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JUSTICE AND RELATED MATTERS IN THE LEGACY OF FRANS DE WAAL

La justicia y otras cuestiones afines en el legado de Frans de Waal

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ABSTRACT: Initially, we critically examine the current state of knowledge in the field of Philosophy of Biology pertaining to empathy as a subject of scientific investigation. Subsequently, we delve into the constraints associated with empathy in some primates, including humans, recognizing it as a socially situated and evolved attribute. Additionally, we explore its potential as a political asset among humans. In light of these findings, we reevaluate the dichotomy between perspectives that emphasize altruism and egoism as fundamental principles in the biological and ontological senses. Lastly, we put forth the scientifically defensible

idea that significant connections exist between empathy and the concept of justice.

Keywords: scientific iusnaturalism, altruism, egoism, evolutionary epistemology, Philosophy of Biology.

RESUMEN: El artículo comienza analizando el estado actual del debate en Filosofía de la Biología sobre el establecimiento de la empatía como objeto del conocimiento científico. A partir de esta premisa, reflexiona acerca de los límites de la empatía en la configuración de la conducta humana planteando ciertos argumentos conducentes a una revisión del equilibrio de fuerzas en el debate entre el altruismo biológico y el egoísmo ontológico. Finalmente, propone la posibilidad de afirmar la existencia de nexos científicamente demostrables entre la aptitud para la empatía y la idea de justicia.

Palabras clave: iusnaturalismo científico, altruismo, egoísmo, epistemología evolucionista, Filosofía de la Biología.

1. INTRODUCTION

Frans de Waal's work has been causing a significant impact in the field of Philosophy of Biology for decades. This impact is not only due to the valuable intrinsic content of his systematic empirical observations and theoretical contributions—such as politics in chimpanzees, empathy as an object of scientific knowledge, the natural genesis of Ethics, and aversion to inequality—but also because it triggers questions and critical issues that will likely encourage a reexamination of previously widely accepted or presupposed notions. It may also lead to a shift in the analytical perspective to be applied in the lines of research opened by his work for future investigations. Attempting to condense, describe, or even evaluate over forty years of rigorous scientific labor in a few pages would be unwise, if at all possible. Fortunately, the ambitions of this text are much more modest. Nonetheless, we would like to propose, through this text, some reflections that can contribute to the debate on the consequences that de Waal's intellectual legacy is promoting in terms of changing perspectives or questioning certain dogmas or axioms presupposed in the preceding philosophical-biological paradigm, as we believe they should be reevaluated in light of his work. Let us now explore how we can suggest some reflections in this regard.

2. THE ESTABLISHMENT OF EMPATHY AS AN OBJECT OF SCIENTIFIC KNOWLEDGE

If Sigmund Freud underlined the importance of the concept of the unconscious within the field of Psychology, it could be said that De Waal has established the visibility of empathy as an object of scientific knowledge within Biology. In doing so, he has strengthened contemporary evolutionary epistemology. Thanks to his research, emotions have ceased to be opaque, invisible, or negligible psychic and behavioural phenomena for science and have attained the epistemological status of a subject of study as intrinsic to scientific-biological knowledge as, and connected with, species' evolutionary trajectories, hereditary transmission through genetics, epigenetics, etc., the particular and differentiable action of evolutionary forces, or physiology. After all, empathy is comprehended as the cognitive ability to identify oneself with others and share their emotions or feelings. It is the capacity of the self to be affected by the other-selves, involving the internalization of others' psychological states to the extent of experiencing them—or nearly so—as if they were one's own. Ultimately, it represents a remarkable and precise degree of emotional resonance.

What would be the meaning of emotions in Biology, paraphrasing Theodosius Dobzhansky (1973), in light of evolution? What is their teleology if we adopt a philosophical-biological perspective based on the notion of final cause as proposed by Aristotle? Initially, emotions seem a sort of interface between three distinct entropic systems, although two of them are strongly intertwined: mind, body, and the environment (De Waal, 2019, 112). Instincts also represent an organism's response to the interactions between mind, body, and environment. However, in the vast majority of animal species, instincts entail an automatic and unambiguous reflexive response. When a stimulus is received in this triple interface, an immediate, predetermined, and closed response is activated. This circumstance was previously considered by authors like Descartes (1991) as a premise to deem all non-human animals as automata or machines, at most, organic matter subject to the rigid and inexorable laws of Physics and Chemistry but lacking consciousness of their own individual identity.

Although emotions, like instincts, also direct the mind's attention and predispose the body to promote actions and ultimately behaviours, emotions emerge without the automatism and immediacy characteristic of instinctive responses. They allow for a space—time—for the prior meditation of experience, reflection, and judgment, thus constituting a flexible and open psychic system much more sophisticated and richer than

instincts. Instead of the previously described unidirectional, one-to-one relationship between the stimulus from the environment and the reaction of the mind-body entity that constitutes the organism, which is characteristic of instincts, emotions enable a multivalent behavioural response. They allow for the integration of individual experience and the evaluation of the environment, thereby preparing the organism for an optimal response. From the perspective of an evolutionary epistemology, it could be argued that emotions evolved because they decisively contribute to guiding our behaviour in an environment of elevated complexity that cannot be fully comprehended cognitively. Specifically, they do so by their capacity to induce adaptive reactions based on the evaluation of various situations imposed by the environment, such as danger, the unknown, competition for limited resources in a given environment, external aggressions, mating options, and more (De Waal, 2019, 35).

