

## Darwin's politics of selection *From natural to artificial*

Luis Manuel Sanchez, *Universidad Nacional de San Agustín, Arequipa, Perú*

**ABSTRACT.** The uses of natural selection argument in politics have been constant since Charles Darwin's times. They have also been varied. The readings of Darwin's theory range from the most radically individualist views, as in orthodox socio-Darwinism, to the most communitarian, as in Peter Kropotkin's and other socialist perspectives. This essay argues that such diverse, contradictory, and sometimes even outrageous political derivations from Darwin's theory may be partially explained by some incompleteness and ambivalences underlying Darwin's concepts. "Natural selection," "struggle for existence," and "survival of the fittest" are open concepts and may suggest some hierarchical and segregationist interpretations. Circumstantially, Darwin accepted social "checks," such as discouraging marriage of "lower" individuals to prevent them from reproducing, in a vein of Malthusian politics. This makes Darwin's theory of selection by struggle collide with his theory of social instincts, by which he explains the origins of morality. It also favors reading Darwin's *On the Origin of Species* or *The Descent of Man* from opposite, mostly ideological perspectives. Darwin's position is ambivalent, although hardly unreasonable. The recognition he makes of social instincts, as well as the use of the concept of artificial selection, entails accepting the role of human consciousness, by which social evolution cannot be reduced to natural evolution, as socio-Darwinians did next and as some neo-Darwinists seem to repeat. On these grounds, this essay argues the inadequacy of the conventional model of natural selection for understanding politics. If we want to describe politics in Darwin's language, *artificial* rather than *natural selection* would be the concept that performs better for explaining the courses of politics in real society.

Key words: Natural selection, artificial selection, consciousness, social instincts, social Darwinism, neo-Darwinism, evolution, sociobiology, biopolitics, Darwin, Wallace, Huxley, Kropotkin

### 1. Darwinian controversies

The political uses of Charles Darwin's natural selection theory cannot be understated. They have been constant since Darwin's time, as the predominance of social Darwinism discourses during the first half of the twentieth century testifies. It might even be said that the political implications have been the more influential side of Darwin's theory in public debates.<sup>1,2,3</sup> Darwin himself could not avoid thinking on the consequences of natural selection theory in terms of politics, particularly in *The Descent of Man*. Some of his ideas were

magnified later by his followers, originating numerous, even contradictory and controversial, interpretations.

In this essay, I revisit Darwin and briefly group the most relevant political uses of Darwin's arguments up to the present, comparing them with Darwin's original views. The purpose is to assess which aspects of natural selection theory remain valid for politics and which do not. Accordingly, five main conflicting political interpretations will be distinguished, based on the way in which the relationship between biology and politics is assumed.

The first one is called the *neutral view* (section 2), which is presumably only committed to describing what is observed under natural circumstances, with no political interference at all. Allegedly Darwin might be

doi: 10.1017/pls.2019.1

Correspondence: Luis Manuel Sanchez, 77 Sunderland Drive, Bribie Island, Queensland, Australia. Email: [luismsf@hotmail.com](mailto:luismsf@hotmail.com)

ascribed to this position, although perhaps in a solitary and inconsequential way.

Then, I consider the position “in favor of” nature, which may also be called the *deterministic view* (section 3), as far as it attempts to turn the descriptive natural selection theory into a normative guide for politics. Here may be congregated the most popular and controversial political visions of authors such as Herbert Spencer, Walter Bagehot, Ernst Haeckel, William Sumner, and others, who are usually labeled “social Darwinists.” Generally, their views are associated with the politics of laissez-faire as well as with the politics of racism, eugenics, and social segregation that permeated the political discourse during the twentieth century's first decades.

There is also the *difference view* (section 4), in which authors claim either to differentiate natural selection from society or to avoid the effects of natural selection on human issues. Men are not mere animals. Before all, we are rational beings; therefore evolution must be guided by intelligence and morals. This is the classic stance of Alfred Russel Wallace, the recognized co-founder of natural selection theory, but it is also the final position of Thomas Henry Huxley, Darwin's most prominent guardian.

Others, such as Peter Kropotkin and Edward Aveling, developed the view of *compatibility* (section 5), according to which nature is strongly tied to society. Biology cannot be opposed to society nor society to biology. Indeed, biology supports a good society inasmuch as in the natural world there is not only struggle for existence but also cooperation. This is the basic argument that Kropotkin exposes in *Mutual Aid*.

Going into the twentieth century, I consider the view of evolutionary *sociobiology* and *biopolitics*, both of which developed from the neo-Darwinian framework usually described as the *modern evolutionary synthesis*. These visions are not free from political implications either; they are usually linked to the so-called neoliberal agenda, which will be discussed in (section 6).

In the course of this essay's revisiting, the reasons for such extreme divergences among Darwin interpreters are discussed. On one side, it will be argued that natural selection theory is imprecise and ambivalent in Darwin's own terms, particularly when he speaks of social and moral instincts. This allows his followers to make their own biased readings, choosing some parts of Darwin's writings and leaving aside others. On the other side, it will be sustained that — apart from the difference and compatibility approaches — both socio-Darwinian

and neo-Darwinian interpretations miss the problem of human *consciousness*, which is present in Darwin at least under the notions of *social instinct* and *artificial selection*.

Consciousness, implicit in Darwin's comprehension, provides the basis to speak of proper social evolution. On these grounds, given the extended biological disturbances caused by human contrivances across the world, I will sustain that if some aspects of Darwin's language remain valid, it is not the notion of “natural selection” but rather “artificial selection” that renders a more appropriate description of the specific character of political actions. In addition, the notion of “artificial selection” might help us differentiate what is truly progressive in human politics, and what may be considered regressive in terms of impacts on nature.

Some cautions on the uses of “natural” and “artificial” selection concepts may be considered before getting to the point. We must recall that Darwin speaks of natural selection just in a “metaphorical” sense.<sup>4</sup> On the other side, we must not forget that for Darwin, there is more than natural selection in nature. He also speaks of sexual selection, transmutation, Lamarckian use and disuse, and the influence of environment. These reasons prevent us from using the terms of “natural” and “artificial” in a fully descriptive sense, although they do not preclude us from using them in a heuristic mode, as the terms are employed in what follows.

It is also possible that the concept of “artificial selection” may seem anachronistic, in light of more recent concepts used in evolutionary theories, such as *cultural evolution*. I should note only that, since this essay attempts to reconstruct a historical debate, it has been thought more convenient to move in the language used by Darwin.

## 2. Darwin's neutral view

The HMS *Beagle's* voyage was certainly decisive in framing Darwin's theory. The young biologist was amazed by the enormous variety of species observed in every land he visited. In his mind hovered the question of how such a vast variety of species truly appeared and persevered in the world. By that time, the theory of “species fixity” was in disrepute, and Darwin was highly attracted to the idea of “transmutation,” which was eagerly upheld, apart from Jean-Baptiste Lamarck, by his grandfather, Erasmus Darwin. He was also shocked by the wretched violence in savage communities that he

took notice of, particularly among the natives of Tierra del Fuego.

Back in London, stimulated by Thomas Robert Malthus's *Essay on the Principle of Population*, Darwin came up with the idea of species' natural selection under a struggle for existence. In this way, he thought of species deriving from each other by unfettered violence, over a long span of time.

Arguably, Darwin was not interested in postulating any politics derived from his natural researches. In that sense, his attitude portrays a notable effort at keeping a scientific neutrality, as much as he could. This does not mean he was void of any political preference, nor was he unconscious of the Victorian era's political issues. Ultimately, his human motivations, mental images, and underlying concepts could not escape from this context. Although his theory does not directly advocate for any politics, it cannot elude reflecting the political society of the moment, attached to his personal beliefs.<sup>5</sup>

By the time Darwin returned to London, the notions of "development" and "progress" — preceded by the idea of "transmutation" — were in vogue, although the word "evolution" was likely not yet popular. The initial use of this term is unclear, but it was employed by naturalists such as Charles Lyell in 1833<sup>6</sup> and Robert Chambers in 1844<sup>7</sup> and became fashionable from around 1870<sup>8</sup> onward. In 1852, Spencer used the term in relation to "transmutation" and "development," notably speaking of a "Theory of Evolution"<sup>9</sup> to describe both natural and social changes. The word "evolution" was barely employed by Darwin, at least until the sixth edition of *On the Origin of Species* (1872).<sup>10</sup>

In *The Descent of Man* (1871), Darwin speaks of "the principle of evolution" or, sometimes, of "the principle of gradual evolution." Darwin's specific concept, inferred from his two major works, is not "evolution" but *evolution by natural selection*, which alludes to the origin of species departing from common ancestors, selected by "struggle" and "selection of the fittest."

