

The descent of instinct and the ascent of ethics*

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ABSTRACT: La riflessione sui fondamenti biologici del comportamento umano in un'ottica darwiniana deve tenere in considerazione il ruolo dell'istinto. Le tesi di Darwin – dall'*Origine della specie* in poi – cercano le radici dell'etica nella biologia...

PAROLE CHIAVE: Istinto, darwinismo, etica.

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1. Moral capacity

Reflecting on the biological foundations of human moral behavior within a Darwinian framework should involve something too often forgotten: finding actual links with what Darwin proposed in his writings. This task should not be intended as a philosophically idle form of deference to an author of the past, but as a necessary step to recover the correct historical and theoretical bases of the problems we are facing. Indeed, an interest in the history does not necessarily mean to commit fallacies akin to *argumentum ad verecundiam*, but it can take the form of a correct *argumentum ad auctoritatem*. In considering what Darwin wrote about the biological bases of morality, I will recall some of the theses of *The Origin of Species* and *The Descent of Man* that, *mutatis mutandis*, could be accepted without much difficulty by those who believe in the correctness and validity of (neo-)Darwinian evolutionism.

What may be found astonishing by some - in particular, by those who have never had (or never wanted) the opportunity to venture into Darwin's fascinating works - is that he not only raised the problem of the biological roots of ethics but offered a good solution, too. Indeed, his solution is so convincing (even if, of course, it is worked out at the phenotypic level and without contemporary philosophical technicalities) that even in our day it can hardly be opposed.

While expounding Darwin's theses, I have the chance to retrieve a distinction that, though fundamental for the present issue, is almost *always* neglected - that is, the distinction among *behavior*, *moral judgment on behavior*, and *moral capacity*, to be intended as the capacity for both formulating and applying moral judgments on behavior, and for behaving accordingly.¹ With this distinction in place, I first contend that Darwin has both a theory of the genesis of human moral capacity (i.e., a theory of what the enabling conditions for the moral capacity are, and of how they have evolved) and a theory, to be kept well distinct from the former, of the genesis of different moral judgments. Then, I suggest that more than one theory of the genesis of the different moral judgments can be coherent with the same theory of the genesis of moral capacity. Finally, I argue that only the latter can involve a naturalization via evolutionary biology, whereas the former cannot, even if some contemporary authors support this possibility.

What I propose might be superficially considered as a form of nihilism, since it will be argued that neither the so-called moral behavior nor moral judgments on behavior have biological *fundamenta inconcussa*. Actually it is not so. What I am suggesting is, on the one hand, an unavoidable consequence of (neo-)Darwinian evolutionism and, on the other hand, an attempt to open up a realm of true morality. For I am claiming that moral responsibility cannot be remitted to a religion, an ideology, or a mysterious quid that we simplistically call "nature." In my view, for a (neo-)Darwinian evolutionist there should not be any "theologization of morality," "ideologization of morality," or "naturalization of morality," but only a naturalization (i.e., a *biologization*) of the enabling conditions for moral capacity. Man should be considered fully responsible for his moral judgments and for his behavior, even if his judgments and his behavior depend on his moral capacity, the enabling conditions of which in turn, as Darwin taught us, are entirely dependent on his biological evolution.

From this point of view, Plato's myth of the two horses and the charioteer can be read as if the enabling conditions for the human moral capacity were one of the horses, and moral judgments were the other. Plato's

¹ To give a precise and uncontroversial definition of moral capacity is not at all easy; cf. [9].

metaphor, then, turns out to suggest that the enabling conditions, due to biological evolution, and moral judgments, due to human affairs and culture, should not be mixed up willy-nilly, even if a correct analysis of the latter cannot be possible without a good understanding of the former. This desired result can only be accomplished if the charioteer - as Plato wrote - is able to tackle his “painfully difficult business” with competence and ability, without getting himself bewitched by fundamentalist sirens, of whatever kind they might be: religious, ideological, or naturalistic.