Ultimately, emotions are the physiological-metabolic mechanism through which evolution ensures that, in intensely social species with a high degree of cognitive development such as those included in the primate taxon, the body implements the most beneficial responses and behaviors for the adaptive success of the organism in each environment and under each circumstance. While it is true that instinct also plays a similar role in many socially and cognitively less complex species, as mentioned above, the key advantage of emotions lies in the fact that they “do not dictate specific behaviors” (De Waal, 2019, 113). They are not automatic, one may add, and thus allow for the mediation of factors that are prototypical of *Homo sapiens*, such as experience, deliberation, prudence, reasoned judgment, and so on. It is precisely because our behavioral repertoire is so similar to that of other primates in many aspects that we, primates, experience similar emotions.

Emotions are closely tied to the evaluative cognition of the environment, constantly categorizing information to optimize our adaptability and, ultimately, ensure our survival. If emotions were solely the result of indulging in our own and others' moods, they would likely lack any evolutionary significance and cease to exist. Since Rizzolatti and Sinigaglia's (2006) groundbreaking work, we have abundant scientific evidence to assert that emotional empathy is not a supernatural essence, a kind of “ghost in the machine” harbored exclusively by our privileged species due to its unique sensitivity. Instead, it has a well-documented physiological basis responsible for its efficacy: mirror neurons. These neuro-specular mechanisms enable resonance between different selves and the simulation of others' psychological states “as if” they were our own. Furthermore, thanks to documented cases such as Phineas Gage and Elliot, as studied

by Antonio Damasio (2001), and subsequent research by neuroscientists like Marco Iacoboni (2009), it can be confidently stated that emotions not only constitute the *conditio sine qua non* of moral reasoning but also serve as a prior and crucial element for almost any type of decision-making. In fact, without emotions involved in the various available options, reflection and reasoning alone are insufficient for making choices.

In other words, even if any specimen of *Homo sapiens* retains intact the capacity for abstract reasoning, coherent analysis, strategy, and calculation, without emotions, their ability to make decisions and, consequently, to make any moral judgment declines. Brain scanning techniques and positron emission tomography have repeatedly demonstrated that the resolution of moral conflicts activates evolutionarily ancient brain areas. Therefore, moral decision-making cannot depend solely on the extended neocortex, our most recent acquisition in brain structures responsible for abstract reasoning. Instead, it is firmly rooted in “millions of years of social evolution” (De Waal, 2010, 43). For the same reasons, without emotions, human beings would lack any cognitive evaluation of the environment that allows us to optimize our adaptability and increase our chances of survival.

Given that emotions have played a decisive role in our evolutionary history, both because they are essential for cognitive evaluation of the environment and because they constitute the indispensable link in the development of the intense sociability characteristic of *Homo sapiens*, why should emotions not be subject to scientific inquiry in natural sciences, just like other human cognitive abilities such as memory, perception, attention, or imagination?

3. LIMITS OF EMPATHY IN HOMO SAPIENS: A CONTEXTUALIZED ABILITY

To admit empathy as an object of study in natural sciences, and by extension in Philosophical Anthropology, implies in some way drawing consequences from its application to the analysis of our own behaviour and our philosophical-political conception of the globalized social world in which we live. Empathy affects the very core of a longstanding debate that emerged shortly after the advent of Darwinism in Biology, the dialectic between selfishness and altruism as an explanatory principle for individual and collective behaviour, and ultimately for the worldview that shapes the human political community, as it is closely linked to the notion of altruism and, more specifically, with the very possibility of experiencing and sharing it. Once altruistic conducts are admitted as real phenomena in natural sciences, the critical question in evolutionary biology would be

how to explain it within a dynamic marked by the struggle for survival, especially if we assume individuals as entirely selfish entities compelled by competition for resources and governed by the relentless tribunal of natural selection. This is because, if we assume an ontology in which selfishness is fundamental for reproductive benefit, altruistic behaviours would be displaying an antiadaptive behaviour, evolutionarily irrational and ineffective, as they cease to prioritize the self and the satisfaction of one's own needs as the absolute priority in any circumstance.

However, doctrine does not agree when it comes to precisely establishing what constitutes altruistic behaviour, beyond generic notions. In principle, one could speak of altruistic behaviour of an organism when, on its own initiative, without receiving any external coercion or expecting compensatory reciprocity, it shares its own resources to satisfy the needs of others. However, this approach would be clearly insufficient when considering altruism as a complex phenomenon involving many internal and external factors, as well as a no less intricate evolution. In fact, various theories have attempted to explain it to date, but all have been deficient in defining altruism, lacking clarity and precision, thereby hindering the interpretation of relevant empirical data. Some portray altruism as merely apparent, driven by fundamental selfishness, «Scratch an 'altruist' and watch a 'hypocrite' bleed» (Ghiselin, 1974, 247), while others attempt to present it as genuinely selfless. A final group of options seeks to explain altruism through processes of self-identification with the other, excluding acts of supererogatory self-sacrifice and self-giving due to situating the debate outside the egoism-altruism dichotomy.

Certainly, solutions in which human motivations are inherently selfish have long been dominant. Against their inability to offer a sufficient explanation of the phenomena studied, new altruistic explanations are designed against this long-held monopoly. However, altruistic theories have problems like lack of precision leading to misinterpretation and inconclusiveness of the empirical findings, according to Feigin *et al.* (2014, 6). Given this, perhaps it is time to propose interpreting this circumstance as a symptom that “the assumption of universal egoism must be replaced by a more complex assumption allowing room for both egoism and altruism” (Feigin *et al.*, 2014, 6). And this should be done while avoiding the crude abuse of Natural History as the ultimate deciding judge to argue for or against either based on empirical observations, as nature is so rich and complex that countless observations could be cited without advancing the controversy in any direction: “The book of nature is like the Bible: everyone reads into it what they want to read, tolerance or intolerance, altruism or greed” (De Waal, 2015, 61).