Darwin was interested in keeping his theory free of any teleological connotation, but it seems that he hardly achieved it. He doubted that nature leads to a predefined upper bound but shared the idea of inevitable progress attached to the concept of evolution.<sup>11</sup> Natural selection was conceived as constantly tending to make later forms "higher than their progenitors."<sup>12</sup>

He was also conscious of the possible political implications of his theory. Occasionally, he could not help himself in giving some political opinions based on the thesis of natural selection. In *Origin*, Darwin evades

any direct discussion of social issues, but in his private correspondence, he is more candid, reminds James Allen Rogers.<sup>13</sup> For instance, in a letter to Wallace, in 1864, he writes, "Our aristocracy is handsomer (more hideous according to a Chinese or Negro) than the middle classes, from (having the) pick of the women; but oh, what a shame is primogeniture for destroying natural selection!"<sup>14</sup>

In 1869, in a letter commenting on Hugo Thiel's article on the economic applications of natural selection theory, Darwin carelessly accepts the social and moral implications of his theory: "You will readily believe how much interested I am in observing that you apply to moral and social questions analogous views to those which I have used in regard to the modification of species. It did not occur to me formerly that my views could be extended to such widely different, and most important subjects."<sup>15</sup> Later, in *Descent of Man*, Darwin goes plainly to the point:

With savages, the weak in body or mind are soon eliminated; and those that survive commonly exhibit a vigorous state of health. We civilized men, on the other hand, do our utmost to check the process of elimination; we build asylums for the imbecile, the maimed, and the sick; we institute poor-laws; and our medical men exert their utmost skill to save the life of everyone to the last moment. There is reason to believe that vaccination has preserved thousands, who from a weak constitution would formerly have succumbed to small-pox. Thus, the weak members of civilised societies propagate their kind. No one who has attended to the breeding of domestic animals will doubt that this must be highly injurious to the race of man. It is surprising how soon a want of care, or care wrongly directed, leads to the degeneration of a domestic race; but excepting in the case of man himself, hardly anyone is so ignorant as to allow his worst animals to breed.<sup>16</sup>

In this passage, Darwin clearly confronts the possible impacts that some sort of politics — that is, artificial measures — may entail for natural selection. He deprecates political actions such as building asylums for the imbecile, the Poor Laws, and even vaccination. These, in his judgment, would affect the natural selection of the fittest, inducing some sort of degeneration. That is, Darwin implies that society should not deter natural selection by artificial means. The continued line of thought might be, "Should humanity artificially

encourage the selection?" This question is theoretically solvable but remains unanswered by Darwin's thinking.

Darwin is not only conscious of some political implications of his natural theory, but also he expressly takes his main concepts from social analogies. It happens, first, with the concept of "natural selection," which, as he memorably explained, came to his mind by analogy to the processes of "artificial selection" of species made by breeders. It also occurs with the concept of "struggle for existence" as the main mechanism explaining the selection. Darwin referred to the key moment in which the idea of speciation by struggle struck his thoughts, while "reading for amusement" Malthus's *Essay on the Principle of Population*, in 1838. Both metaphors are evidently social. Besides, Silvan Schweber suggested in 1980 that Darwin's theory of "divergence," which aimed to make precise the formation of new species, would have been inspired by the idea of the division of labor due to Adam Smith.<sup>17</sup>

In front of this view, justified doubts arise as to whether Darwin's concepts spontaneously emerged from his natural investigations or were the unconscious extrapolation of social concepts and prejudices regarding nature. Particularly the concerns of the English political economy may have inspired Darwin's metaphors for conceiving nature. Was he using Malthus's argument to illustrate what happens in nature, or was he attributing to nature ceaseless struggles, as those observed within humans? Was he identifying truly "selective" acts in nature or attributing to nature selective acts such as those practiced by farmers?

The second strand of these questions seems to be more convincing: Darwin attributes to nature patterns of behavior typically observed within humans, hence employing words with inevitable anthropocentric bias, such as "selection" itself, as well as "struggle," "lower," "higher," "progress," "perfection," and even "evolution." Certainly, there are no "breeders" selecting in nature, and we can only dubiously speak of proper hierarchies of survival — lower or higher — among beings. Obvious differences may also be traced between species' harsh interdependence in the natural world and struggles and warfare organized by men through military means. Such differences should not be diminished.

The anthropocentric tone of Darwin's language contrasts with the view of Wallace, who believed that domestication and natural processes were different from each other. "Wallace, for example," write Nelson Papavero and Christian Fausto Moraes dos Santos, "started by saying that the varieties produced in the

state of domestication are very distinct from those which occur in a natural state — the total opposite of Darwin's point of view, who believed that the process of artificial selection, caused by domestication, were a faithful analogy of natural selection occurring in nature." "According to Wallace," the authors continue, "when abandoned domesticated varieties have a tendency to revert to the normal form of their predecessor species. In this way, Wallace firmly rejected the validity of this analogy."<sup>18</sup>

Jerry Fodor and Massimo Piatelli-Palmarini make the point that Darwin did not confuse "artificial" with "natural." Darwin noticed that breeding could be unconscious and unintended, which led to his idea that selection could indeed be automatic and unintentional.<sup>19</sup> This may be granted. The point is that "unconscious" and "unintentional" is not selection at all. As Spencer noted early on, selection supposes a "selector." Why keep speaking of "selection," then?

The choice of the word "selection" by Darwin might have been innocent. Unfortunately, it could not prevent that, by appealing to the biased language of the "weak" and the "stronger," "savages" and "civilized," the "lower" and the "higher," some men, groups, and races decided to assume themselves truly selected as the fittest by the enigmatic force of natural selection. To the extreme, some elite groups also felt authorized to become the "selectors," thus propelling selective processes among the rest of people in search of what they thought to be "the fittest."

In connection with this, the Darwinian language entails a second characteristic: it is sloppily *elitist*. It does not help break the aristocratic prejudices of traditional caste and monarchical societies. On the contrary, it is apt to reinforce hierarchical patterns or to erect new ones, grounded on the idea of nature supposedly selecting the "higher" and disposing of the "lower."

In addition, Darwin's language is also tinted by *social-teleological* bias that is not ameliorated by his skepticism about progress in nature.<sup>20</sup> Darwin not only employs the word "evolution" with the same steering connotation as the words "development" or "progress" implied in the epoch but also, in the pages of *Descent of Man*, he speaks therein recurrently of "advancements," "superior," "ascending scale," "progress," and "progressive development," clearly suggesting some elements of differential improvement and progressive tendencies. See, for instance, this expression in *Descent of Man*:

But everyone who admits the general principle of evolution, must see that the mental powers of the higher animals, which are the same in kind with those of mankind, though so different in degree, are capable of advancement. Thus, the interval between the mental powers of one of the higher apes and of a fish, or between those of an ant and scale-insect, is immense.<sup>21</sup>

That is, nature appears to have a hierarchical and directional tendency. At first, this may indicate a certain difficulty of Darwin's language to express the variation and continuity of species along the timeline, free of the old teleological connotations; but it might also imply some personal ideological understandings about what happens in nature. To be sure, apart from "struggle," the idea of species' genealogical progression is precisely what characterizes Darwin's natural theory in comparison with previous explanations, such as that of Georges Cuvier, who assumed that the number of species was fixed in the world and that there was nothing like a "great chain" or progression in beings.<sup>22</sup> As said before, the idea of "progression" was previously associated with "transmutation" and "development" and, after Darwin became increasingly associated with the word, "evolution."

Regardless, the fact is that for most audiences, the elements of struggle, hierarchy, and progression in evolution became the most attractive part of Darwin's theory. From the consequences of this popularity, Darwin cannot be exonerated. More than that, regarding his aforementioned opinions in *Descent of Man* and in his private letters, Darwin would have to be branded an orthodox socio-Darwinian, were it not because in the pages of *Descent of Man* he also undertakes a defense of morality against naked struggle (we will see it later). Such ideological propensity is confirmed, for instance, in this well-known letter to Heinrich Fick, written on July 26, 1872, in which he condemns trade unions and cooperatives:

The rule insisted on by all Trades-Unions, that all workmen — the good and bad, the strong and weak, — shd all work for the same number of hours and receive the same wages. The unions are also opposed to piece-work, — in short to all competition. I fear that Cooperative Societies, which many look at as the main hope for the future, likewise exclude competition. This seems to me a great evil for the future progress of mankind."<sup>23</sup>

Evidently, Darwin situates competition as the main natural check on population in the struggle for existence, as Malthus did. The exclusive difference is that Malthus thought of struggle that aimed to reach a population equilibrium, while Darwin attributes to the struggle the property of speciation. He distrusts that all workers, the strong and the weak, must be treated equally. If so, this ultimately would frustrate competition and the selection process. Nonetheless, in some pages of *Origin*, Darwin seems to be not quite sure about the expected outcomes of the selection:

All that we can do, is to keep steadily in mind that each organic being is striving to increase at a geometrical ratio; that each at some period of its life, during some season of the year, during each generation or at intervals, has to struggle for life, and to suffer great destruction. When we reflect on this struggle, we may console ourselves with the full belief, that the war of nature is not incessant, that no fear is felt, that death is generally prompt, and that the vigorous, the healthy, and the happy survive and multiply.<sup>24</sup>

Thus, accepting evolution seems to be more an act of faith. Also, in *Descent of Man*, Darwin reportedly attempts to reevaluate the exact weight of natural selection, admitting that in nature, other factors also play a role:

I now admit, after reading the essay by Nägeli on plants, and the remarks by various authors with respect to animals, more especially those recently made by Professor Broca, that in the earlier editions of my "*The Origin of Species*" I probably attributed too much to the action of natural selection or the survival of the fittest. I have altered the fifth edition of the *Origin* so as to confine my remarks to adaptive changes of structure. I had not formerly sufficiently considered the existence of many structures which appear to be, as far as we can judge, neither beneficial nor injurious; and this I believe to be one of the greatest oversights as yet detected in my work. I may be permitted to say as some excuse, that I had two distinct objects in view, firstly, to shew that species had not been separately created, and secondly, that natural selection had been the chief agent of change, though largely aided by the inherited effects of habit, and slightly by the direct action of the surrounding conditions.<sup>25</sup>

In this paragraph, Darwin reaffirms the role of natural selection, but with one important qualification: it is the chief but not the only factor in “change.”