2. Darwin’s theory of the genesis of the enabling conditions for moral capacity

In chapter 7 of *The Origin*,² Darwin analyzes the relations among the instinctual behavior of lower animals, that of higher animals, and that of man. It would seem proper to start an inquiry of this kind with a definition of “instinct,” but Darwin claims that he does not intend to risk such a definition. Nonetheless, he gives it only few a lines later: “An action, which we ourselves should require experience to enable us to perform, when performed by an animal, more especially by a very young one, without experience, and when performed by many individuals in the same way, without their knowing for what purpose, is usually said to be instinctive” ([1], p. 234).

After this clarification, Darwin distinguishes *instinctual behavior* and *habitual behavior*. In his view, the former is a trait inherited by an individual - although he could not know exactly what this meant. The latter, instead, is an unconscious - and sometimes will-independent - behavior that is not a trait of an entire population but only of some individuals. Habitual behavior is the result of a conscious and continuous repetition of a certain noninstinctual behavior. It is a kind of behavior that one acquires by means of training and, from a certain point on, results so naturally that it seems to have one of the characteristics pointed out by Darwin for instinctual behavior: it is “performed ... without their knowing for what purpose.” As a consequence, instinctual behavior and habitual behavior may be so similar that an observer could fail to distinguish them.³

It is worth noting that the discussion of this issue is one of the many times in which Darwin’s Lamarckism comes to light. According to Darwin, certain sorts of habitual behavior can become hereditary, and therefore instinctual. Nevertheless, Darwin has a clear perception of three different behavioral levels: instinctual behavior; noninstinctual but habitual behavior; and noninstinctual and nonhabitual behavior, which characterizes our species, *Homo sapiens*. I accept this threefold distinction, even if I prefer to speak of *instinctual behavioral phenotype*; *noninstinctual habitual behavioral phenotype*; and *noninstinctual nonhabitual behavioral phenotype*.

Darwin himself offers an account of behavior that makes it suitable to be called “phenotype.” As we can realize by reading both *The Origin* and *The Descent*, behavioral traits, from the point of view of their evolution, must be considered exactly as the physical traits of living beings. Moreover, to call “noninstinctual” a kind of behavioral phenotype seems also acceptable. In addition, it should be noted that it is well known that physical phenotypes are plastic, that is, that there are *norms of reaction*, in virtue of which a given genotype can express different physical phenotypes in different environmental conditions (cf. [3][8]). Once the existence of behavioral phenotypic traits is accepted, it seems plausible to conclude that behavioral phenotypes must also be plastic.

² It is chapter 8 in the 1872 edition.

³ By the way, this question is still open: what is instinctive and what is not?

With reference to this very close evolutionary parallelism between physical and behavioral phenotypes, in the last chapter of *The Origin* Darwin writes some very clear lines: “we admit the following propositions, namely, - that gradations in the perfection of any organ or instinct, which we may consider, either do now or could have existed, each good of its kind, - that all organs and instincts are, in ever so slight a degree, variable, and, - lastly, that there is a struggle for existence leading to the preservation of each profitable deviation of structure or instinct. The truth of these propositions cannot, I think, be disputed” ([1], p. 435).

Thus, like all physical phenotypes, instinctual phenotypes evolve by means (also) of the environmental selection of small casual mutations.

If in *The Origin* Darwin discusses the evolution of instincts only in one chapter, in *The Descent* he spends many pages extensively discussing the evolutionary steps from lower animals to higher animals and, lastly, to *Homo sapiens*. In this 1871 work, especially in the first part, Darwin argues in the usual way (i.e., through an incredible amount of cases drawn from all kinds of sources) that the shift from lower animals to *Homo sapiens* occurred by means of a gradual evolutionary process of both cerebral-mental traits and instinctual behavioral traits. Naturally, in this case there is no evolutionary gap; also in this case *natura non facit saltus*.