In any case, it seems clear that behaviors considered altruistic are highly conditioned by the circumstances in which they occur. Moreover, it is difficult to avoid the suspicion that altruistic dispositions coevolved with other behaviors, such as the rejection of outsiders, favoritism towards one's own group, and certain types of cooperation with specific members of the same group but not others. To address altruism in its complexity, we will primarily focus on the phenomenon of parochial altruism, defined as favoritism towards the internal group at the expense of the external group (Choi and Bowles, 2007). Although this phenomenon of parochial altruism is often considered an anthropological universal of the sapiens (Greene, 2013), its frequency actually varies among communities and throughout individuals' lives, just as the empirical evidence presented in the specialized literature varies depending on the methodological approach used to study it (Pisor *et al.*, 2020). This points, on one hand, to a flexible phenomenon that is context-dependent and highly complex, and on the other hand, to the inconvenience of assuming empathy culminating in altruism as the decisive argument to definitively settle the manichean dilemma of selfishness versus altruism in favor of the latter.

In principle, the specialized literature on the aforementioned parochial altruism commonly conceives it as a primary disposition in our species, so that tolerance towards outgroup individuals would only emerge due to the suppression of this tendency towards the, let's say, natural inclination to parochialism. However, it is not entirely clear in this literature what the necessary and sufficient causes of this suppression are. Among the different possible causes, cultural institutions can impose tolerance towards outgroup members (Fearon and Laitin, 1996; Fry, 2018), the generation of new loyalties through interaction with outgroup members would reduce favoritism towards the ingroup (Brewer and Campbell, 1976; Buchan *et al.*, 2009; Fukuyama, 2001; Hruschka and Henrich, 2013; Mau *et al.*, 2008; Singer, 1981), or the adequate satisfaction of basic needs would enable individuals to genuinely consider the well-being of members from external groups and perhaps make them more inclined to do so (Hruschka *et al.*, 2014; Silva and Mace, 2014). Furthermore, each of these options has its own internal debates that further complicate the overall discussion. We may or may not accept the ontological priority of parochialism over tolerance and empathy towards outsiders, and we may even fundamentally accept the establishment of empathy and, by extension, altruism as objects of scientific knowledge. However, we must not lose sight of the intimate connections between altruism and many other human traits, some of which are often considered antagonistic to attitudes based on our empathic abilities. Perhaps this antagonism is not absolute or, if it is,

it may have an unavoidable feedback component. In any case, parochial altruism can cast light on altruism as a situated, dynamic phenomenon.

How does parochial altruism function in different human groups and in other closely related primate species such as chimpanzees (*Pan troglodytes*) and bonobos (*Pan paniscus*)? In these and other species, a frequent correlation has been observed between cooperation within the group and the presence of external threats. Scientific evidence shows that in different taxa, including birds and mammals, an external threat is immediately followed by an increase in group cohesion and affiliation (Radford *et al.*, 2016). Birds (Radford, 2011), social carnivores (Thompson *et al.*, 2017; Morris-Drake *et al.*, 2019; Mosser and Packer, 2009), and primates (Beehner and Kitchen, 2007) demonstrate cooperative actions among many group members before and during external conflicts.

In humans, it has been experimentally demonstrated that preferences for one's own group over external groups in competitive contexts manifest from a very early age (Fehr *et al.*, 2008; Benozio and Diesendruck, 2015; Fehr *et al.*, 2013). In chimpanzees, hostile and violent conflicts with external groups appear to be widespread, although the intensity and cost of these conflicts vary depending on the studied population (Wilson *et al.*, 2014). For example, when neighbouring chimpanzee communities extend their territorial occupation into each other's territory, they create a zone of overlap where there is a high risk of conflict between the two communities erupting (Wrangham *et al.*, 2007; Wilson *et al.*, 2007).

This territorial aspect of chimpanzee life is manifested through indirect conflicts such as vocal exchanges at a distance (Samuni *et al.*, 2021) or direct conflicts involving visual and/or physical contact, including chasing and attacking the external group (Boesch and Boesch-Achermann, 2000; Wrangham and Glowacki, 2012). These situations of fluctuating hostility can escalate to lethal aggression (Wilson *et al.*, 2014). An example of the culmination of this spiral of intraspecific aggression, known as lethal warfare, was well-documented in Gombe National Park, Tanzania, by the renowned primatologist Jane Goodall (1986), referred to in primatology as the Gombe Chimpanzee War or the Four-Year War. In this war, a chimpanzee community split into two factions, forming two separate communities. The two factions started patrolling the border area and engaging in confrontations, which escalated into an all-out war where even the elderly and revered members of the once-united community were not spared. The horrified primatologists witnessed former comrades annihilating their former friends and even drinking their warm blood.

However, this bellicose aspect of chimpanzee social life is counterbalanced by cooperative dynamics within the internal group, such as

territorial patrols and increased group cohesion (Samuni *et al.*, 2017). Similarly, it has been observed that various species of dolphins (Delphinidae) also form male coalitions that engage in collective surveillance and territorial control, displaying openly aggressive behaviors against any external group intrusion in their habitat (Parsons *et al.*, 2003).

The cases of empathy we tested do not revolve around individual otherness between the self and another self, which also exist and have been extensively documented. For example, adult chimpanzees diving into the water to rescue a young chimpanzee and ending up drowning within minutes —chimpanzees cannot swim, and they know it. Instead, we sought to focus our attention on collective responses against other groups in which some individuals risk their physical integrity to help the group. For instance, protecting shared benefits such as suitable space for all group members or the substantial amounts of protein provided by a cooperatively hunted large prey. The significance of these territorial conflicts between groups is that “territorial expansions increase feeding opportunities, reduce within-group competition, and therefore offer reproductive benefits” (Lemoine *et al.*, 2022, 6). According to Wilson *et al.* (2001), these collective responses to intrusions are characterized by loud vocalizations in chorus and patrolling, showing a group cooperation inseparable from the rejection of the external group from other chimpanzee communities.