Darwin thought that if man had not been subjected to natural selection, “assuredly he would never have attained to the rank of manhood.”<sup>26</sup> If man is to advance higher than it is, “he must remain subject to a severe struggle”; otherwise, “he would soon sink into indolence, and the more highly-gifted men would not be more successful in the battle of life than the less gifted.”<sup>27</sup> Yet he appears to believe that crude natural selection by struggle is closer to oldest nature and savages than to civilized men. He notes that “[t]he early progenitors of man must also have tended, like all other animals, to have increased beyond their means of subsistence; they must therefore occasionally have been exposed to a struggle for existence, and consequently to the rigid law of natural selection.”<sup>28</sup>

Eventually, Darwin arrives at a more exasperated political conclusion: “Hence our natural rate of increase, though leading to many and obvious evils, must not be greatly diminished by any means. There should be open competition for all men; and the most able should not be prevented by laws or customs from succeeding best and rearing the largest number of offspring.”<sup>29</sup> The idea of superiority among men, and the call for protecting the superior, not the lower, is irrepressibly suggested in this paragraph.

In other sides, echoing Greg and Dalton's criticisms, Darwin was inclined to believe that ethical behavior in the long run could affect the fitness of society.<sup>30</sup> Poverty must be accepted as a Malthusian check for solving the problem of population pressure. Darwin was persuaded of the value of discouraging the poor and unfit from marriage in order to avoid the consequences of the extended poverty,<sup>31</sup> alert to the concept that advanced societies might decay by overprotecting the weak and the poor.<sup>32</sup>

However, struggle — or rather, nature — will also be a factor in moral progress.<sup>33</sup> Here begins the ambivalence. In *Descent of Man*, Darwin takes pains with the instinctive origin of moral feelings, particularly those referred to other-regarding behavior. There, he contends that such conducts cannot be derived from “low motive of self-interest” but from hereditary social instinct, as that of parental and filial affection.<sup>34</sup> These feelings specifically manifest at the community level, making ethical behavior possible.

These expressions — together with others that will be revisited in (section 6) — have prompted some authors

to sustain that in *Descent of Man*, Darwin mutates from a Malthusian view to a more liberal ethic: “a politics that would spread from the family to the tribe, to the nation and race, and eventually to include men and women of all races,” says Dennis Hodgson, commenting on Piers Hale's book on *Political Descent*.<sup>35</sup> Incidentally, in private, Darwin defined his politics as “liberal or radical,” in the sense of following laissez-faire industrialism. In *Descent of Man*, he is more interested in a liberal humanism when he affirms the origins of morals in social feelings, other than those leading the struggle for existence.<sup>36</sup>

Then there is a latent conflict between the political consequences in favor of competition associated with his theory of natural selection by struggle and Darwin's doctrine of social and moral instincts — although, evidently, this conflict is only formal, since in real world, it is always possible for different instincts to coexist. In the balance, we might say that the former theory prevails over the latter in public discussion, but it cannot be ignored that in Darwin, both positions coexist.

In any case, despite being motivated by the scientific ethos of the epoch, Darwin fails in keeping his theory neutral to any political consequences. It happens not so much because he had political opinions, just as any author does, but because in the making of his biological ideas, Darwin cannot elude the influence of the political discussions of his time. He himself accepts the influence of English political economy in *Origin*, when says that natural selection “is the doctrine of Malthus applied with manifold force to the whole animal and vegetable kingdoms.” Fierce economic competition is at the center of Darwin's main metaphor,<sup>37</sup> which was observed in an early review in the *Manchester Guardian* that found in *Origin* the “National and Individual Rapacity Vindicated by the Law of Nature.” Huxley also immediately appreciated Darwin's book as a political weapon: a “veritable Whitworth gun in the armoury of liberalism,” alluding to laissez-faire liberalism.<sup>38</sup>

Despite Darwin's obscurities, preferences, and ambivalences — or precisely because of them — the political predisposition of natural selection theory was not ignored by scientists or by politicians. Natural and social changes became treated as part of the same process, conspicuously in Spencer's evolutionism. Then, through the common acceptance of struggle, competition, and progression, the mixing of Darwin's and Spencer's theories became easy and inevitable, achieving prevalent resonance in the following years, particularly among those later called socio-Darwinians.

### 3. The determinist reading

The political uses of *Origin* were favored not only by the inherent predisposition of Darwin's work, but also surely by the intensity of English debates on the so-called social question, Malthusianism, and the "Poor Laws" amendments.<sup>39</sup> Besides, the reading was inevitably permeated by the culture and style of thinking of the period, charged by scientism, positivism, and determinism, which resulted in naturalizing and biologizing social explanations.

Nature was obviously not ignored by scientists, writers, and artists in previous centuries, but in the nineteenth century, it was positioned at the center of scientific research. Scientists focused on nature and directly appealed to it to justify their normative elaborations. More importantly, after the introduction of Darwin's theory, nature came to mean "biology," rather than indicating physics, geology, or paleontology. Nature virtually meant "natural selection" and became located at the center of evolutionist views. Such achievement may be due to the effort of Darwin's renowned supporters (Huxley, Wallace, Spencer, Haeckel, August Weismann), as well as to the ease of Darwin's terminology in the evolutionist discourse that was then in vogue. Yet the aptitude of natural selection theory to matching the interests of social groups and the material expectations of societies in competitive progress at the time must not be underestimated.

Amid the competition triggered by the proliferation of inventions, the growth of a productive middle class, the increase in the number of poor people, and the emergence of new wealthy people, it is unsurprising that a natural theory expounding a struggle for existence and survival of the fittest was highly attractive and became the theory of social evolution par excellence. A certain biological determinism turned out to be the rule, undoubtedly stimulated by the habit of speaking of evolution as a physical force, law-alike, in Newton's manner.

Wallace's seminal paper of 1855, for instance, is titled "On the Law Which Has Regulated the Introduction of New Species." Meaningfully, in 1867, Wallace enumerated six chief "laws," the action of which, according to him, produce all the phenomena of living things.<sup>40</sup> Darwin, in turn, speaks in *Origin* of "Laws of Variation" and explains natural selection in this way: "One may say there is a force like a hundred thousand wedges trying force into every kind of adapted structure into the gaps of in the economy of Nature, or rather forming gaps by thrusting out weaker ones."<sup>41</sup>

Then, biological determinism expanded. It may be conspicuously detected, with few distinctions, in the mainstream of Darwin's followers, later mostly labeled "socio-Darwinian," with Bagehot, Spencer, Haeckel, and Sumner among the most prominent. It is also obvious in the many variants of eugenics that Francis Galton's elucubrations inspired.

Bagehot believed that natural selection operates in history, particularly at the level of customs, societies, and nations, selecting the customs of one society over those of others, with the strongest killing out the weak as they could.<sup>42</sup> Cohesive groups can defeat those that are more individualistic. Correspondently, in *Physics and Politics* (1872), Bagehot writes,

Conquest is the premium given by nature to those national characters which their national customs have made most fit to win in war, and in many most material respects those winning characters are really the best characters.<sup>43</sup>

Spencer's discourse followed similar patterns. Since his early years, Spencer was eagerly committed to looking for the moral foundations of society based on naturalistic views. He thought that easy aid to the poor would undermine their self-reliance capacity, and on the discussions of the Reform Act (1832) and the Poor Laws (1834), he sided with the laissez-faire vision.<sup>44</sup> Henceforth, he did not relinquish those ideas.<sup>45</sup> In *Social Statics* (1851), Spencer speaks of moral law as "an endowment now in process of evolution" that coincides with laws of state-duty as well as with those of political economy.<sup>46</sup> This "evolution" is "the law of complete life, . . . linked with those physical laws of which life is the highest product."<sup>47</sup>

In that pre-Darwin book, Spencer considered the poverty of the incapable, the distresses of the imprudent, the starvation of the idle, and the displacement of the weak by the strong, leaving many "in shallows and in miseries," as "the decrees of a large, far-seeing benevolence"; the same "which brings to early graves the children of diseased parents, and singles out the low-spirited, the intemperate, and the debilitated as the victims of an epidemic."<sup>48</sup> This led him to disapprove of the Poor Laws, because they affected the rights of a dissenter being taxed for the maintenance of a system of relief that he disapproved of.<sup>49</sup> Also, the Poor Laws retarded the process of adaptation to a "social state."<sup>50</sup>

On this background, Spencer assumed that free trade and the diminution of the role of government were necessary for the development of both individual and social

morality, keeping in line with the ongoing discourse on poverty and poor relief since Elizabethan times, says Thomas Gondermann.<sup>51</sup>

Then, when Spencer read Darwin's works, it is easy to understand his eagerness in approving the theory of natural selection by struggle for existence, keenly suggesting "survival of the fittest" as the proper epitome of Darwin's theory. Spencer was not strictly a Darwinian. Indeed, he is mostly described as a Lamarckian.<sup>52</sup> Yet Spencer's synthetic philosophy, embracing natural and social evolution from the homogeneous to the heterogeneous, converges with no difficulty with the main consequences of Darwin's theory, namely, competition, struggle for existence, and "survival of the fittest." This may also be the reason why Darwin echoed Spencer's expressive phrase with no displeasure.