Concerning emotions and basic mental powers (imagination, curiosity, capacity for imitation, reason, attention, memory), Darwin claims that all animals possess them, even if different species possess them at different degrees, with *Homo sapiens* ranking first ([2], part I, chap. 3). Regarding higher mental powers (abstractive and conceptual capacities, selfconsciousness, and mental individuality), Darwin is sure that they belong to higher animals, in particular to primates, but he hesitates about the possibility of assigning them to lower animals. On these grounds, and considering the basic principle that any biological event, or process, must be observed from an evolutionary point of view, he feels confident in drawing the following conclusion: “If these [basic mental] powers, which differ much in different animals, are capable of improvement, there seems no great improbability in more complex faculties, such as the higher forms of abstraction, and selfconsciousness, etc., having been evolved through the development and combination of the simpler ones” ([2], p. 86).

Therefore, *Homo sapiens*' species-specific cerebral-mental traits are nothing but the evolutionary result of selective processes applied to the mutations of its ancestors' cerebral-mental traits.

Such an emphasis on the cerebral-mental traits is not accidental. Rather, it is what we need to understand the core of Darwin's solution to the problem of the roots of moral capacity - that is, to the problem concerning its enabling conditions. The possibility of a gradual evolutionary process leading from a certain subclass of instinctual behavior (i.e., social instinctual behavior) to moral behavior depends on a gradual evolutionary process of cerebral-mental traits.

Darwin begins his argumentation by recalling that an evolutionary process leading to the emergence of ethics could only take place in living beings that already possess a particular kind of instinctual phenotype: social instinctual phenotype.⁴ That is, a necessary condition for an evolutionary process leading to an ethically governed way of living is that it occurs in animals endowed with social instinctual behavior. Of course, this kind of behavioral phenotype is still an evolutionary result of positive selective processes, connected to preexisting nonsocial instinctual behavioral phenotypes:

⁴ At this point, it should be noted that as Darwin - in *The Origin* - did not linger upon the origin of species but started by assuming that there are species, so - in *The Descent* - he did not linger upon the origin of the instinctual phenotypes but assumed that there are instinctual phenotypes.

It has often been assumed that animals were in the first place rendered social, and that they feel as a consequence uncomfortable when separated from each other, and comfortable whilst together; but it is a more probable view that these sensations were first developed, in order that those animals which would profit by living in society, should be induced to live together, in the same manner as the sense of hunger and the pleasure of eating were, no doubt, first acquired in order to induce animals to eat. ([2], p. 108)

Nevertheless, even if a social instinctual behavior is necessary, it is not sufficient. For a necessary biological precondition must be satisfied: a suitable cerebral-mental evolution must have occurred. In this way, Darwin has all he needs to formulate his solution to the problem of the biological roots of the moral capacity: “The following proposition seems to me in a high degree probable namely, that any animal whatever, endowed with well-marked social instincts, the parental and filial affections being here included, would inevitably acquire a moral sense or conscience, as soon as its intellectual powers had become as well, or nearly as well developed, as in man” ([2], p. 101.).

Therefore, according to Darwin, any species that has evolved suitable cerebral-mental traits can arrive at a stage in which its members can both formulate and apply moral judgment and behave accordingly, that is, at a stage in which they are moral agents.

Certainly, a species may evolve in a way such that its members do not judge behavior in the same way as we, humans, do; nevertheless, their moral judgments might be very similar ([2], p.102). Note that Darwin is not discussing the genesis of moral judgments of a certain kind, but the genesis of the enabling conditions for the capacity both for formulating and applying moral judgments and for behaving accordingly.

It should be still observed that such capacity must not be qualified as “moral” in virtue of the fact that it is intrinsically moral. Actually only a posteriori can we know that it gives its owners the power both to formulate and to apply moral judgments and to behave accordingly. Therefore, only a posteriori are we allowed to call it “moral.” This aspect is extremely important, from the point of view of the foundations of ethics, because it leads to an antifundamentalist and antiessentialist position.

Moreover, it should be underlined that in Darwin’s view - and this is really a very strong and impressive claim - the human moral capacity does not belong to man because he is a privileged being, in whatever sense this claim might be understood, but only because of casual and nonteleological events that occurred along his phylogenetic evolution. In other words, it is precisely on the basis of the just highlighted phylogenetic casual and ateleological events that we can support the idea that man is what he is. It was the natural history of our species that made us “privileged”,⁵ and not some unknown or unknowable metaphysical property gifted by some God.