Following Lemoine *et al.* (2022, 6) again, these and other data “confirm that chimpanzee intergroup competition, in-group cooperation and social cohesion are intimately linked.” They also suggest that “participation to border patrols involves not only immediate but also long-term fitness benefits associated with securing and potentially expanding a territory, thereby reducing within-group feeding competition and improving group members reproductive success” (Lemoine *et al.*, 2022, 7), indicating a possible connection between intra-group cooperation and intergroup competition.

Regarding bonobos, they are generally considered less xenophobic and more tolerant, as their conflicts, as far as we know, do not escalate to lethal attacks (Wilson *et al.*, 2014), and they also share territory with neighbouring groups (Lucchesi *et al.*, 2020; Samuni *et al.*, 2021). However, although these male coalitions are less frequent in bonobos compared to chimpanzees and are rather rare, there is also intergroup competition among bonobos. It has been documented a greater cooperation among males within the ingroup when directed to attacking males from the outgroup, and a reduction in aggression among ingroup members during intergroup dynamics (Tokuyama *et al.*, 2019), similar to the patterns exhibited by chimpanzees. This, along with other data, suggests that “some

degree of out-group competition is evident in bonobos, albeit to a much lesser degree than chimpanzees, and that cross-population variation in intergroup hostility occurs in bonobos” (Lemoine *et al.*, 2022, 9).

In conclusion, and returning to the previous discussion on parochial altruism, from an evolutionary perspective, it can be asserted that the cooperation of human groups with other external groups outside the strictly familial or tribal circle would have coevolved alongside hostility towards external groups as a result of selective pressure from intergroup conflicts. Of course, there are other hypotheses that emphasize the collaborative aspect to a greater extent (Hrdy, 2007; Hill, 2002), but there is strong evidence of the relationship between cooperation, cohesion, and the presence of external threats. Thus, in the context of human migration and national identity, it has been demonstrated that altruism reinforces anti-immigration attitudes when based on the belief that immigration would entail some form of harm to members of the national community, indicating that anti-immigrant individuals are often driven by altruistic motives rather than selfish attitudes: “Under certain conditions, sincere altruistic motivations can not only promote cooperation such as solving collective action problems, but can also exacerbate conflict such as in the case of immigration” (Kustov, 2021, 33).

Hence, populist anti-immigration discourses have such an easy and yet effective argument to connect with the masses and mobilize them by appealing to atavistic territorial instincts, whose trigger sooner or later responds to the scapegoating of immigrants, the quintessential other to the polis, and by extension, someone conceptualized as a non-“us” simply because they are different. In evolutionary epistemology, nationalism comes to mean the exaltation of the motto “My tribe is the best,” and in its most extremist versions, it could even imply a disturbing “My tribe is the only one.” And perhaps this does not satisfy our anthropocentric ego, but both the evolutionary proximity and the practical identity of such shared behaviours with chimpanzees and, less frequently, with bonobos, regarding the evolutionary synergy between intragroup cooperation and intergroup belligerence, help us visualize the similarities in the ultimate case of lethal aggression: war. With war, the xenophobia and contempt professed towards the other group reach the extreme of declassifying fellow members of the same species to categorize them as a different species, as species membership draws the conceptual boundary between hunting and murder or between extermination and genocide. This dislocation in intellectual representations is also shared by humans and chimpanzees as a preliminary stage to the aggression of war because when the other group is perceived as different and inferior, as a different species—Adolf

Hitler and his “Jewish problem” constituted the epitome of infamy, but examples abound—it, on the one hand, fosters self-esteem and solidarity with one’s own group, and on the other hand, makes it much easier to annihilate the other. In any case, we also coincide in the method, murder, as well as in the outcome, genocide. Before that, we proceed with dehumanization, and they with “dechimpanzification” (De Waal, 2010, 142).

Thus, established the continuities in evolutionary biology, our analysis of the plausibility of the connection between parochialism and altruism could also be traced by resorting to biochemistry. Lemoine *et al.* (2022) explore the oxytocinergic system, a physiological system with various functions that apparently modulates the activity of different brain regions involved in social interaction and could therefore play a fundamental role in the maintenance and formation of social and cooperative bonds. Although initially it may have served as the foundation for the bond between mother and offspring, in various species, including chimpanzees, it would have been co-opted as an essential component for the formation of pair bonds and, in general, various forms of companionship or affiliations with group members not linked by kinship. Interestingly and coincidentally, the oxytocinergic system is also activated when individuals face a collective threat and in competition with external groups. It has been documented that intranasal administration of oxytocin in humans during experiments conducted with the intergroup prisoner’s dilemma promotes cooperation and trust among members of the ingroup and develops a defensive disposition towards the outgroup (De Dreu *et al.*, 2010; De Dreu, 2012; Ten Velden *et al.*, 2017). In chimpanzees, this same physiological system is activated in both sexes immediately before and during a conflict and during border patrols, and it is also involved in the detection and avoidance of external groups in multiple vertebrate species. Lemoine *et al.* (2022, 9) hypothesize that “This physiological pathway probably acts by promoting pro-social behaviour and thus increasing in-group interests while, in parallel, increasing awareness of potential threat from the out-group, thereby increasing out-group hostility.”