Gondermann suggests that Spencer became a social Darwinist, providing two elements of proof: "first, his individualism and rejection of governmental aid for those he considered 'unfit,' and second, his belief that societies develop under some rule or mechanism similar to natural selection."<sup>53</sup> Arguably, once in possession of Darwin's argument, Spencer's favoritism for individual competition, struggle, and attack on government became somewhat more radical and more stringent. He believed in the irresistible force of social development as progressive ascent in which marginalized poverty and racially suppressed groups "were represented as precarious 'outcasts of evolution.'"<sup>54</sup> There was also — he posited — an ascending order of races that could be measured by their brain sizes. The advance from the savage state to our present civilization amounts "to nearly 30 per cent on the Original size," he notes.<sup>55</sup> Then, as Stephen Jay Gould remarked in 1981, "For Spencer, as for many of his contemporaries, brain size became the measure of all things."<sup>56</sup>

Nonetheless, as a convinced Lamarckian, Spencer's biological determinism admits social influence, inasmuch as brain size is a function of the social.<sup>57</sup> The social performs biological differences along the evolutionary chain. Yet once the biological differences are established in the brain, he claims that the "fit" races will progress and the wretched will become marginalized and degenerate. Consequently, evolution has two outcomes: one to favor the fittest, the other to dispose of the lower. In the struggle for existence between societies, "The more-evolved societies drive the less-evolved societies into unfavourable habitats; and so entail on them [a] decrease of size, or decay of structure, or both."<sup>58</sup> Besides, such a process of degeneration would

be irreversible, and the status of primitiveness could not be cast off, "because social statuses were inscribed in brain size and because the processes of social progression and degeneration were irreversible, the social distance between the civilized and savage became an enormous hindrance to equality, which could not be mitigated socially or politically," recalls Gondermann.<sup>59</sup>

The fittest survive and the weakest degenerate. This is the law of evolution as postulated by Spencer that became increasingly popular at the end of the nineteenth century. The proximity to Darwin's conclusions is obvious, although evidently Darwin is speaking of speciation and Spencer mostly of biological status and economic progress.

Spencer believed that some behavioral patterns, such as those exhibited by the poor, were heritable. This led him to confront one imaginary problem described by Gondermann with these words: "Under the given social conditions, the survival and multiplication of these weaklings would weaken the whole society, to the effect that 'generation after generation, a greater unworthiness' would be produced."<sup>60</sup> Then, Spencer concluded, "the quality of a society is lowered morally and intellectually, by the artificial preservation of those who are least able to take care of themselves."<sup>61</sup> The political recommendation emerging from this reasoning seems obvious: thrash the lower. The combination of Darwin and Lamarck in Spencer's hands appears to be ready to produce its most explosive consequences. The eugenics carriage against the "lower" seems to be the unavoidable route; nonetheless, Spencer did not take that step. Instead, he kept advocating for laissez-faire capitalism, becoming one of the most stubborn detractors of states' social roles until his last days.

Some of Darwin's other readers were driven toward more drastic conclusions, such as the tempting assumption that "[n]atural selection needs help and we would do better helping it." Wallace refers, for instance, to the case of Mr. Gran Allen, who concluded "that girls should be taught both by direct education and by the influence of public opinion, that the duty of all healthy and intellectual women is to be the mothers of as many and as perfect children as possible."<sup>62</sup> To such purposes, Allen "recommended to choose as temporary husbands the finest, healthiest, and most intellectual men, thus ensuring a variety of combinations of parental qualities which would lead to the production of offspring of the highest possible character and to the continual advancement of the race."<sup>63</sup>



This may sound hilarious these days, apart from being fatal for loving marriage, as Wallace already observed; but there were others who obtained rather tragic consequences from the natural selection view. Wallace also mentions the case of Mr. Hiram M. Stanley, who asserted that

In the true golden age, which lies not behind but before us, the privilege of parentage will be esteemed an honour for the comparatively few, and no child will be born who is not only sound in body and mind, but also above the average as to natural ability and moral force. The most important matter in society, the inherent quality of the members which compose it, should be regulated by trained specialists.<sup>64</sup>

In this statement, the radical program of “scientific” eugenics appears to be announced, and the gates of hell leading toward selective extermination practices, such as those that caused millions of victims in the first half of the twentieth century, were eventually opened.

The definitive path to the politics of eugenics was taken by Galton. It is not enough, he believed, to defend *laissez-faire* and oppose government intervention, as neither lets the outcast degenerate. To ensure the evolutionary future of societies, men ought to assume a deliberate part in furthering the great work of evolution.<sup>65</sup> Galton dedicated much effort to measuring and comparing human “races,” being alarmed by the proportion of weakly and misshapen individuals in the streets, as well as the lunatic, idiot, and pauper asylums, prisoners, patients in hospitals, crippled, and congenitally blind. He concluded the presence of a “religious significance of the doctrine of evolution” and the “moral duty” of furthering it.<sup>66</sup> “Our race is overweighed,” he says, “and appears likely to be drudged into degeneracy by demands that exceed its powers. If its average ability were raised a grade or two, our new classes F and G would conduct the complex affairs of the state at home and abroad.”<sup>67</sup>

Galton’s biological determinism was irrepressible. In 1883, he used the word “eugeny” to term those “good in stock.” Then, eugenics was founded, and it was extensively funded by governments and private agencies in the following years, aimed at giving the “more suitable races or strains of blood” more chance to prevail over the less suitable. It was proclaimed as a science by many and as a religion by some. In a few years, it was welcomed by governments and acclaimed by prestigious academic circles in Europe, Germany, and North America.

Interestingly, some eugenicists, such as the German feminist Helene Stöcker, believed that eugenics could pursue humanitarian ends by improving child care and prenatal care, as well as by helping mothers. Yet, as Niles Holt says, “more eugenicists appeared to side with the American Paul Popenoe, who insisted that child labor laws and minimum wage laws preserved the biologically “inefficient.”<sup>68</sup>

To be sure, Galton coined the word “eugeny,” but selectionist theories were already on the scene, at least as far as the French naturalist Georges-Louis Leclerc, comte de Buffon spoke of the “degeneration” of animals (1766) and Arthur de Gobineau referred to the “inequality of races” (1853–1855), arguing that the Arian race would degenerate by interbreeding with other populations.<sup>69</sup> For Galton and the eugenicists, there was no doubt that natural selection played the determinative role. Thus, they concluded that society, science, and the government should promote the fittest.

Obviously, eugenics meant to substitute “natural selection” by means of “artificial selection,” but this was an imperceptible question not discussed by Darwinists. Darwin spoke of the “lower” and the “higher,” “barbarians” and “civilized,” and he distrusted artificial measures that could deter natural selection, but he did not explicitly advocate in favor of any artificial measures for fostering selection. Galton took Darwin’s reasoning further, presuming to extract from natural selection theory all possible — even ludicrous — normative consequences.

After Galton, the eugenics creed became even more radical. It was argued that if men do not help natural selection, nations will degenerate. This was Weismann’s theory of *panmixia* — that if the Malthusian struggle for existence is removed, the degeneration of race will be the inevitable result.<sup>70</sup> Without competition, there will be decadency. Weismann’s argument sounds highly attractive, and prominent minds took it seriously.<sup>71</sup> For instance, Karl Pearson was convinced that “education, good laws, and sanitary surroundings for the feeble, menaced to suspend natural selection, which may be a real danger to society.”<sup>72</sup> Also, H. G. Wells wrote *The Time Machine*, portraying a future society in which the descendants of mankind have degenerated because of the suspension of a struggle for existence.

In the name of “natural” selection, social Darwinism opted to promote “artificial” mechanisms of selection, such as those sponsored by the eugenicist movement. This led social Darwinists to be ultimately both self-deceptive and self-defeating. By assuming that the world

is only about individuals in competition selected by natural selection, they deceived themselves. By inferring that states — or societies — must intervene to promote natural selection, they self-defeated because this implies either that there is no natural selection or that it is not law-alike. Therefore, the intervention of an artificial hand is required in order to make the theory valid.