In the light of the foregoing considerations, we can claim that, according to Darwin, *Homo sapiens*’ enabling conditions for the moral capacity are an evolutionary outcome, which should not be necessarily restricted to that species.

However, why do these enabling conditions concern the evolution of cerebral-mental traits? Darwin’s answer is extremely relevant from a biological point of view, and philosophically quite sophisticated:

⁵ Of course, it is a relative privilege. In its niche, any species is privileged by its phylogenetic history.

As we cannot distinguish between motives [that induce to act in a certain way], we rank all actions of a certain class as moral, if performed by a moral being. ([2], p. 115.) A moral being is one who is capable of reflecting on his past actions and their motives of approving of some and disapproving of others; and the fact that man is the one being who certainly deserves this designation, is the greatest of all distinctions between him and the lower animals. ([2], p. 633)

That is, morality is not an intrinsic property of behavior but depends on the fact that a certain act is performed by a moral agent, that is, an agent capable of moral judgments on behavior. First, this means that, on the one hand, there are behaviors and, on the other hand, there are moral judgments on behaviors. Secondly, it means that, in order to both formulate and apply moral judgments on behaviors and to behave accordingly, one must have a suitable cerebral-mental structure.⁶

This claim about the distinction between behavior and moral judgments on behavior (which can be formulated and applied only by a certain kind of animal, in particular those having reached a certain stage of their cerebralmental evolution) has two important consequences.

First, claiming that certain behaviors are intrinsically moral or immoral is wrong. They can be called moral only insofar as they are thus valued by a living being endowed with the moral capacity in virtue of its cerebral-mental evolutionary history (it has the enabling conditions). That is, behavior is never intrinsically moral or immoral. Morality and immorality are not intrinsic characteristics of behavior, but judgment-dependent properties of behavior. Naturally, as Darwin also admits, “I am aware that the conclusions arrived at in this work will be denounced by some as highly irreligious” (ibid.), but *c’est la vie*, or, rather, *c’est l’évolution de la vie*.

Second, because *Homo sapiens* seems to be the only species that has reached the suitable cerebral-mental evolutionary stage, that is, the only one possessing the suitable enabling conditions, any attempt to analyze the genesis, or the status, of moral theories by comparing nonhuman behavior with human behavior must be looked at with suspicion. Moral capacity, that is, the capacity both for formulating and applying moral judgments, and for behaving accordingly, enters the scene of phylogenesis only after suitable cerebral-mental structures have appeared through casual ateleological processes.

Before going on, it is worth noting that the distinction between behavior and moral judgments on behavior put forward by Darwin was not a novelty. It had already been suggested by several philosophers throughout the history of Western thought, although Darwin was the first to reach that point of view through a biological path. For example, a couple of centuries before Darwin, while theorizing on the phenomenology of behavior and on moral judgments, M. de Montaigne, in his *Essais* ([4]), showed that the same sort of behavior might be subject to many different moral judgments. Moreover, only a few years after *The Descent*, while traversing a philosophical-deconstructive route, F. Nietzsche argued in his *Zur Genealogie der Moral* ([5]) that each moral judgment has a long story and that, in order to understand its real status, we should know the human and social circumstances from which it emerged.

Of course, neither Montaigne nor Nietzsche focused his attention on the biological roots of the moral capacity. Instead, they tried to show, respectively, the interplay among moral judgments and their genesis in human affairs. Nevertheless, both attempts were grounded on the implicit assumption that there is a deep

⁶ A deep understanding of this claim would require an analysis of both the phylogenetic evolution of the nervous system and mental capacities.

difference between behavior and moral judgments on it. This is exactly one of the conclusions supported by Darwin and wonderfully described by Villiers de L'Isle-Adam in the first of his *Contes cruels*, "Les demoiselles de Bienfilâtre":