We can also consider the role played by testosterone in cases of parochial altruism in humans (Diekhof *et al.*, 2014; Reimers *et al.*, 2015). Essentially, during intragroup conflict or competition, it has been observed that testosterone promotes altruistic and tolerant behaviour—tolerance, for example, referring to the decision not to punish an individual for breaking rules—and, in general, prosocial behaviour towards members of the ingroup among male humans, while increasing hostility towards members of the outgroup. If testosterone plays this role in male human cognition, it would mean that parochial altruism is not primarily or at least not

exclusively produced by cultural factors, even if they modulate the intensity, frequency, etc., of this phenomenon.

From this perspective, if we assume that altruism is genuine—sincere and not the camouflage of more or less immediate selfish motivations—, the capacity to generate emotions is also genuine. Therefore, altruism could be understood as one of the behavioural outcomes of that cognitive aptitude we call empathy. And both altruism and empathy would be universal or potentially universal, in the sense that they manifest respectively as behaviour and aptitude in the overwhelming majority of human beings and, generally, in the rest of primate species. However, they are not universal when it comes to designating the beneficiary of altruistic attention. It is well known that human beings can display altruistic behaviours and acts of supererogatory self-sacrifice towards relatives, friends, acquaintances, and even strangers, and we refer to the latter case as philanthropy. However, this circumstance does not imply that we are not highly selective nor that we are always willing to engage in the highest sacrificial altruism. It is far from concluding that the egoistic and altruistic facets participate in our anthropological identity in a Manichean style. If it is true that altruism evolved alongside hostility towards external groups in the context of intergroup competition, then its flexibility may have a critical limit that is not imposed by more or less ontologically selfish ideological discourses but by the evolutionary course of our species. Thus, while it is true that ontologically selfish discourses manifest a blatant inconsistency with the most basic and frequent observations of comparative ethology, the radically opposite idea would be equally untenable, according to which biological altruism would be the key and ontological egoism and parochialism would be culturally acquired defects that affect individual personality and irreversibly poison society. If such a high mutual implication between altruism, parochial behaviour, and intergroup conflict has been demonstrated, it seems inadvisable to adopt either of these radical positions exclusively. It seems unwise to collect scientific evidence with the intention of definitively and apodictically demonstrating the reign of selfishness and the nonexistence of altruism, or vice versa, when explaining the behavioural idiosyncrasy of our species.

As a corollary of the previous considerations, appealing to empathy while neglecting evolutionary, biochemical, and other closely related aspects could create a mystified image in which the extent and manner in which empathy can act as a social and political ideal end up being dangerously overvalued. An excessive emphasis on empathy can lead to an exaggeration of values intimately connected to it, such as equality, while disregarding equally important aspects of human life, such as

spontaneous hierarchies based on freedom, merit, or political struggle observed in chimpanzees and humans. Thus, in the current political arena, clearly dominated by States and large corporations associated with them, such emphasis could also persuade some individuals that the state, as an administrative machine, can embody these egalitarian values as an extension of interpersonal empathy. However, to what extent can we consider the equality, altruism, and empathy that occur spontaneously, in a face-to-face style, among members of small groups to be the same as those found between the small political groups that control the legislative and executive branches of the State and the millions of governed people, with which politicians necessarily interact as if they were faceless taxes and votes providers?

It is true that Lemoine and his colleagues mention the hypothesis that the oxytocinergic system may have undergone a functional expansion during our evolutionary history as a modulator of large-scale human cooperation with both familiar and unfamiliar individuals by activating cooperation as a response to external threats. These functional expansions “have potentially happened several times in the evolution of vertebrates [153], like being co-opted from the regulation of parturition, lactation, and mother-infant bonds, to regulating pair bond formation and social-bonds, etc.” (Lemoine *et al.*, 2022, 9). However, even considering this fact, it is highly debatable to accept that this functional expansion could result in cooperative behaviours in the face of collective external threats among citizens without family ties and with diverse or conflicting interests at the State level, if it is even possible. It seems quite obvious that the relationship between individual citizens and the administrative machinery of the State is far from the original type of relationships in which empathy, altruism, and cooperation evolved. Furthermore, human history stubbornly teaches us about states that became totalitarian machines controlled by small oligarchies who, while articulating grave discourses based on equality, were primarily concerned with defending the interests of their own kind. These oligarchs cooperated and perhaps effectively empathized with members of their own group while treating the rest of the subjects under the power of the State as mere tools. Even today, in liberal democracies, politicians grouped in parties can be seen as a privileged group attempting to use citizens as potential voters through practical discourse and activism, as well as sources of wealth through coercive tax activities. If altruism has evolved to cooperate with individuals in dynamics of interpersonal social relationships of reasonable proximity, can we expect the State to be an appropriate tool for promoting empathy, altruism, and cooperation in dynamics of intersubjective, proximate relationships?

If we consider the Soviet Union as an extreme example of this State model, authors who were educated during its regime, such as Levina (2017), describe how the material equality imposed by the State ultimately only applied to the common people, this is, those who were not part of the nomenclature, while a privileged caste of corrupt authorities, permeating all levels of the State administration, followed different values. The most illustrative phenomenon of this situation could be observed in the daily coexistence of an official market, regulated and centralized by the Supreme Soviet, and a black market, so that the population lived the social duality characteristic of an inconsistent double standard. While in the public sphere, they upheld and even shared the discourse of egalitarian ideals and the consequent centralized planning that defined the egalitarian State, in the private sphere, they resorted to the black market as something commonplace and inevitable. The collective activity imposed by the State bureaucracy, especially if it is oligarchic, is far from resembling spontaneous, altruistic, and genuinely communal empathetic cooperation. Given the key role of proximity in altruism, it may very well be the case that the final result of this State-driven egalitarian experiments was inevitable, and not just a consequence of a bad application of political values and ideals.