In Germany, Haeckel was not conducted toward the eugenics path, but symptomatically he condemned war for the loss of “the physically and intellectually most vigorous young men,” and assumed a similar biological determinism.<sup>73</sup> Haeckel was convinced of the universal aptitude of Darwin's theory to inform both natural and social evolution, apart from accepting that Darwin's theory was essentially aristocratic, whereby it discredits the socialist demands:<sup>74</sup>

Darwinism, or the theory of selection, is thoroughly aristocratic; it is based upon the survival of the best. The division of labor brought about by development causes an ever-greater variation in character, an ever-greater inequality among the individuals, in their activity, education and condition. The higher the advance of human culture, the greater the difference and gulf between the various classes existing. Communism and the demands put up by the Socialists in demanding an equality of conditions and activity is synonymous with going back to the primitive stages of barbarism.<sup>75</sup>

Biological determinism under the influence of Darwinian-Spencerian language may be found not only in Europe but also in America, within academic and political circles, as well as in the business culture, even though, at that time, nobody called themselves a social Darwinist.<sup>76,77</sup> According to Erin Sutter, in the passage from the nineteenth to the twentieth century in America, the theory of evolution permeated the political culture and was used to support many viewpoints, even opposing ones. Whether anti-imperialists or imperialists, social Darwinists or Progressives, reformers or anti-reformers, they were influenced by Darwin's language and used evolutionary rhetoric in their arguments.<sup>78</sup>

A conspicuous instance is William Sumner's, who believed that competition and the survival of the fittest formed the cornerstone of the theory of evolution.<sup>79</sup> In a clear Spencerian adhesion, Sumner supported the laissez-faire approach to economics and condemned interference, or reforms, by the government: hindrances

that would favor the weak, disrupting the survival of the fittest and the progress of evolution. Sumner's conclusions were coherent with utilitarian premises, but to some extent, he exacerbated them: rights and morals are somehow relatives.<sup>80</sup> We consider rights just because they are useful, but they can be changed if necessary for evolution. Instead, he said, evolution cannot be changed. “Man cannot change his world; he can only go with the flow of change and adapt,” thus it is childlike to try to “plan out a new social world.”<sup>81</sup>

Physical determinism is defended in a rather crude way. “We cannot go outside of this alternative: liberty, inequality, survival of the fittest; not-liberty, [or] equality, survival of the unfittest. The former carries society forward and favors all its best members; the latter carries society downwards and favors all its worst members,” says Sumner.<sup>82</sup>

Nevertheless, if evolution is inevitable and rules the world, for some reason it does not apply to the level of countries or nations. Sumner opposed imperialism, appealing in this case not to evolution nor utilitarianism but to “American principles.”<sup>83</sup> Others such as John Barret extracted from Darwinian interpretations the opposite conclusion: “The rule of the survival of the fittest applies to nations as well as to the animal kingdom. It is a cruel, relentless principle being exercised in a cruel, relentless competition of mighty forces; and these will trample over us without sympathy or remorse unless we are trained to endure and strong enough to stand the pace.”<sup>84</sup>

In sum, socio-Darwinians may disagree on specific political consequences, but they share the common belief that natural selection is law-alike and that selective politics should just protect or reproduce it. They assume that natural evolution is inevitably ruling nature and society, both essentially described by competition, struggle for existence, and survival of the fittest. Despite their differences, they articulated a common political discourse laying behind elitist and segregationist policies. As Cobb says, socio-Darwinian ideas provided the intellectual basis for imperialist policies, tax policies reducing burdens on the rich and shifting them onto the poor and middle class, the absolutizing of property rights, welfare programs treating the poor as failures and misfits, racial segregation in education and housing, and eugenics programs to promote the “superior” race.<sup>85</sup>

Allegedly, there is not such a fatal determinism in Darwin's writings, to the extent that he grants a certain space for morality. Biological determinism emerged

from the fusion of Darwinian and Spencerian visions, thence termed “social Darwinism.” Perhaps it would have been more adequate to label it as “biological Spencerism,” as Marvin Harris suggested in 1974.<sup>86</sup> Still, this naming convention would miss the concessions that not only Darwin’s language, but also Darwin’s arguments in both *Origin* and *Descent of Man*, provide socio-Darwinians arguments or motivate socio-Darwinian understandings. After all, without struggle for existence, competition, and survival of the fittest, Darwin’s theory would be unrecognizable — and this is what social Darwinists particularly emphasize.

In addition, Darwin’s attitudes toward his emerging socio-Darwinian followers were ambiguous. When required by Galton’s theories, Darwin hesitated to score distances. Galton was concerned by the fact that members of aristocracy inherited merits without deserving them. Also, he was dismayed by certain signals that the weak classes were reproducing at higher rates than the more industrious and intellectual middle class. Darwin paused on these claims. He considered Galton’s exaltation unfounded and his solutions unnecessary. The action of natural checks in populations, suggested Darwin, would dispel Galton’s fears.

This conviction in the greatness of natural selection notwithstanding, to the end of his life, Darwin apparently felt pessimistic about the assumed role of natural checks and balances. Wallace witnesses one of his latest conversations, in which Darwin

... expressed himself very gloomily on the future of humanity, on the ground that in our modern civilization [sic] natural selection had no play, and the fittest did not survive. Those who succeed in the race for wealth are by no means the best or the most intelligent, and it is notorious that our population is more largely renewed in each generation from the lower than from the middle and upper classes.<sup>87</sup>

Incidentally, Wallace had the same impression: “it is indisputably the mediocre, if not the low, both as regards morality and intelligence, who succeed best in life and multiply fastest.”<sup>88</sup> Yet Wallace was somewhat more optimistic about the future progress, claiming that such a mediocre situation was just an abnormal period of the world’s history.<sup>89</sup> The world did not seem to behave like the theory predicted.

#### 4. The difference approaches

Not all Darwinians assumed such a biological fatalism. There were also those who found in Darwin’s terminology singular inspiration for promoting social, economic, and political reforms so as to improve the people’s condition. Such was the case of Progressivism in the United States at the beginning of the twentieth century, which supported important welfare politics that marked an extensive period of social policies in that country. There were also those who thought of evolution to be true in nature as in society, but with a different significance in each case. This may be called the *difference*, or the *divergence*, approach.

This is characteristically the position of Wallace, the other naturalist who is held as an independent and simultaneous discoverer of natural selection theory, but also of Thomas Henry Huxley, the socialist David G. Ritchie, and others.

Like Darwin, Wallace believed in ferocious struggle for existence and progress as a natural law applicable both to nature and human mental faculties.<sup>90</sup> In *The Development of Human Races under the Law of Natural Selection* (1864), he writes,

Extinction of Lower Races. It is the same great law of “the preservation of favoured races in the struggle for life,” which leads to the inevitable extinction of all those low and mentally undeveloped populations with which Europeans come in contact. The red Indian in North America, and in Brazil; the Tasmanian, Australian, and New Zealander in the southern hemisphere, die out, not from any one special cause, but from the inevitable effects of an unequal mental and physical struggle.<sup>91</sup>

However, in the same place, Wallace speaks of man as “social and sympathetic.” Man has increased mental, moral, and intellectual qualities, in proportion to physical characteristics, which have become less important.<sup>92</sup> Hence, “his physical structure would cease to be affected by the operation of ‘natural selection.’”<sup>93</sup> This means that the evolutionary processes in nature must be distinguished from evolution in society. The advent of the human mind represents a new stage in the evolutionary process that divorced man from the vegetable and animal kingdoms and freed him from the laws of natural selection.<sup>94</sup> Accordingly, says Wallace, man has escaped in two distinct ways from the laws of the animal world:

1. By his superior intellect he [man] is enabled to provide himself with clothing and weapons, and by cultivating the soil to obtain a constant supply of congenial food . . . 2. By his superior sympathetic and moral feelings, he becomes fitted for the social state; he ceases to plunder the weak and helpless of his tribe; he shares the game which he has caught with less active or less fortunate hunters, or exchanges it for weapons which even the weak or the deformed can fashion; he saves the sick and wounded from death; and thus the power which leads to the rigid destruction of all animals who cannot in every respect help themselves, is prevented from acting on him.<sup>95</sup>

Thanks to the progress of the mind, even the lowest savages “were able to act upon and modify the forces of nature in such a way as to bypass bodily adaptations to the dictates of the ‘struggle for existence.’”<sup>96</sup> However, the development of the mind does not mean that all societies weigh the same. Wallace says, “If my conclusions are just, it must inevitably follow that the higher the more intellectual and moral must displace the lower and more degraded races; and the power of ‘natural selection,’ still acting on his mental organization, must ever lead to the more perfect adaptation of man’s higher faculties to the conditions of surrounding nature, and to the exigencies of the social state.”<sup>97</sup>

Consequently, Wallace manages to advocate in favor of alleviating humans from natural selection, although accepting some sort of social gradation. In this way, says David Stack, Wallace “rescues man from the Malthusian curse without compromising the mechanism of natural selection in the rest of nature.”<sup>98</sup>