Pascal nous dit qu'au point de vue des faits, le Bien et le Mal sont une question de «latitude». En effet, tel acte humain s'appelle crime, ici, bonne action, là-bas, et réciproquement. ... Les actes sont donc indifférents en tant que physiques: la conscience de chacun les fait, seule, bons ou mauvais. Le point mystérieux qui gît au fond de cet immense malentendu est cette nécessité native où se trouve l'Homme de se créer des distinctions et des scrupules, de s'interdire telle action plutôt que telle autre, selon que le vent de son pays lui aura soufflé celle-ci ou celle-là: l'on dirait, enfin, que l'Humanité tout entière a oublié et cherche à se rappeler, à tâtons, on ne sait quelle Loi perdue. ([10], 1)

3. Darwin's Theory on the Genesis of the Different Moral Judgments

As said, Darwin did not propose only a theory of the biological roots of the moral capacity but also a theory of the genesis of the differences among moral judgments. Even though the two theories must be kept distinct, it is interesting to dwell upon the latter.

In the section entitled "The More Enduring Social Instincts Conquer the Less Persistent Instincts" and in the "Concluding Remarks" in chapter 4 of *The Descent*, Darwin argues that our moral judgments and moral emotions arise because we are embedded in a social environment and are subjected to the approval and disapproval of our likes. Therefore, "Man prompted by his conscience, will through long habit acquire such perfect self-command, that his desires and passions will at last yield instantly and without a struggle to his social sympathies and instincts, including his feeling for the judgment of his fellows" ([2], p. 119). That is, prompted by the "feeling for the judgment of their fellows," men of a certain population must have gradually come to formulate a set of values and rules that nonintentionally and slowly led to moral judgments. As a consequence, "The imperious word ought seems merely to imply the consciousness of the existence of a rule of conduct, however it may have originated. Formerly it must have been often vehemently urged that an insulted gentleman ought to fight a duel. ... If they fail to do so, they fail in their duty and act wrongly" ([2], p. 119). Thus, moral judgments are nothing but the nonintentional consequences of certain interests of a given human population to *follow* certain kinds of behavior - which are praised - and *not to follow* other kinds - which are blamed:

The wishes and opinions of the members of the same community, expressed at first orally, but later by writing also, either form the sole guides of our conduct, or greatly reinforce the social instincts; such opinions, however, have sometimes a tendency directly opposed to these instincts. This latter fact is well exemplified by the Law of Honour, that is, the law of the opinion of our equals, and not of all our countrymen. The breach of this law, even when the breach is known to be strictly accordant with true morality, has caused many a man more agony than a real crime. We recognise the same influence in the burning sense of shame which most of us have felt, even after the interval of years, when calling to mind some accidental breach of a trifling, though fixed, rule of etiquette. The judgment of the community will generally be guided by some rude experience of what is best in the long run for all the members; but this judgment will not rarely err from ignorance and weak powers of reasoning. Hence the strangest customs and superstitions, in complete opposition to the true welfare and happiness of mankind, have become all-powerful throughout the world. We see this in the horror felt by a Hindoo who breaks his caste, and in many other

such cases. It would be difficult to distinguish between the remorse felt by a Hindoo who has yielded to the temptation of eating unclean food, from that felt after committing a theft; but the former would probably be the more severe. ([2], pp. 125-126.)

Thus, a moral judgment is grounded on an interest of a community and on the feeling for blame or for praise.⁷

An upshot of this position is that, in order to avoid blame, one needs not to break rules and must have been properly trained (i.e., educated and selfeducated), so that one possesses a suitable self-control and a sufficient command of one's own behavior. Certainly, the development of these moral skills does not require the explicit knowledge of all steps:

How so many absurd rules of conduct, as well as so many absurd religious beliefs, have originated, we do not know; nor how it is that they have become, in all quarters of the world, so deeply impressed on the mind of men; but it is worthy of remark that a belief constantly inculcated during the early years of life, whilst the brain is impressible, appears to acquire almost the nature of an instinct; and the very essence of an instinct is that it is followed independently of reason. ([2], p. 126.)

