in the field of biology to assess altruistic behaviors of non-human animals.

However, these criteria seem to be insufficient when theorists in the field of ethics seek to characterize human actions as altruistic. Thus, the type of altruism considered to be distinctive of human animals is psychological altruism. Sober (1988) characterizes this type of altruism in four characteristics: (1') the presence of mind is necessarily a criterion; (2') there can be no concern with the reproductive success of the animal; (3') there cannot be any comparative analysis; (4') when there is benefit, this benefit is achieved in a non-instrumental way.

The evolutionary view of morality considers, therefore, that in the case of human animals, there is a connection between biological altruism and psychological altruism. In other words, biological altruism, widely analyzed in non-human animals, would explain and support the development of psychological altruism in human beings. According to Ruse and Wilson (1986),

¹¹ Sober (1988) uses a slightly different nomenclature, namely, psychological altruism is called vernacular altruism, and biological altruism is called evolutionary altruism. Wilson (1975) uses the nomenclature intrinsic altruism and extrinsic altruism. For the sake of simplicity, we will follow the nomenclature most used in the literature, namely, psychological altruism and biological altruism.

Richards (1987) and Joyce (2014), psychological altruism is a combination of biological altruism with other cognitive abilities, such as language, memory and the ability to develop habits¹². Psychological altruism would ultimately be a “sophistication” (given the organic complexity of human beings compared to non-human animals) of biological altruism.

Based on this grounding in ample empirical evidence, evolutionary ethics established itself as one of the strongest positions in the philosophical discussion of the 20th century, being endorsed by several authors (Ruse (1986), Street (2006), Joyce (2006), among others. others). According to Gibbard (1990), the evolutionary view of ethics,

have sufficient coherence from common observation, ethnographic reports, diffuse discoveries in experimental psychology and evolutionary considerations about complex coordination in human life to make this speculation [evolutionary ethics] *amenable to development*. (GIBBARD, 1990, p. 30, emphasis added).

Although evolutionary ethics has wide acceptance nowadays, establishing an evolutionary conception of morality faces several challenges, arising both from philosophy and from science itself. Because, as this is a position of naturalistic bias, it is necessary to use information from science correctly. According to Ruse, “(...) the central point of naturalism is that if science is wrong, you will be wrong too.” (RUSE, 1995, p. 256). Therefore, in the next section of this paper, we will address a problem inherent in evolutionary theory: the compatibility of altruism with natural selection.

3. The Empirical Challenges to Evolutionist View of Morality

The evolutionist explanation of the moral faculty seems to synthesize the view that human beings are the only beings in nature capable of being “moral”¹³, presenting a specific type of altruism: psychological altruism, which

¹² Some authors criticize this point, namely, they claim that it is not possible to make a connection between biological altruism and moral altruism, considering that the theoretical leap between both is very large. However, we believe that Ananth (2005) offers a theoretically satisfactory way out of this leap, namely the “Baldwin effect”. For further discussion of this point, see: Ananth (2005), Sober (1993) and Nagel (1978).

¹³ At this point, we follow Joyce (2014), who considers that morality in human beings has as a distinctive feature the ability to formulate moral judgments. The discussion about human beings being, in fact, moral, is beyond the purposes of this work. Therefore, for the evolutionary perspective of morality, the central point is that human beings are capable of taking so-called moral (or altruistic) actions, following

can be considered as a “sophistication” of biological altruism, present in other species¹⁴. However, reconciling biological altruism with the theory of evolution has been a challenge since the early development of Darwin's natural selection. In other words,

(...) He who is ready to lay down his life, as at least a savage would be, instead of betraying his fellows, would leave no offspring to inherit his noble nature. (DARWIN, 1882, p. 163)

The problem raised by Huxley and a handful of others is that natural selection and its products are, *prima facie*, the antithesis of helping and cooperating [altruism]. We begin with the struggle for existence and end up discovering that only victory counts from an evolutionary point of view. As a result, all of our traits, physical and mental, are geared toward personal success. The personification of selfishness! (RUSE, 1995, p. 279, *emphasis added*).

The theory of natural selection thus appears to have an intrinsic inconsistency with respect to altruism. The idea of altruism and cooperation is simply out of place from an evolutionary perspective. Organisms should, taking the perspective of natural selection, act selfishly, as this benefits their own chance of survival and reproduction, ensuring greater reproductive fitness and number of offspring. Given this, it follows that natural selection should

moral judgments that guide this type of action. By moral judgment, we follow the characterization of Joyce (2014) and Prinz (2015), who consider a moral judgment as an application of a moral concept (such as good, bad, fair, unfair) to a given sentence, such as “Killing is wrong”. For further discussion, see: Joyce (2014) and Prinz (2015).