4. THE APTITUDE FOR EMPATHY AND THE IDEA OF JUSTICE

Therefore, “empathy fuels our interest in others” (De Waal, 2019, 144) to the extent that it provokes emotional contagion, the assumption of others’ emotions as if they were our own, especially negative emotions, as it “has the unique property of transforming another person’s misfortune into a feeling of personal distress” (Hoffman, 1981, 133). From a biological-evolutionary perspective, it can be affirmed that empathy would never have evolved if it did not provide an adaptive advantage; it would lack value for the survival of the species if it did not grant mutual benefits to individuals whose emotions resonate, thus “contributing to the creation of a cooperative society in which individuals can rely on one another” (De Waal, 2019, 152). Empathy, thus considered, is the sensitive and cognitive capacity to generate adaptive prosocial behaviours, an emotion generator that promotes among group members the development of behaviours aimed at ensuring the stability of social coexistence.

However, considering empathy as inherently good or bad is trivial, just like intelligence or physical strength; it is a multi-purpose aptitude that “can be used for good or ill, depending on one’s intentions” (De Waal, 2019, 134). On the other hand, the product of empathy, emotions, can indeed

exhibit a moral inclination. Furthermore, Edward Westermarck (1912) distinguished between positive and negative retaliatory emotions: the positive ones constitute the empathic response of satisfaction derived from receiving a benefit, and their corresponding behavioural correlate mainly seeks reward, as in the case of gratitude or returning favours; the negative ones constitute the empathic response of resentment against actions harmful to the individual or the group, and their corresponding behavioural correlate mainly seeks punishment, as in the case of delayed revenge or the revenge system developed by chimpanzees. This final case is connected to the altruistic xenophobic attitude above mentioned, in which nationals rejected foreigners out of empathy to their co-nationals, who they presumed to be harmed economically as a result of foreigner's influence in national economy.

Both are crucial due to their prosocial nature, as they foster harmony and group stability while preventing excesses and opportunism, thus promoting morality towards normativity. Given that the ability to recognize certain societal norms of conduct and apply them to others and oneself helps in survival and prosperity, as demonstrated by evolutionary psychology, natural selection favoured groups that developed an articulated morality aimed at establishing normative patterns of social behaviour reinforced with incentive mechanisms, such as reward-punishment, more or less coercive.

However, moral emotion is still not complete morality, understood as the capacity to formulate moral judgments. Positive and negative retaliatory emotions, such as gratitude or revenge, operate within a limited orbit that is simultaneously selfish and egocentric, with the self-interest as its diameter, and thus they still fall short of the universality required by the normativity implicit in the idea of justice. Selfish in the sense of valuing one's own actions and others' actions solely based on the outcome of each action in relation to one's own self, while disregarding others' interests and the consequences of the action for the other self; and egocentric in the sense of exaggerating the exaltation of one's own self, considering it the centre of attention and general activity, and thus evaluating one's own actions and others' actions solely in terms of how one desires to be treated or how one does not wish to be treated. In contrast, in order to embrace morality compatible with moral judgment, the underlying emotion must transcend mere visceral instinct and dissociate from self-interest, from the cost-benefit calculation of the action in relation to one's own situation. Thus, the turning point between positive or negative retaliatory emotions and strictly moral emotions lies in selflessness, the only way to enable the impartiality and universality required for the abstract treatment

of good and evil implicit in moral judgments: without selflessness, there is no impartiality, and without impartiality, there is no justice. However, there is still a long way from strictly moral emotions to the notion of justice, a journey that inevitably requires cognitive aptitudes for the abstract treatment of good and evil to be accounted for.

Regarding its abstract categorization, there seems to be a notable difference between *Homo sapiens* and other primates who, like other evolutionarily distant species, show relative ease in evaluating their own and others' actions based on whether they are beneficial or detrimental to the self, but with much greater difficulty regarding others. Any notion of justice must have an origin, and the most logical place to look for it is the self; the studied individuals showed certain expectations about how they themselves should be treated, but not about how others should be treated. Once the capacity for at least an egocentric sense of fairness is established (De Waal, 2007, 77), it can later be expanded to encompass gradually intersubjective, social, or ultimately universal forms of justice. Recall, for example, how easily a stray dog flees if you simulate the intimidating gesture of reaching for a stone nearby—it quickly runs away to avoid harm to the self it has already experienced. Now, if we try to recall a behaviour of an individual of the same or a different species in which it inhibits its own action for the benefit or avoidance of harm to others, although such behaviours exist and have been documented, as in the case of Rhesus monkeys (*Macaca mulatta*, Wechkin *et al.*, 1964), we will find that it is more difficult for our memory.

While it is true that empathy and reciprocity observed in other species are not sufficient by themselves to generate the moral experience as understood among humans, it is equally true that they are essential for morality because without reciprocity between individuals in terms of emotional connection and exchange, there would be no moral human society. Thus, the key to ethological research demonstrating moral capacity in other animal species, such as elephants, dolphins, and especially non-human primates, lies in establishing the evolutionary continuity between that extrahuman or prehuman moral activity and human morality proper. Moreover, on the contrary, considering empathy as such a ubiquitous experience in human society, developing so early—new-borns are capable of accurately imitating facial expressions between 42 minutes and 72 hours of age (Gazzaniga, 2012, 173)—showing distinct neural and physiological correlates and having a well-established genetic basis, it would go against available knowledge in biology if it lacked any evolutionary continuity with other primates. Therefore, it is not unreasonable to assert the evolutionary continuity between the experience of morality as a constant

in human sociability, and that of other non-human primates and non-primate species, although the evidence for the latter seems weaker. It would be contrary to the available scientific evidence to continue denying the existence of moral empathy outside the species *Homo sapiens sapiens*.