In addition, far from the certain individualism that *Origin* may transmit — not so much *Descent on Man* — Wallace believed that in the selection would prevail those individuals with more capacity for acting in concert.<sup>99</sup> He imagined a good society as a big family. “As in a family, the same comforts and enjoyments are secured to all, and the very idea of making any difference in this respect to those who from mental or physical disability are unable to do so much as others, never occurs to anyone.”<sup>100</sup>

Not surprisingly, Wallace supported anti-elitist politics. He believed that nature selects superior minorities but understood “superior” in a different way than the socio-Darwinians. Higher human characteristics involve the “admiration of all that is beautiful and kindly and self-sacrificing, repugnance to all that is selfish,

base, or cruel.” One of his most striking phrases referring to evolutionary selection is well known: “Those who succeed in the race for wealth are by no means the best or the most intelligent.”<sup>101</sup> Then, in his distinguished paper of 1890, he went on to assert the following:

It is my firm conviction, for reasons which I shall state presently, that, when we have cleansed the Augean stable of our existing social organization, and have made such arrangements that *all* shall contribute their share of either physical or mental labour, and that all workers shall reap the *full* reward of their work, the future of the race will be ensured by those laws of human development that have led to the slow but continuous advance in the higher qualities of human nature.<sup>102</sup>

Consequently, true progress in evolution implies recognizing equal rights to land and an equal share of the produced wealth for all members of society.<sup>103</sup> Contrary to Spencer’s policies based on private property, Wallace defended land nationalization and criticized the negative impact of British free trade policies on working-class people. He also condemned wars and arms races and the dangerous conditions in which poor and urban workers lived in Europe, claiming himself socialist. Before all, he distanced himself from eugenics and opposed Galton’s recommendations, such as the claim that early marriage of those marked high by merit of both health and intelligence should be promoted through state endowments. He gave more weight to the action of *nurture* than *nature*. James Marchant recalls that Wallace, to the end of his life, told him that “[a]n individual is, of course, a product of *nature* and *nurture*, but it is one-tenth the former and nine-tenths the latter.”<sup>104</sup>

The other renowned Darwinist, Huxley, allegedly the one who coined the term “Darwinism” and who defended Darwin’s theory loyally more than others, arrived at similar politics as Wallace’s, although with important political nuances. He did not renounce Darwin’s Malthusian assumptions and contended that natural law and subsequent “natural right” did not bring a state of peace, but rather war among individuals: “The ceaseless and pitiless ‘struggle for existence’ which obtains throughout the whole world of living things is, in truth, the inevitable consequence of the circumstance that each living being strives knowingly, or ignorantly, to exert all its powers for the satisfaction of its needs.”<sup>105</sup> However, he believed that “the terrible struggle for existence tends

to final good” and that “the suffering of the ancestor is paid for by the increased perfection of the progeny.”<sup>106</sup>

Huxley distrusted Rousseau’s natural equality but claimed to struggle against our animal nature rather than letting it to lead our evolutionary destiny. In his essay “The Struggle for Existence in Human Society” (1888), despite praising the terrible struggle for existence as being neither moral nor immoral, but non-moral, Huxley postulates that society has a moral object: it cannot be ruled by struggle. In his essay “Evolution and Ethics” (1894), he strongly asserts that “the ethical progress of society depends, not on imitating the cosmic process, still less in running away from it, but in combating it.”<sup>107</sup> He adds,

[T]he ethical man — the member of society or citizen — necessarily runs counter to that which the non-ethical man — the primitive savage, or man as a mere member of the animal kingdom — tends to adopt. The latter fights out the struggle for existence to the bitter end, like any other animal; the former devote his energies to the object of setting limits to the struggle.”<sup>108</sup>

Accordingly, Huxley repudiated competition and struggle as an exclusive social ethic, and in his *Roman Lectures*, he comes about with this suggestive thinking:

[S]ocial progress means a checking of the cosmic process at every step, and the substitution for it of another, which may be called the ethical process; the end of which is not the survival of those who may happen to be the fittest, in respect of the whole of the condition which obtain, but of those who are ethically the best.<sup>109</sup>

By these reasons, Huxley’s posture has been rightly identified with ethical liberalism — that is, the late nineteenth century’s new liberalism, advocating the legitimate intervention of the state in view of the complex social conflicts brought by the development of modern industrialism. Cautiously, those new liberals postulated that government inaction might have an adverse effect on citizens’ liberties.<sup>110</sup>

This was also the intuition of Ritchie, whose view of evolution is closer to Huxley’s. Ritchie thought of evolution not only as a conception but also as a guide offering direction on how to order our lives.<sup>111</sup> He did not refuse the concept of a struggle for existence but believed that evolution “means a great deal more than the principle of natural selection.”<sup>112</sup> Accordingly, Ritchie sustains that

the concepts of Darwinism are perfectly applicable to human society *mutatis mutandis*.<sup>113</sup>

Ritchie, like Kropotkin, warns that Darwin speaks in a different tone than his disciples, who often utilize Darwin for political purposes. By the time of *Descent of Man*, Darwin had declared himself “liberal or radical,” when radicalism “was no longer bound to out-and-out *laissez faire*,” notes Ritchie.<sup>114</sup> Ritchie’s position contrasts with the individualistic radicalism of Spencer, who believed that the struggle was only between individuals, while according to Ritchie, it also happens “between race and race.”<sup>115</sup> A tone of social Darwinism may be perceived in Ritchie’s expression, as well as when he celebrates Galton’s scientific works on heredity.<sup>116</sup> However, Ritchie questions the evolutionist politics that maintains that all that ought to be done is to remove every artificial restriction on the operation of natural selection. Following Huxley, Ritchie considers that consciousness is the point that marks the difference of humans in natural evolution. He writes,

[H]uman beings are not only engaged in the struggle for existence, but know that they are so engaged, are capable of looking round on what they are doing, of reflecting, of comparing results and considering some good, some bad, some to be desired and others to be avoided. If we distinguish — as Professor Huxley says it is convenient to do — between man and nature, then it is of extreme importance to us to discover the natural laws which operate in society, but it does not follow that we owe them any allegiance.<sup>117</sup>

Ritchie maintains that progress comes only by struggle, but apart from struggle between individual and individual; race and race; nation and nation: there is also struggle between institutions, languages; and ideas. That is why “governments are natural products” of evolution, and the private competition among individuals cannot be glorified.<sup>118</sup> Moreover, struggle in its highest form is not that which causes an individual’s death, “but that causes the death of partial truths that have become errors, and of customs that have outlived their use.”<sup>119</sup> That is, what Ritchie’s thinking suggests is that the true struggle for evolution is at the level of ideas.

## 5. The view of compatibility

Authors included in this group might be compared with those maintaining the difference viewpoint, to the extent that their political conclusions are close each

other. Yet instead of emphasizing the difference, these authors claim that there are beneficial similarities between nature and social evolution. In the natural world, there is more than strictly a struggle for existence; there is also natural cooperation and mutual aid, and therefore nature and society are more compatible than they appear.

At least two authors hold this opinion: Peter Kropotkin and Edward Aveling. Kropotkin does not refuse Darwin's theory but attempts to complement it, claiming himself a Darwinist. What discomforts him is the harsh version of Darwinism reduced to struggle for existence as portrayed by Huxley in "The Struggle for Existence in Human Society."

In the introduction to *Mutual Aid*, Kropotkin recalls how impressed he was by two facts during his early journeys in eastern Siberia and northern Manchuria. On one side, "the extreme severity of the struggle for existence which most species of animals have to carry on against an inclement Nature." On the other, "even in those few spots where animal life teemed in abundance," he says, "I failed to find — although I was eagerly looking for it — that bitter struggle for the means of existence, among animals belonging to the same species, which was considered by most Darwinists (though not always by Darwin himself) as the dominant characteristic of struggle for life, and the main factor of evolution."<sup>120</sup>

Kropotkin testifies to the enduring conditions of animals struggling with a severe environment. This, he argues, makes sense of the "overwhelming importance" of what Darwin described as "the natural checks to over-multiplication." Yet seeing the semi-wild cattle and horses in Transbaikalia, the wild ruminants everywhere, the squirrels, and so on, he realized that "when animals have to struggle against scarcity of food," affected by natural calamities, "comes out of the ordeal so much impoverished in vigour and health, that no progressive evolution of the species can be based upon such periods of keen competition."<sup>121</sup>

This directed Kropotkin's attention to the social prognoses made by socio-Darwinians on the premise that the struggle for the means of existence is "a law of Nature." "I was persuaded," says Kropotkin, that to admit "a pitiless inner war for life within each species, and to see in that war a condition of progress, was to admit something which not only had not yet been proved, but also lacked confirmation from direct observation."<sup>122</sup> He continues,

We have heard so much lately of the "harsh, pitiless struggle for life," which was said to be carried

on by every animal against all other animals, every "savage" against all other "savages," and every civilized man against all his co-citizens — and these assertions have so much become an article of faith — that it was necessary, first of all, to oppose to them a wide series of facts showing animal and human life under a quite different aspect. It was necessary to indicate the overwhelming importance which sociable habits play in Nature and in the progressive evolution of both the animal species and human beings.<sup>123</sup>

On these grounds, Kropotkin was ready to postulate the "law" of mutual aid "as one of the chief factors of evolution." Chapters 7 and 8 of his book are devoted to mutual aid among human beings, presenting surviving cases of communities and mutual-support institutions in England, France, Germany, Switzerland, Denmark, and other countries. When examining the everyday life of the rural populations of Europe, he says, "we find that, notwithstanding all that has been done in modern States for the destruction of the village community, the life of the peasants remains honeycombed with habits and customs of mutual aid and support."<sup>124</sup> This also happens in urban areas, where associations, societies, brotherhoods, alliances, institutes, unions, and so on may be counted by thousands in Europe.