Thus, according to Darwin's theory of the genesis of different moral judgments, each moral judgment arises through conscious or unconscious agreements or pacts made by the members of a population in order to privilege certain kinds of behavior (which are praised) above others (which are condemned).

Darwin's theory of the genesis of different moral judgments is compatible with his theory of the genesis of the enabling conditions for the moral capacity. Nevertheless, we must note that there might be many (virtually an infinite number of) different theories of the genesis of moral judgments, each compatible with Darwin's theory of the root of the moral capacity. For example, Nietzsche's theory of the genesis of different moral judgments is compatible, and so is Kitcher's (Chapter 9 in this volume). But Nietzsche's does not involve any explicit connection with biology, whereas Kitcher's is grounded on biological considerations.

Thus, if one is convinced by Darwin's argument for the roots of the moral capacity expounded in the previous section, but is unsatisfied with Darwin's explanation of the genesis of different moral judgments, one can maintain the former, while looking for a satisfying alternative to the latter. At this point it should be clear that there is an underdetermination of the theories of the genesis of different moral judgments by the theory of the biological root of moral capacity.

Darwin considered *The Origin* as "one long argument" in favor of evolutionary theory as a whole ([1], p. 435). Similarly, we could consider chapter 7 of *The Origin* and *The Descent* respectively as the proem and as a long argument in support of the idea that evolutionary theory implies a particular theory of the genesis of the enabling conditions for the human moral capacity. Moreover, *The Descent* may also be seen as containing a long argument in support of a particular theory of the genesis of different moral judgments.

This means that if we accept Darwin's evolutionary theory, we are forced to accept his theory of the

⁷ It is interesting to note that usually anyone who tries to root moral judgments on animal social instinctual behavior neglects both the negative part of their "sociality" and the limits of such foundational inference. Darwin, instead, was totally aware of this fact: "It may be well first to premise that I do not wish to maintain that any strictly social animal, if its intellectual faculties were to become as active and as highly developed as in man, would acquire exactly the same moral sense as ours. ... If, for instance, to take an extreme case, men were reared under precisely the same conditions as hive-bees, there can hardly be a doubt that our unmarried females would, like the worker-bees, think it a sacred duty to kill their brothers, and mothers would strive to kill their fertile daughters; and no one would think of interfering" ([2], part I, chap. 3). On the "unsociality" of social insects, cf. [11].

biological roots of moral capacity, but we can reject his theory of the genesis of different moral judgments. Moreover, all of this allows us to state that:

1. behavior is not intrinsically moral or immoral; morality and immorality are judgment-dependent properties;
2. we can both formulate and apply moral judgments and behave accordingly only because we are animals that have reached a suitable cerebral-mental evolutionary stage (we possess the enabling conditions);
3. the moral capacity is an evolutionary outcome that occurred in the phylogenesis of *Homo sapiens*, but it could occur also in the phylogenesis of other living beings.

4. The consequences of a darwinian approach to the moral capacity

Following Darwin's indications, we have reached the conclusion that man's moral capacity must be seen as an evolutionary outcome and that there are no intrinsically moral behaviors but only moral judgments on behaviors. The latter statement means that there are behaviors that we consider moral because our moral judgments on them are positive (*proper moral behaviors*), and behaviors that we consider immoral because our moral judgments on them are negative (*improper moral behaviors*). We should be well aware that this implies (as Montaigne, Nietzsche and many other philosophers taught us, and as Villiers de L'Isle-Adam described so well) that what is a proper behavior for an individual or for a community might not be such for another individual or for another community. That is, although an instinctual, or noninstinctual, behavior may be independent of a particular culture and a particular community, this is not true of moral judgments.

Certainly, some could accuse me of moral relativism. Even if this is not the place to debate such a complex question, I wish to mention three points against this possible accusation.

First, accepting Darwin's evolutionary theory means accepting both Darwin's solution to the question concerning the biological roots of the moral capacity and the consequent separation between behavior and moral judgments on behavior. Therefore, if someone rejects the consequences, by *modus tollens* he should also reject Darwin's theory of evolution.