¹⁴ Psychological altruism can be considered a “sophistication” of biological altruism due to the biological constitution of human beings. According to Vlerick (2020), altruistic dispositions evolved through a combination of social inclinations and biological inclinations. “Human altruistic dispositions evolved from a combination of cultural group selection, which led to a highly cooperative niche characterized by prosocial norms and sanctions, with natural selection for altruistic psychological traits in this altered social environment (which rewards altruism and punishes free-riders and others who engage in antisocial behavior).” (VLERICK, 2020, p. 2). Vlerick's point is that, in addition to having a social component, that is, a willingness to follow social norms and rules, we can also offer a biological explanation of psychological altruism, as we have a biological component that rewards altruistic behaviors. Thus, human beings would be a species that has this “resource” derived from biological altruism, and molded in our brains. Because, according to Vlerick, the engagement of human beings in altruistic behaviors towards each other stimulates feel-good hormones, such as dopamine, oxytocin and serotonin. Thus, we can infer that we are biologically rewarded for acting psychologically altruistically, something similar to organisms that are “rewarded” practically for acting biologically altruistically with each other (as this increases their reproductive fitness). The central point is that psychological altruism goes “beyond” the increase in reproductive fitness, also bringing a feeling of well-being. For further discussion of this point, see: Vlerick (2020).

have favored those organisms that acted for their own benefit, and altruism should have been eliminated from nature. However, empirical evidence points to the opposite path: altruistic behavior is counterintuitively identified in several species. For the evolutionary explanation of morality in humans to be possible, it is necessary to explain this conflict between the theory of natural selection and the existence of altruistic organisms in nature. For, an evolutionary explanation of morality needs to be compatible with natural selection (since this explanation shows that the moral faculty is an adaptation). In order for the evolutionary explanation of morality to be empirically supported, we will analyze three perspectives that try to solve the problem: the theory of levels of selection, the theory of kin selection and the theory of reciprocal altruism.

3.1 The Theory of Levels of Natural Selection

For some Darwinian theorists, including Darwin, the problem of altruism is directly related to the problem of the levels at which natural selection operates. According to Darwin,

(...) When two tribes of primitive men living in the same country come into competition, whether (other things being equal) the tribe has the greater number of courageous, sympathetic, and loyal members, who are always ready to warn others of danger, as well as protect and defend each other, this tribe would have better success and would conquer the other. (DARWIN, 1871, p. 113).

If a position on natural selection is adopted at the individual level, where evolution only benefits individual organisms, it follows that altruism should not have evolved, as it is not advantageous to adopt this type of behavior. From an individual perspective, the best behavior to be adopted is selfish behavior. However, taking a position on natural selection at the group level, it is inferred that altruism seems to be evolutionarily advantageous. A group made up mostly of altruistic individuals, who subordinate their selfish interests to maximizing the benefit of the group, has a survival advantage over groups composed mostly or exclusively of selfish individuals. In the case of Old World monkeys, individuals warn (alarm) their group mates when a threat approaches. A group composed of altruistic individuals would benefit from a group of selfish individuals, as the number of warnings (alarms) to their companions to protect the group would be considerably higher.

However, neo-Darwinian theorists, while agreeing that selection at the group level may allow the evolution of altruistic behaviors, doubt the importance of this evolutionary mechanism. Among the first authors to challenge the group selection view in favor of a gene-centered explanation were Williams (1966) and Smith (1964). Both argued that group-level selection has little evolutionary force and is an unlikely justification for promoting altruistic behavior. Dawkins (1976), more vehemently, states that the theory of selection at the group level succumbs to subversion within the groups themselves. Within groups composed of altruistic individuals, any free-rider¹⁵ would lead the group to ruin. The free-rider would have a greater reproductive advantage, managing to generate more offspring than the other individuals, until the selfish individuals overlap with the altruistic individuals¹⁶.

However, Dawkins' proposal, and the gene-centric view, have come under criticism. Initially, the main “counter-attacks” of group selection were made by Cohen and Eshel (1976) and by Matessi and Jayakar (1976). These biologists aimed to develop explanatory models in which group selection can indeed occur in nature, and not be a rare or isolated phenomenon. This explanatory model gained further strength from laboratory experiments conducted by Wade (1980), which demonstrated strong causal effects of group selection in certain populations.