Eventually the book's installments were appreciated by Henry Bates, at the time secretary of the Royal Geographic Society in London, as "truly Darwinism." Kropotkin was convinced that his viewpoint was compatible with some developments of Darwin's *Descent of Man*.<sup>125</sup> Needless to say, this view allowed Kropotkin to advocate for a cooperationist, decentralized, and anarchist politics. He writes,

Neither the crushing powers of the centralized State nor the teachings of mutual hatred and pitiless struggle which came, adorned with the attributes of science, from obliging philosophers and sociologists, could weed out the feeling of human solidarity, deeply lodged in men's understanding and heart . . . And the need of mutual aid and support which had lately taken refuge in the narrow circle of the family, or the slum neighbours, in the village, or the secret union of workers, re-asserts itself again, even in our modern society, and claims its rights to be, as it always has been, the chief leader towards further progress.<sup>126</sup>

Another variant of evolutionist compatibility is that of Edward Aveling, who in 1884 wrote *The Gospel*

of *Evolution*. Aveling insisted that Christian evangel was in decline because its legends were becoming discredited. Men needed a new evangel, and this came with the scientific gospel — “the Gospel of Evolution” — which would make possible, in Aveling’s estimation, a “universal peace through sea and land” and a “universal brotherhood of man.”<sup>127</sup>

Aveling proposed a comprehensive definition of evolution. “Evolution is the name for the idea of the unity and continuity of phenomena,” he says. It “is the doctrine of nonintervention. According to this gospel, matter and motion are all in all.” In this account, Darwinism is just a part of the gospel, although, in a certain sense, the most important one. “Whilst Darwinism shows that man is not distinct from the lower animals,” evolutionists believe “that plants and animals have had a common parentage, that living matter has originated from the nonliving, that there has been no break in the vast series of phenomena at any point.”<sup>128</sup>

From these assumptions, Aveling derived the contention that man may improve his destiny, and the sole means of progress on earth is not the struggle for existence, but rather study and work. Aveling claims two necessities: “Study of nature to find out what is; work to apply the knowledge for the increase of human happiness.”<sup>129</sup>

Critical views such as those of Henry George, Karl Marx, and other left-leaning thinkers might be regarded as close to the compatibility perspective, as far as their theories share at least one aspect of Darwin’s theory: the idea that species evolve by natural conditions. Yet these authors completely refuse to apply the Malthusian theory contained in the doctrine of the “struggle for existence” to human society, as well as that of “survival of the fittest.” George believed that the chasm between humans and animals was unsurmountable. “Between the lowest savage and the highest animal, there is an irreconcilable difference. It is not a difference of degree, but of kind,” he says. Thus, it is mischievous to approve the prevailing belief that civilizations progress by “development or evolution. That is, by the survival of the fittest and hereditary transmission of acquired qualities.”<sup>130</sup>

Marx, in turn, accepted that humans evolve from nature and that the theory evolution applies to both nature and society and is dependent on a materialist basis; but he also claimed that the evolution of society is radically different from that of nature. This does not depend on natural selection, or on inherited characters, or on any biological condition at all — not even on

pure consciousness. It relies on the historical mode of production, which is the way in which humans organize to provide themselves their material goods. Besides, social development proceeds by evolution but mostly by “revolution.”<sup>131</sup> Thus, although their views are compatible with the view of material evolution, neither Marx nor George can be considered Darwinians.

## 6. Sociobiology and biopolitics

The attraction to socio-Darwinian thought reigned into the 1930s, decreasing in the aftermath of World War II. The war was involved in the decline of socio-Darwinian thought, as well as the criticism of important authors, such as Mark Twain, Henry George, Karl Marx, J. A. Hobson, John Maynard Keynes, and Franz Boas; but assuredly the decisive disapproval came from the consequences of the war, in which, to put it in plain terms, socio-Darwinian discourses and policies proved their notorious predisposition to produce catastrophic results.<sup>132,133</sup>

Nonetheless, in the same period, neo-Darwinian studies were in progress by authors such as Haldane (1932), Dobzhansky (1937), Mayr (1942), Huxley (1942), G. G. Simpson (1944), and others, framing what came to be known as the *modern evolutionary synthesis*. These ideas stimulated the rebirth of social approaches based on biology and Darwinian evolution, so that in the 1970s, sociobiology and biopolitical studies were launched by Wilson (1975), Alcock (1975), Eibl-Eibesfeldt (1975), Dawkins (1976), Somit (1972), Schubert (1976), Alexander (1977), Masters (1983), and others. These authors explore the origins of social behavior, altruism, cooperation, leadership, hierarchies, and states within a neo-Darwinian framework.

The initial move is usually credited to Edward O. Wilson’s *Sociobiology* (1975), which claims to pay attention to the biological basis of social behavior. Wilson defines sociobiology as “the systematic study of the biological basis of all forms of social behavior.” To him, all behavior is necessarily an extension of the brain as a biological entity, including human culture. Moreover, “the evolution of social behavior and culture is driven by the environmental contingencies of natural selection.”<sup>134</sup>

Wilson locates altruism as “the central theoretical problem of sociobiology” and explains it as a gene’s technique for replicating itself. Altruism, he says, “by definition reduces personal fitness”; therefore, the only reason altruism might evolve by natural selection is

kinship — that is, when the altruism of an unfit person benefits the “gene pool” of the next generation.<sup>135</sup>

Wilson distinguishes between “hard” and “soft” altruism. Hard-core altruism is that which is unilaterally directed at others: “the bestower expresses no desire for equal return and performs no unconscious actions leading to the same end.”<sup>136</sup> This sort of altruism would be “irrational.” It is the kind of altruism frequent among social insects, although it also tends to prevail among other species. Albert Somit explains that Wilson considers hard-core altruism the enemy of modern civilization, as much it promotes, for example, “nepotism.”<sup>137</sup> On the other hand, soft-core altruism is the selfish behavior, the “true selfishness,” usually calculated by the individual, in the expectation of obtaining reciprocal benefits for oneself or for one’s closest relatives. Soft altruism “is the key to a more nearly perfect social contract.”<sup>138</sup> Wilson was confident that the evolutionary balance would eventually favor soft-core altruism, since human beings “appear to be sufficiently selfish and calculating to be capable of indefinitely greater harmony and social homeostasis.”<sup>139</sup>

In the same way, Wilson explains aggression, territoriality, and ethnocentrism, in *On Human Nature* (1978), in terms of the brain’s genetically programmed tendencies: “Our brains do appear to be programmed to the following extent: we are inclined to partition other people into friends and aliens, in the same sense that birds are inclined to learn territorial songs and to navigate by the polar constellations.”<sup>140</sup> However, Wilson is cautious about appealing to biology to explain all social behavior, an inconsistency for which Somit reproached him in 1980. “The question of interest,” Wilson declares, “is no longer whether human social behavior is genetically determined; it is to what extent.”<sup>141</sup> He assumes that the selective evolutionary process works on the individual level and can be “deeply influenced by the vagaries of cultural evolution.”<sup>142</sup>

Later, in 1981, Wilson and Charles Lumsden postulated the theory of “gene-culture co-evolution,” described as a “complicated, fascinating interaction in which culture is generated and shaped by biological imperatives while biological traits are simultaneously altered by genetic evolution in response to cultural innovation.”<sup>143</sup>

Evolutionary biopolitics has gone further in developing sociobiology’s main tenets, using it to explain political behavior, the origin of states, and the limits of democracy. Arguably, in some cases, biopolitics reveals a more accentuated biological determinism and

supports a more individualistic view of evolutionary tendencies.