Second, my discussion does not imply that one must accept Darwin's theory on the genesis of different moral judgments. As already stated, there could be many theories of that sort, compatible with Darwin's theory of evolution, applied to the moral capacity.

Third, there are many kinds of relativism. Let us consider three of them:

1. epistemological relativism, that is, the view that reason cannot find any *fundamenta inconcussa* for ethics;
2. phenomenological relativism (à la Montaigne), concerning the phenomenological awareness that different individuals and different communities might deliver different moral judgments on the same behavior;
3. (phylo)genetic relativism (à la Nietzsche, but also à la Darwin), regarding the idea that each moral judgment has a long history, beginning with an agreement, a convention, a habit, or something like that, among men.

These kinds of relativism, however, must not be confused with *existential relativism* (i.e., the view of those who are indifferent to any particular moral hierarchy), or with the *relativism as to the consequences* (i.e.,

the idea that the consequences produced by certain kinds of behavior have no relevance with reference to our moral judgments). It should be clear that I am not suggesting a defense of existential relativism or of relativism as to the consequences. An epistemological relativist, a phenomenological relativist, or a (phylo)genetic relativist is not at all committed to the other two forms of relativism. For example, I might be an epistemological relativist, a phenomenological relativist, and a (phylo)genetic relativist (as I actually am). Nevertheless, like almost everyone (I suspect), I have a particular hierarchy of moral values and I take into great consideration the consequences of my (and other people's) actions; that is, I am neither an existential relativist, nor a relativist as to the consequences.

Let us move to another aspect. The evolution of what we call genotype can arrive at a stage in which the correlated physical phenotype - in particular, the cerebral-mental phenotype - allows us to make moral judgments on the instinctual and noninstinctual behavioral possible phenotype. This means that, from a certain stage of the history of evolution, there have been living beings with traits allowing them the moral capacity; that is, they had and have a suitable structure of the central and peripheral nervous system, a suitable structure of the nervous cells, a suitable genetic expression in the nervous cells, and a suitable regulation of that genetic expression.

This leads to two relevant remarks. First, in order to understand the correlations between biology and ethics, it seems that we should not be too concerned about the putative causal correlations between genes and behavior in general (Rosenberg, Chapter 10 in this volume). Instead, we should study the genetic and neuronal structures and processes that make both the formulation and the application of moral judgments and the coherent behavior possible, that is, that make the moral capacity possible (i.e., the enabling conditions). But there is also a second remark, and it concerns the weakness of moral will. An agent might judge a given behavior as morally improper and still fail to have the capacity for repressing it and, if necessary, for substituting it with a behavior that is judged morally proper. Are we sure that such an incapacity is always totally independent of biological aspects? Note that if there are genetic and neuronal enabling conditions for the moral capacity, then an individual whose genetic and neuronal enabling conditions are not "normal" could not have, or could have, a defective, "normal" moral capacity, where "normal" must be considered with great care. This should be neither forgotten nor neglected only on the basis of an abstract idea of political correctness but should be scientifically investigated and then experimentally tested.⁸

5. Conclusion

By distinguishing *behavior*, *moral judgment on behavior*, and *moral capacity*, I have first of all attempted to trace what a (neo-)Darwinian approach to the genesis of the moral capacity should be, by recalling Darwin's own statements. In doing this, I have contended that a theory of the roots of the moral capacity can be developed independently of any particular theory of the genesis of moral judgments. I have thus reached the conclusion that if one wants to be a (neo-)Darwinian, one necessarily should accept that the human moral capacity is an evolutionary outcome. But this has nothing to do with a possible biological reduction of moral judgments and systems.

⁸ On scientific results connected with these possibilities, [6].

The foregoing considerations strongly suggest, however, that moral judgments are not grounded on something mysterious or numinous, but in human affairs and human interrelations. Therefore, to paraphrase Nietzsche, nothing is *Menschliches, Allzumenschliches* as the formulation and the application of moral judgments, and nothing is *Menschliches, Allzumenschliches* as the capacity for formulating and applying them. Yet, only the latter requires analysis in biological terms.

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