¹⁵ The term free-rider comes from game theory. In general terms, the free-rider is the one who, even when inserted in a group, decides to take his own benefit as a course of action. For further discussion of this point, see: Hardin (2003).

¹⁶ This conception developed by Dawkins (1976) about the “selfish gene” can be revised in the face of a counterexample. The counterexample in question is extracted from observation reports of the Druid Peak pack, which was introduced in Yellowstone Park in 1996. This pack was originally composed of 5 wolves: #38 and #39, these being the alpha male and female, and her three puppies #40, #41 and #42. In her first year in the park, alpha female #39 leaves the pack to become alone wolf, probably kicked out by her daughter #40, an extremely aggressive and relentless wolf, who becomes the new alpha and demonstrates typically selfish behaviors. She-wolf # 40 continued to constantly harass her sisters, especially the beta female, #42, who came to be called Cinderella (in allusion to the violence suffered by the character by her sister). She-wolf #40 did not breed or leave offspring, and furthermore, she did not allow her sister Cinderella to also leave offspring, as she killed her litter of pups. However, the following year, #40's sisters rebelled and killed her, placing Cinderella as the new alpha of the pack. From the new leadership, the Druids became the largest pack ever seen as it was found that at least three litters were born from the freed females, resulting, in 2001, in 37 members of the Druids. With this example, it is noticeable that the “selfish gene” is not capable of dismantling any group. Initially, because the behavior is at the phenotypic level, not genotypic. And, in addition, it is verified by empirical evidence that animals such as wolves have a complex social organization, based on emotions, which manages to confer great stability on the relationships and ties of individuals between groups, not making the dismantling of these groups something so simple and difficult. easy, which supposedly would happen in the presence of any free-rider, as pointed out by Dawkins.

Wade compared the evolutionary response of a group selection process (i.e., selection among isolated reproductive groups in a population) with a kin selection process (i.e., selection among groups of relatives in a population with random mating within a population with same genetic pool) and with an individual selection process (i.e., selection within groups in each of these population structures). *His empirical and theoretical results demonstrated the causal importance of group selection during the process of evolution.* That is, when group selection was taking place, it generated an evolutionary response over all other processes, easily detectable even when individual selection or other random process promotes the same trait as group selection, that is, even when it affected one non-altruistic trait. (SHAVIT, 2005, p.5, emphasis added).

However, even with Wade's (1980) defense, the group selection view is still widely criticized, in favor of the gene-centered view, namely, the theory of kin selection. One of the central points of the endorsement of the gene-centric view is that this view manages to offer a rule, which can explain the relationship of altruistic behaviors in a wide range of cases: Hamilton's law.

3.2 Kin Selection Theory

For kin selection theorists, the altruistic behavior of individuals is selective, targeting only specific individuals, not any individual. According to Vlerick (2020), kin altruism can be understood as follows: “the genes decoded for altruistic behavior towards kin are good replicators (and consequently can spread), since they 'help' the copies of themselves in other organisms (that is, in genetically related organisms)”.

Therefore, individuals only adopt altruistic behavior with those who have some degree of kinship. This happens because individuals who are related share, to some degree, their genes, with the possibility of these individuals presenting the same behavior as the person performing the action. When performing an altruistic action for a family member, such as sharing food, the chance that the one who received the altruistic action reciprocates the action is high, being able to share his food with the sharer on a future occasion. Evolution thus increases the possibility of survival of those individuals who have genes in common, which would guarantee altruistic behavior.

The demonstration of favoring altruistic behavior is based on Hamilton's Rule, which states that $b > c/r$, with “b” being the benefit of the one who receives the altruistic action, “c” the cost of the one who promotes

the altruistic action, and “ r ” the coefficient of the family relationship between the share giver and receiver. According to Okasha (2013, p. 7), the value of “ r ” for full siblings is $\frac{1}{2}$, for parents and children $\frac{1}{2}$, for grandparents and grandchildren $\frac{1}{4}$, for cousins $\frac{1}{8}$, and so on. The higher the value of “ r ”, the greater the possibility that the recipient of the altruistic behavior also has the altruism gene, being able to reciprocate the action.

The theory of kin selection has a large amount of empirical information in its favor. For example, in several bird species, it has been confirmed that organisms are much more likely to help their relatives with raising their young than to help unrelated ones. In the case of most social insect species, which have a haplodiploid form of reproduction, females share more genes with their sisters than with their own offspring. So these organisms will have more genes in the next generation through the help of the reproduction queen, who will increase her number of sisters, than by investing in reproduction for their own offspring. Therefore, these organisms will act altruistically, promoting the reproduction of their close relative, in this case, the queen, instead of promoting their own reproduction.