However, so far, we have only analysed the emotional dimension of empathy, but not yet the cognitive dimension, which undoubtedly is essential to acknowledge moral normativity and ultimately the concept of justice. In other words, empathic response may not be limited to emotional contagion or resonance, such as when we yawn upon seeing someone nearby yawning or when we feel sorrowful when we see someone in distress. It can also include a cognitive or intellectual component in those cases that the literature in this context refers to as “taking the perspective of the other,” where empathic response also altruistically tunes in to the emotional state of others, but additionally triggers focused and cognitively selective or attributive behaviour that aims to meet the specific needs of the beneficiary of the altruistic behaviour.

Among the myriad of documented cases, we will limit ourselves to summarizing one well-known example provided by De Waal (2007, 55-59). Kuni, a female bonobo at the Twycross Zoo in England, caught a starling and, after being asked by a caretaker to release it, held the starling in one hand and climbed the nearest tall tree, wrapping her legs around the trunk to have both hands free to hold it. Upon reaching the highest point, she carefully unfolded her wings, one in each hand, and forcefully threw the bird towards the outside of the enclosure. This action involves empathy towards the other and compassion for suffering, but it also implies the cognitive or intellectual element we mentioned earlier because the same act would have been inappropriate with a fellow bonobo. Instead, Kuni perfectly grasped what would be suitable or good for a member of a different species.

In conclusion, it is an altruistic behaviour that adjusts to the specific needs of another. This reveals the structure of the Matryoshka dolls, used by De Waal (2003) as an analogy to present his model of the three layers of empathy. The first and most intimate level would correspond to contagion, which accounts for the automatic emotional impact and at its core, there is a perception-action mechanism that triggers immediate and even unconscious resonance between individuals. The next doll would represent cognitive empathy, through which the situation and motives behind the contagious or resonated emotions of others are evaluated. Finally, the third layer would correspond to attribution, in which the agent fully adopts the perspective of the other and engages in behaviour that satisfies their needs, as Kuni did with the starling. Perhaps we observe more complex

and sophisticated responses in *Homo sapiens*, but the evolutionary continuity of this mechanism appears beyond doubt.

How can we appreciate, in the case of the notion of justice, the first intimate layer of empathy responsible for automatic and immediate emotional contagion, the evaluative layer that assesses the situation and motives, and the final layer that corresponds to attribution, the full adoption of the other's perspective culminating in the development of a selective behaviour specifically adjusted to meet the needs of the other? We propose first tracing their manifestations, then observing their relationships and correlations, and finally arguing for some consistent explanatory inference.

Thus, the empathy responsible for automatic and immediate emotional contagion, in the context discussed here regarding the possible continuity between the normativity of human and non-human animals and its connection to the idea of justice, seems to manifest itself in the so-called "aversion to inequality" (Brosnan and De Waal, 2003; Brosnan *et al.*, 2004, 2010; methodology in De Waal, 2007, 71 *et seq.*). Anyone who has watched the famous one-minute video clip of the experiment with capuchin monkeys receiving different rewards, grapes or cucumbers, for the same task and had the opportunity to laugh at the automatic and immediate emotional reaction of the individual who becomes enraged and expresses their anger at feeling disregarded and offended for receiving a less appetizing reward knows what we are referring to. Note that the notion of "aversion to inequality," formulated in a positive sense, could also be called "affection for equality." In any case, the aforementioned studies showed how capuchin monkeys cognitively evaluate rewards in relative terms, comparing them with other available options and measuring their own effort against that of others. While this does not allow for precise labelling or classification of the underlying emotional and somatic upheaval accompanying such responses, it seems plausible to suggest that they are guided by prosocial emotions very similar to the human emotions that govern individual reactions derived from exerting efforts – "Equal pay for equal work," as the labour adage says –, gaining profits or suffering losses, and, in general, their attitude toward others based on the comparatively received treatment in exchanges and resource distribution. Also note how these studies establish as consistent scientific evidence the cognitive evaluation performed by capuchin monkeys before expressing their displeasure and fury at the unequal treatment for the same task: these are manifestations of the first two layers, corresponding respectively to automatic emotional contagion and cognitive or evaluative empathy. Thus, this affection for fair equality or aversion to unfair inequality

documented in numerous intensely social species could be described, if we may take a literary license, as a kind of “emotion of justice,” or at least an already resonant and simultaneously cognitive emotion that loudly demands notions such as fairness and justice.

In the case of attribution, understood as the full adoption of the other’s perspective until their specific need is satisfied, various behaviours have also been documented in non-human primates that manifest the latency of an intellectual representation close to the idea of justice. First, we have the observations made in cases of conflict resolution and reconciliation carried out by a mediator who lacks personal benefits in resolving the conflict. Since De Waal and Roosemalen (1979)’s work, such a substantial amount of scientifically corroborated evidence has been accumulated on this matter, both in De Waal’s work and in that of many other authors, that it is unnecessary to present an exhaustive compilation of existing bibliographic sources. The impartial mediator in the conflict perceives and evaluates the specific needs of the antagonists and the group—putting an end to reciprocal intersubjective aggression and restoring social peace—and acts accordingly without expecting any reward in return: “Here and now, equity consists of stopping the aggression between the contenders to restore group harmony: even if it’s not my problem, let’s get to work.” The “concern for the community” (De Waal, 1997, 265) or “community concern” (De Waal, 2022, 239) culminates in the implementation of prosocial behaviours that promote group harmony and, therefore, foster morality towards normativity, reinforcing the sense that in any conflict situation, there is a beneficial resolution criterion for the group that, taking into account opposed individual interests, goes beyond them.