Therefore, the theory of kin selection can explain altruistic behavior from a genetic perspective of evolution. Altruism only seems like an anomaly when viewed from the perspective of a single individual. Adopting a genetic perspective, as presented by Dawkins (1976, 1982), evolution is a competition among the genes of a species for greater representation in the next generation. In other words, altruistic behavior causes the gene to maximize its copies in the next generations, since the gene carriers benefit each other, maximizing adaptive and reproductive adequacy, more easily propagating the genes to their descendants.

One of the central points of this discussion is the recent change in focus. For, in the early days of the conception of kin selection, the theoretical approach used could be considered excessively genetic (as seen, especially, in Dawkins' conception). Currently, it is considered that behaviors (such as altruism and selfishness) do not emerge directly from certain genes. Especially in the work of Sober and Wilson (1994), it is endorsed that a certain genetic “base” interacts with certain phenotypes (which generate behaviors such as selfishness and altruism), and thus the phenotypes are passed from generation to generation, as long as there is no major environmental change. This vision guarantees that the trait of altruism is passed on to the descendants, without falling back on such a genetic load as the previous visions¹⁷.

¹⁷ This view is also supported by ample empirical evidence, as in the case of wolf packs. In the case of wolf packs, because they do not have a rigid hierarchical structure, cooperative relationships are based

3.3 The Reciprocal Altruism Theory

The theory of reciprocal altruism, originally developed by Trivers (1971), “was an attempt to explain instances of (apparent) altruism between unrelated organisms, including members of different species.” (OKASHA, 2013, p. 19). This theory aims to cover the cases that cannot be included in the theory of kin selection. Its central thesis states that it may be beneficial for one organism to help another, if there is some expectation that the favor will be returned in the future. The only requirements for the explanation of this type of altruism to be successful is that organisms interact several times, and have the capacity for mutual recognition in different situations. The free-rider's challenge, in this case, is minimized, because if the body refuses to help the other, it will incur its own losses, as it will no longer be able to enjoy help for itself.

This theory is supported by extensive empirical evidence. In the case of unrelated individuals, vampire bats are exemplary examples of altruistic behavior. As it is common that, on some nights, bats are unable to feed, and as this can be fatal, since bats cannot survive long periods of time without food, these animals usually donate the collected blood to other organisms. This is because bats live in small groups, recognizing each other and knowing that the benefit of sharing food may return to them at some future time. According to Okasha “(...) bats are more inclined to share food with those who have recently shared it with them.” (OKASHA, 2013, p. 22).

In the case of individuals of different species, a paradigmatic example is that of fish that inhabit tropical coral reefs. Small fish “clean” large fish, removing parasites from their mouths. In this case, large fish benefit from the removal of parasites, while small fish benefit from this food source. The big fish ends up protecting the small fish, as it often ends up returning to the same small fish that cleaned it. Altruistic behavior thus generates mutual benefit for both species in their relationship. Another paradigmatic example is the relationship between humans and dogs. Humans and canids share an extensive history of reciprocal altruism, so that canid selection itself was shaped by this relationship with humans. For, humans would offer food to canids, while canids would offer protection to humans. Thus, both benefited from this relationship: canids had a safe food source, and humans had greater protection of their territory.

on kinship between wolves, that is, on their own family relationships. For further discussion of this point, see: Silveira and Sulich (in press).

From the explanation present in the three theories, namely, in the theory of group selection, kin selection and reciprocal altruism, the problem of the apparent inconsistency between the theory of natural selection and the presence of altruistic organisms in nature seems to have been solved. For, as the vast majority of biological phenomena are multicausal phenomena, it is possible that the three explanations offer, at least in part, illuminating points for the evolution of altruistic behavior in nature, both among organisms that share genes, and those that they don't share. Thus, the evolutionary view of morality can be sustained, as there is no incompatibility with the theory of natural selection. However, even if evolutionary ethics is empirically tenable, this type of theory is still a philosophical view. Thus, in the next section, we will address the two conceptual theoretical challenges to evolutionary ethics: the naturalistic fallacy and Hume's law.