But secondly, even more illustrative in this regard is the behaviour of control role documented in alpha males. Among chimpanzees, when a dispute arises, initially everyone tends to take the side of their relatives, allies, or friends, understood as those who frequently exchange alliances, food, grooming rituals, hugs, kisses, etc. Probably, the persistence of this unregulated dynamic would ultimately lead to total internal conflict. However, the alpha male does not tend to follow this general behaviour; instead, he interrupts fights by defending one of the parties or by acting impartially. Alpha males position themselves bristled between the contenders, engage in intimidating displays, or even physically separate them with their own arms, all until the hostility disappears. With these actions, their goal is not to favour one side in the conflict but rather to end it and restore social peace in the community. This control role and its proper performance emerge when the role of arbiter is dissociated from their own

social preferences. The evaluation of the importance and social function of the control role, as well as its cultural transmission, promote the notion of impartiality, in the sense of a selfless alignment in the heteronomous resolution of others' conflicts. Alongside the aforementioned concern for fair equality or aversion to unfair inequality, impartiality is the second prerequisite for developing the idea of justice. As mentioned above, without selflessness, impartiality cannot exist, just as without impartiality, justice cannot exist. This control role, arbiter, or judge required in conflict mediation was exemplarily performed by Luit, Frans de Waal's favourite chimpanzee. On one occasion, a dispute between two females escalated into a widespread brawl, until Luit intervened and used his strength to restore peace: "Unlike the others, he did not take sides, but anyone who continued to fight earned a slap" (De Waal, 2010, 85). In his intervention, he positioned himself above the conflicting parties and beyond his own social preferences, seeking to restore social harmony rather than favouring his relatives, friends, or allies. In other interventions, he sided with third parties, but his decisive action was not proportional to the time spent with him or the attention dedicated to grooming him; it was not conditioned by his personal interest.

But furthermore, *a fortiori*, this dissociation between the alpha's personal interests and the exercise of the arbiter role can occur not only within the same individual but also between different individuals (De Waal, 2010, 86-87). After Luit was overthrown by the coalition between Nikkie and Yeroen, during the initial phase of the subsequent four-year duumvirate, Nikkie attempted to intervene between warring parties as soon as a dispute arose. However, his intervention usually escalated the conflict rather than minimizing or resolving it, as he systematically aligned himself in favour of his friends or allies, in addition to harassing the older females by hitting them on the head. In contrast, the group always accepted the pacifying and reconciling manoeuvres of Yeroen, who ended up monopolizing the role of arbiter to such an extent that, in the second phase of his rule within the coalition, the official alpha male Nikkie didn't even gesture to intervene in case of a scuffle. This process demonstrates that the collective decides through implicit acceptance who holds the underlying authority of the arbiter, whose function does not necessarily have to coincide with that of the alpha male in the same individual. The effective performance of leadership, detached from the mere imposition of brute force, requires prior social acceptance of the arbitral function implemented by the leader. The effectiveness of their arbitration does not solely depend on force but rather on the authority transferred through implicit consensus

and majority compliance within the group. Once the role of control is dissociated from personal preferences, the political-community function of the impartial arbiter emerges, contributing to the transition from personalized and despotic power to leadership. If a collective develops the role of an impartial arbiter or judge, it seems plausible to infer that its members have at least a similar intellectual representation to our notion of justice and that there exists a generalized consensus among them regarding the goodness and necessity of individual or collective dispensation of justice for the stable and peaceful progress of social coexistence within the political community. Interestingly and coincidentally, in current law, an arbitrator is referred to as a designated judge. The community's interest in the arbiter and the skilful exercise of their role lies in the fact that arbitration offers the possibility of protecting the weak and their interests against the strong and theirs. At any given moment, anyone can find themselves in a position of weakness or be affected by the situation of a loved one. Therefore, the function of the arbiter is crucial and concerns the entire collective. By supporting the arbiter who is considered more effective by the majority, the group grants them the indispensable moral authority for their interventions to guarantee the restoration of harmony and, ultimately, the order of the community in the fairest and least violent manner possible.

In conclusion, the dissociation between the roles of the alpha male and the arbiter, along with the persistence of the functionality of heteronomous, disinterested, and impartial arbitration in the resolution of social conflicts, in our opinion, decisively contribute to substantiating an evolutionary explanation for the cultural emergence of justice administration in terms of socio-historical necessity.

5. CONCLUSION

The considerations presented in the previous sections, in our opinion, lead to the possibility of concluding the plausibility of various hypotheses that may contribute to enriching and clarifying the ongoing debate in this forum. In the short and medium term, the beginning of the end of the scientific paradigm that disregarded the empathic capacity of *Homo sapiens* and other animal species as objects of study seems to be occurring. The viability of this conceptual development may progressively unfold as the study of mirror neurons advances as the physiological basis of emotional empathy. This new scientific object of study, empathy, as the driving force behind social emotions and ultimately

adaptive prosocial behaviours through a more sophisticated and efficient system of responses than those provided by instinctual automatism, could tend to question selfish approaches to human behaviour and rebalance the ongoing debate between viewpoints proposing human nature to be ontologically selfish or altruistic in a fundamental sense. Finally, this would open up the perspective to discuss and argue the existence of a shared axiological substrate among the human species, derived from our evolutionary history, amenable to scientific study, and open to consideration by an evolutionary Philosophy of biology philosophy that we have allowed ourselves to call scientific iusnaturalism, a natural law scientific theory.

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