4. Conceptual Challenges to the Evolutionary View of Morality

Michael Ruse (1986), in the paper “Evolutionary Ethics: a Phoenix Arisen”, points out that there are two traditional conceptual problems that have prevented a deep development of evolutionary ethics as a philosophical project: Hume's law, and Moore's naturalistic fallacy. These two problems ended up “undermining” the attempts to offer a naturalistic view of morality, that is, an explanation that involved the sciences. However, according to Ruse (1986) and Joyce (2013), it is fully possible to overcome these two conceptual challenges and establish an evolutionary project in ethics. Therefore, in the first moment, we will explain the philosophical problems directed by Hume and Moore to visions of ethics related to science to, in a second moment, show the possibility of overcoming these challenges and, consequently, the possibility of establishing the evolutionary project of ethics.

Moore's naturalistic fallacy is usually defined as a problem that naturalistic theorists must grapple with. For it would be a mistake to try to define ethics in natural terms. The naturalistic fallacy is one of the most important points of Moore's argumentation in *Principia Ethica*, following directly from the thesis of non-analyzability, indefinability and simplicity of the “good”. Therefore, for a full understanding of the naturalistic fallacy, it is necessary to understand this previous thesis. The thesis of the non-analyzability, indefinability and simplicity of the good points out that the “good” is a simple property, explanatory exhaustible in itself and that does not support any type of decomposition, as it is an ultimate semantic constituent.

Any ethical theories that do not depart from this point, even if located within the normative scope (given the analytical primacy of second-order questions), will not constitute knowledge, as they will incur a fallacy: the naturalistic fallacy.

Theorists may commit the fallacy for three reasons: (1) theorists who identify the good with a property other than the good itself commit the fallacy. This is due to the fact that the good is a simple property, which is exhausted in itself, and which, therefore, does not admit any identification (in the sense of explaining the concept) with another property, other than itself; (2) theorists who identify the good with an analyzable property also commit the fallacy. This is due to the fact that it is only possible to explain, through decomposition, complex properties through simple properties; (3) theorists fall into the fallacy of defining the good in natural or metaphysical terms. Spencer's classic evolutionary ethic, social Darwinism, stresses that good conduct is the same as "relatively better evolved conduct." But it seems that these two notions, namely "good" or "good conduct" and "relatively better evolved" are very different notions. They seem to belong to different scopes, namely, the descriptive scope of being, and the normative scope of ought to be. But, what is the problem in identifying two notions of different scopes?

Moore's answer to this problem is the Open Question Argument. This argument has the following structure: since goodness is a simple and indefinable property, any proposed analysis of F for goodness, we have that the proposition that "the property F is good" is distinct from the proposition "the property of F is F". But what is the point of this argumentative structure? Using Spencer's example, we have that: Spencer's definition: "X is good" means that "X has the property of being an evolved behavior". However, with the development of Moore's argumentation in the Argument of the Open Question, it is noticed that these two propositions are different. Consequently, the second step of the open question is introduced, for Spencer:

1. (A): Given that "X has the property of being an evolved behavior" then "X is good." This, of course, is an open question.
2. (B): Given that "X is good" then "X is good". This is not an open question.
3. (C): If the proposition "X has the property of being an evolved behavior" and the proposition "X is good" are different in terms of whether or not they are open questions, then they express different propositions¹⁸.

¹⁸ This formulation is taken from Speaks (2007).

If Spencer's definition were correct, then A and B would be semantically identical propositions. As A and B do not leave equal questions, they are not semantically identical propositions. Therefore, Spencer's definition is not correct. Moore's most general conclusion is that "good" cannot be identified with any properties investigated by the natural sciences, nor with those of evolutionary biology (in Spencer's case). The point of the open question argument seems to emphasize, as Speaks (2007) states, that the property "good" is not identified with any natural property.

According to Baldwin (2008), Moore thinks of three different versions of what a natural property should be: (a) a property is natural when it has spatio-temporal existence. Consequently, unnatural properties have no existence in the spatio-temporal world (eg, truths of arithmetic); (b) natural properties give the object all the substance it has, and are independent parts of it. Consequently, unnatural properties are dependent parts of it, and do not give the object all the substance it has; (c) a property is natural when it is the subject of the natural sciences or psychology. Thus, unnatural properties are not the subject of natural science or psychology.

Consequently, unnatural properties are not the subject of natural science or psychology. From this, it seems natural to conclude, as Moore does, that "good" has no identification with natural properties and is an unnatural property, which does not belong to the subject of the natural sciences and has no spatio-temporal reality. Thus, identifying the good as a natural property, point (2) of theories that fall into the naturalistic fallacy, is explained fully with the Open Question Argument.

Although the naturalistic fallacy poses a major challenge to classical evolutionary ethics, endorsed by Spencer, the challenge does not apply to the contemporary conception of evolutionary ethics. As highlighted, contemporary evolutionary ethics is completely different from what became known as social Darwinism (in this work, called classical evolutionary ethics). Classical evolutionary ethics points out that evolution should guide our moral values and attitudes. This theory offers a prescriptive, placing evolution as a constituent part of the definition of moral value. And this is precisely the reason why evolutionary ethics was stagnant until the end of the 20th century, as it was completely immobilized by the naturalistic fallacy.

The contemporary view of evolutionary ethics can be systematized as an approach that:

(...) treats morality as a set of dispositions and behaviors that represent the transformations of “pro-social” or “proto-moral” behaviors and dispositions of ancestral human beings. These dispositions and behaviors are theorized as adaptive, as having contributed to increasing the chances of leaving descendants of the animals that possessed them. (WILSON, 1986, p. 295).

Therefore, this contemporary conception of evolutionary ethics does not aim to offer a definition of moral value in natural terms, nor does it aim to provide a biological foundation for morality. Purpose is much less substantive. The aim of contemporary evolutionary ethics is only descriptive, not prescriptive.¹⁹ Considering that ethical theories must necessarily offer a normative foundation for our actions is what Ruse considers to confuse the “priest” with the “teacher”. According to Ruse, the moral philosopher's job is not to prescribe new moral ideals, but to understand morality as we employ it. And this by no means falls into the naturalistic fallacy.

Although the naturalistic fallacy is often considered just an “extension” of Hume's law, the two are quite different. The naturalistic fallacy applies to the metaphysical scope, based on the nature of the “good” property, while Hume's law applies to the logical scope, based on the possibilities of logical derivation between two considerably different scopes of language. Consequently, it is necessary to explain how the evolutionary view of ethics could overcome Hume's law.

Hume's law, in general terms, points out that one cannot derive an is from an ought. According to Hume:

In every moral system I have hitherto encountered, I have always noticed that the author follows for some time the ordinary way of reasoning, establishing the existence of God, or making observations about human affairs, when, suddenly, I am surprised to see that, instead of the usual propositional copulas, such as is and is not, I do not find a single proposition that is not connected to another by an ought or ought not. This change is imperceptible, but of the greatest

¹⁹ This movement can be taken in two different ways. It can be a easy target for criticism from its oppositors, who can say that the movement of taken ethics away from the normative field, and putting it the descriptive field misses the point of the conceptual problem. It can be said that the conceptual problem can only be accessed from a normative point of view, and we know that, from a evolutionist perspective, this movement is problematic. But, it is possible to answer this type of criticism. We can consider that the normative role of morality remains as it always has been. Evolutionary ethics isn't trying to deny that. It is possible to take that evolutionary ethics is only trying to show that a lot of important data originating from biology can be used in our understanding of human moral behavior. Besides this, evolutionary data can also be used in our selection of the finest normative theories in the domain of ethics.

importance. For, as this ought or ought not expresses a new relationship or statement, this would need to be noted and explained (...) (HUME, 2000, p. 509).

Therefore, we chose to characterize Hume's law in the most traditionally accepted way in current philosophical development: (i) as establishing a strong figurative semantic thesis (PUTNAM, 2005, p. 29) and (ii) as establishing a logical barrier between the scope of being and duty, preventing any deduction between the two scopes (SAUTTER, 2006, p. 3).

For Putnam (2005), the central point of Hume's law is not to point to one of the inference canons of formal logic, but to establish a metaphysical dichotomy. According to this view, Hume assumes a metaphysical dichotomy between “matters of fact” and “relations of ideas”. Thus, Hume pointed out that a descriptive judgment, of the form “X is Y” describes a “matter of fact”, so no judgment can be derived from “X ought be Y”. However, this apparently simple view incorporates a strong figurative semantics, presupposed in the view of matters of fact: concepts are a kind of ideas, and ideas are figurative. Thus, the only way an idea can represent a matter of fact is by resembling that matter of fact.

Ideas, however, are not only figurative, they also have non-figurative properties, which involve feelings. From this conception, Hume concludes that there are no questions of fact about ethical concepts, because if they existed, these concepts would have to be figurative, which does not occur, since there is no type of moral fact. In other words, the central point is that the “ideas” which correspond to value judgments are feelings, not any kind of fact or entity in the world. According to Putnam, “(...) the fact/value dichotomy [is/should be] is not, at bottom, a distinction, but a thesis, that is, the thesis that ethics does not deal with matters of fact.” (PUTNAM, 2005, p. 35). Therefore, the interpretation has as a conclusion of Hume's law the establishment of non-cognitivism and anti-realism in metaethics, going beyond the traditionally assigned logical point.

For Sautter (2006), Hume's law is much simpler and more direct than the point presented by Putnam. In general terms, it points to the clarification of logical relationships between the scope of “being” and “ought to be”,

the author [Hume] criticizes the way in which what belongs to the domain of ought is derived from what belongs to the domain of being, leaving open the question about the very possibility of such a derivation. (SAUTTER, 2006, p. 242).

The same occurs when trying to deduce propositions about the ought to be from propositions about the being: it is not possible to carry out such an inference movement, as there is a logical barrier between the scope of being and the ought to be, which makes any type of derivation or deduction impossible between the two scopes²⁰.

It is now easy to see why the contemporary reformulation of evolutionary ethics also does not fall under Hume's law, since the starting point of contemporary evolutionary ethics is in its descriptive character, and no longer prescriptive! There is no attempt to derive an ought from an is, as was evidently the case in Spencer's classical evolutionary ethics. The only possible attempt is to offer an explanation of the origins of our moral faculty, and consequently of our moral behavior as human beings, from a biological perspective, that is, from a perspective of ourselves as biological beings that we are. Thus, contemporary evolutionary ethics does not fall into either of the two conceptual problems posed by naturalistic views of morality, showing itself as a conceptually and empirically solid project.

Final Considerations

The main objective of this work was to offer a defense of evolutionary ethics, specifically its contemporary reformulation. As seen, contemporary evolutionary ethics is one of the most promising theories about ethics due to the scientific fecundity of investigations about the moral faculty. Furthermore, evolutionary ethics underlies several philosophical positions within the scope of metaethics. However, in order to live up to this objective, it was necessary to respond to the main objections that would make an evolutionary project of ethics unfeasible, namely, the problem of altruism, the naturalistic fallacy and Hume's law.

Thus, at first, we seek to show that the problem of altruism for the theory of natural selection (which underlies evolutionary ethics), although

²⁰ At this point, the distinction between the naturalistic fallacy and Hume's law is evident in both interpretations of Hume's law. For Putnam, with the conclusion of the establishment of anti-realism by Hume's law, there is an evident mismatch with Moore's philosophy, which establishes a type of unnatural realism, instantiating moral properties. Likewise, in Sautter's interpretation, Hume's law would establish a type of logical barrier between the scope of being and what should be, while Moore, in analogy, would establish a type of ontological barrier between non-natural properties (such as the cases of properties of the "good") and natural properties (as in the cases of properties present in the world). The central point is that the naturalist fallacy is not only concerned with the semantic point, being more vehemently concerned with the ontological scope, given the central thesis of the non-analyzability of the good.

present since the beginning of this type of theory, has strong responses in the development of biology in the twentieth century. In particular, with the theories of kin selection and reciprocal altruism, it has been shown that the theory of natural selection can encompass cases of altruism evident in nature. Thus, within the scope of human morality, it is possible to argue that psychological altruism is a sophistication of biological altruism.

In a second moment, we try to show that the conceptual challenges that sought to prevent a naturalistic perspective of morality, namely, Hume's law and the naturalistic fallacy, can also be minimized by contemporary evolutionary ethics. The minimization of conceptual problems for evolutionary ethics occurs from the differentiation of classical evolutionary ethics to contemporary evolutionary ethics. For, unlike classical evolutionary ethics, contemporary evolutionary ethics does not aim to carry out any kind of prescription of moral behavior, only a description (explanation) of moral behavior based on considerations of natural selection. Thus, contemporary evolutionary ethics consolidates itself as a scientifically informed and conceptually adequate project, which can serve as a starting point for several theories in the field of ethics and metaethics.

References

- BRINK, D. *Moral Realism and the Foundations of Ethics*. Cambridge: Cambridge University Press, 1989.
- DARWIN, C. *The descent of man, and selection in relation to sex*. Londres, Penguin, 2004.
- DAWKINS, R. *The Selfish Gene*. Oxford: Oxford University Press, 1976.
- DRISCOLL, C. "Sociobiology". In: *The Stanford Encyclopedia of Philosophy*. Edward N. Zalta (ed.), 2013.
- GIBBARD, A. *Wise Choices, Apt Feelings*. Oxford: Clarendon Press, 1990.
- HARMAN, G. *The nature of morality: an introduction to ethics*. Oxford: Oxford University Press, 1977.
- JOYCE, R. *The evolution of morality*. Cambridge, MA: MIT Press, 2006.
- _____. "Metaethics and the empirical sciences". In: *Philosophical Explorations*, 9(1), 133-148, 2006.
- _____. "The many moral nativisms". IN: JOYCE, R. *Essays in Moral Skepticism*. Oxford: Oxford University Press, 2014, pp. 122-141.
- _____. "Altruism and Biology". In: *International Encyclopedia of Ethics*. Blackwell: 2013.

- KITCHER, P. *Vaulting ambition: sociobiology and the quest for human nature*. Cambridge: the MIT press, 1985.
- MIKHAIL, J. *Elements of moral cognition: Rawls' linguistic analogy and the cognitive science of moral and legal judgment*. Cambridge: Cambridge University Press, 2003.
- MOORE, G. E. *Principia Ethica*. Trad. Márcio Pugliesi e Divaldo Roque de Meira. São Paulo: Ícone, 1998.
- OKASHA, S. "Biological Altruism". In: *Stanford Encyclopaedia of Philosophy*, Edward Zalta (ed.), 2013.
- PUTNAM, H. *O colapso da verdade e outros ensaios*. Trad. Pablo Rubén Mariconda e Sylvia Gemignani García. São Paulo: Ideias e Letras, 2008.
- RAILTON, P. "Moral Realism". In: *The Philosophical Review* 95(2): 163-20, 1986.
- RICHARDS, R. *Darwin and the Emergence of Evolutionary Theories of Mind and Behavior*. Chicago: University of Chicago Press, 1987.
- RIDLEY, M. *Evolução*. Tradução Henrique Bunselmeyer Ferreira, Luciane Passaglia e Rivo Fischer. Porto Alegre: Artmed, 2005.
- RUSE, M. "Evolutionary ethics: A Phoenix Arisen". In: *Zygon*, 21(1), 95-112, 1986.
- _____. *Sociobiologia: senso ou contra-senso?* Tradução Cláudia Régis Junqueira. São Paulo: Itatiaia, 1983.
- _____. *Taking Darwin seriously: A naturalistic approach to philosophy*. Amherst, NY: Prometheus Books, 1998.
- _____. *Evolutionary Naturalism*. New York: Routledge, 1995.
- RUSE, M.; WILSON, E. "Moral philosophy as applied science". In: *Philosophy*, 61, 173-192, 1986.
- SAUTTER, F. "Um breve estudo histórico-analítico da Lei de Hume". In: *Trans/Form/Ação* [online]. 2006, vol. 29, n. 2, pp. 241-248.
- SAYRE-MCCORD, G. "Moral realism". In: *The Stanford Encyclopedia of Philosophy*. Edward N. Zalta (ed.), 2005.
- SHAVIT, A. "The Notion of 'Group' and Tests of Group Selection". In: *Philosophy of Science*, v. 72, pp. 1052-1063, 2005.
- SILVEIRA, M.; SULICH, J. Howling demands: the role of emotions in approval and censorship behaviors in wolf packs. (*in press*)
- SOBER, E. "What is evolutionary altruism?". In: *Canadian Journal of Philosophy* 14: 75-99, 1988.
- SRIPADA, C.; STICH, S. "A Framework for the Psychology of Norms". In: CARRUTHERS, et al. *The Inmate Mind*, vol. 2: culture and cognition. Oxford: Oxford University Press, 2006.
- STREET, S. "A Darwinian dilemma for realist theories of value". In: *Philosophical Studies*, 127, 109-166, 2006.

- SPEAKS, J. “Moore on the simplicity and indefinability of goodness”. In: *Phil*, 2007, pp.1-6
- TRIVERS, R. “The Evolution of Reciprocal Altruism”. In: *Quarterly Review of Biology*, 46: 35-57, 1971.
- VLERICK, M. “Explaining Human Altruism”. In: *Synthese*, v. 199, pp. 2395-2413, 2021.
- WILLIAMS, C. *Adaptation and Natural Selection*. Princeton: Princeton University Press, 1966.
- WILSON E. O. *Sociobiology: the New Synthesis*. Cambridge MA: Harvard University Press, 1975.
- _____. “Structured Demes and the Evolution of Group-Advantageous Traits”. In: *American Naturalist*, 111: 157-85, 1977.

Email: juliano.ufpel@gmail.com
Email: mariana.burkle@hotmail.com

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