In *Origin*, Darwin asserts that “if it could be proved that any part of the structure of any one species had been formed for the exclusive good of another species, it would annihilate my theory, for such could not have been produced through natural selection.”<sup>144</sup> From this assertion, in 1974, Richard Alexander inferred selfishness as the basis of “maximal reproduction in the long run.”<sup>145</sup> Alexander suggested that human behavior may be sought in “the basic dichotomy between personally or directly selfish (or reproductive) actions and group-sustaining or indirectly selfish actions.” Actions are ultimately selfish, even if individuals are not aware of their motivations, as when parents exhort their children to be unselfish altruists.<sup>146</sup>

Concordantly, in 1998, Somit and Steven Peterson explained that contemporary evolutionary theory runs against social explanations, such as that embraced by Émile Durkheim’s dictum affirming that “social facts require social explanation.” Yet they doubted that evolutionary views were well used by biopolitical studies at that time.<sup>147</sup> Both authors claim that biopolitical studies should adopt “the research techniques and conceptual framework employed by biologists generally” and should utilize the advances in physiology, psychopharmacology, and evolutionary ethology.<sup>148</sup>

Somit and Peterson also explain the coincidence between the point of view of biopolitics and *rational choice* economics, placing the maximization of individual interest at the center. However, biopolitics would be more promising of deep explanations than rational choice, because biopolitics explains what rational choice theory takes for granted, which is humans’ tendency to make decisions on behalf of self-interest. Rational choice cannot explain why this prevails. “In sharp contrast, neo-Darwinian theorists have at their disposal explanations for why self-interested behavior developed among all species; they also have the tools to explain other genetically transmitted tendencies . . . that may often work to influence homo sapiens’ social and political behavior.”<sup>149</sup>

Nevertheless, when considered by other biopolitical authors, the social component acquires more relevance. Roger Masters, for example, rejects the view that social science will be totally absorbed by biology, as much as he criticizes social scientists that ignore biology.<sup>150</sup> In 1984, Masters wrote,

Unlike traditional theories, the evolutionary approach sketched here does not presume either that



the state originated directly from a priori traits of human nature or that it resulted solely from historical circumstances. Rather, the human capacity to institutionalize new modes of improving inclusive fitness, when combined with appropriate external conditions — and perhaps only in the presence of individuals capable of seizing the opportunity — would explain the specific times and places in which states have arisen.<sup>151</sup>

On average, most sociobiology, biopolitics, and evolutionary authors explain the evolution of social behavior under the concepts of “kin selection,” “group selection,” and “inclusive fitness.” These terms are certainly not employed by Darwin, but these authors postulate that they transmit Darwin’s views.

Paul Naour explains that Wilson’s sociobiology is “inspired by the central dogma of evolutionary biology that natural selection shapes ALL classes of traits in organisms.” Also, “behavior and social structure should be studied as ‘organs,’ extensions of genes that exist because of their superior adaptive value.”<sup>152</sup> As for biopolitics, say Somit and Peterson, it “almost unanimously take[s] for granted the validity of neo-Darwinian evolutionary theory,” which leads to only one possible conclusion: “political behaviour is often significantly influenced by genetically transmitted tendencies which are the product of our species’ evolutionary history. This, above all, is the central tenet of the biopolitical movement.”<sup>153</sup>

Notably, sociobiology and biopolitics authors do not speak of a “struggle for existence” or “survival of the fittest” anymore. Instead, they commonly refer to “evolutionary tendencies” and individual competition, and they retain the term “natural selection” to explain altruistic behavior. In that sense, they may be portrayed as neo-Darwinians. However, key differences with Darwin’s thinking may be spotted on important issues.

One of them is the evolution of social behavior and moral sense. Darwin — as seen before — thought of moral sense as social instinct. Anticipating issues that have recently arisen about so-called animal rights, Darwin speaks of the moral sense of them. Moral sense is an innate condition to animals as well as to man, says Darwin: “The following proposition seems to me in a high degree probable — namely, that any animal whatever, endowed with well-marked social instincts, would inevitably acquire a moral sense or conscience.”<sup>154</sup> On this basis, he distances himself from John Stuart Mill, who assumed that social character would be somehow acquired:

It is with hesitation that I venture to differ from so profound a thinker [Mill], but it can hardly be disputed that the social feelings are instinctive or innate in the lower animals; and why should they not be so in man?<sup>155</sup>

Indeed, “moral sense is fundamentally identical with the social instincts,” adds Darwin.<sup>156</sup> Darwin believed that any animal endowed with social instinct can develop moral sense, something that evolutionary views would dispute; although he is cautious to indicate that this does not mean that all animals would acquire the same moral sense as ours.<sup>157</sup> He explains the evolutionary trajectory of moral sense departing from social instinct — mostly expressed in feelings of sympathy — to mental perception, then toward the language expressions acting as guiding signs, up to the point that moral sense becomes habit, too.<sup>158</sup>

Another contrast of sociobiology and biopolitics with Darwin is the question of the origins of altruism. Take, for instance, Wilson’s distinction between “hard” and “soft” altruism. There are two aspects implied in Wilson’s argument. One — primarily relevant for biology — is whether species are capable of genuine altruistic behavior, unconditioned to any personal benefit (what Wilson calls “hard-core” altruism). The second is whether individuals will give priority, in all situations, to their altruistic instincts. It is perfectly possible for one “instinctively” altruistic person to perform an altruistic ponderation in view of a situation — for example, when a swimmer must decide whether to save a drowning mother or her child. This is just like the fact that the feeding instinct does not command us to eat the first raw fish we find at the table. There is always the possibility of both moral and utilitarian deliberation, and the results may be truly idiosyncratic. Therefore, authentically motivated altruism does not exclude pondering situations, which cannot be called “irrational” in the derogatory mode employed by utilitarianists.

It appears that Darwin was clearer than Wilson in both cases. First, Darwin supposes genuine social instincts in individuals, on which he bases the possibility of genuine altruistic behavior.<sup>159</sup> Second, Darwin considers that there may be situations of conflicting instincts. He says, for instance, “Hence a struggle may often be observed in animals between different instincts, or between an instinct and some habitual disposition; as when a dog rushes after a hare, is rebuked, pauses, hesitates, pursues again or returns ashamed to his master.”<sup>160</sup> Thus, the disposition for genuine altruistic

conduct does not imply that individuals are essentially “hard,” in Wilson’s sense, and that individuals will be automatically pressed to behave altruistically in all situations. Pondering feelings and reasons is possible in any circumstance. So, the distinction between hard-core and soft-core altruism seems to be imaginary. Indeed, what Wilson calls “soft altruism” is not altruism at all, but pure utilitarian calculation.

As far as Darwin admits a genuine social instinct in animals and man, it conveys a genuine feeling of sympathy, or love, occasionally manifested in altruism and, for sure, in cooperation. Thus, the “paradox of altruism” that perturbs neo-Darwinian interpreters does not affect Darwin. Darwin does not need to derive either altruism, or moral sense, or any social behavior from selfishness, as far as he admits the existence of both individual and social instinct as innate or given in the biological world.

Darwin’s real concern in *Descent of Man*<sup>161</sup> is not how altruist feelings originate, but how are they maintained: how natural selection can secure the survival of the benevolent and preserve the moral sense in conditions of struggle and survival of the fittest. Eventually, he concludes that morality is reinforced within the group by expectations of reciprocity and feelings of praise and blame.<sup>162</sup> That is, social incentives protect social instincts; in this way, the group keeps the balance between individual and social instincts.

In the opposite direction, neo-Darwinian evolutionary theorists assume that neither social behavior nor altruism is genuine or original: both are derived conducts. Altruism is not given based on truly social instinct, but it presumably would arise along the evolutionary road as an expression of an individual’s self-interest, as much as it increases an individual’s inner pleasure or pain or maximizes selfish benefit-cost. The denial of innate capacity for authentic altruism drives evolutionary theorists into the alluded paradox: how can altruism among selfish individuals be possible? This also leads evolutionary sciences into the trap of selfishness. It explains everything. Evolutionary theory champions selfishness in the same way that social Darwinism champions the struggle and survival of the strongest. The methodological difference between the attitudes are nearly imperceptible, and their tough conclusions come very close, but in this aspect, they stand apart from Darwin’s view.

There is another striking difference. According to Darwin, natural selection is the principal but not the sole mechanism in evolution, which also includes

sexual selection, other inherited instincts, and the influence of the environment. This permits Darwin to affirm that our moral sense or conscience is “ultimately a highly complex sentiment, having its first origin in the social instincts, largely guided by the approbation of our fellow-men, ruled by reason, self-interest, and in later times by deep religious feelings, confirmed by instruction and habit, all combined.”<sup>163</sup> Note also that, in contrast to evolutionary views, Darwin speaks of a moral “sentiment,” not of a “rational” calculation.

In addition, while for Darwin, selection occurs among individuals and groups (such as tribes or communities), for most neo-Darwinians, selection occurs only at an individual level, and, since Williams<sup>164</sup> (1966) and Dawkins<sup>165</sup> (1976), they commonly assume that selection takes place at the level of genes.<sup>166</sup> In *Sociobiology*, Wilson defines natural selection as “the process whereby certain genes gain representation in the following generations superior to that of other genes located at the same chromosome positions.”<sup>167</sup> Dawkins furthered this perspective by speaking of the “selfish gene”<sup>168</sup> and locating genes as “replicators” and organisms as the “vehicle” of genes. The perspective of group and kinship is coupled by neo-Darwinians with the concept of “inclusive fitness.” In this way, says David S. Wilson, by using the concept of “inclusive fitness,” evolutionary theory may explain the selection occurring at all other levels, whether of individuals, within and between groups, or in populations, that could be “vehicles” of selection.<sup>169</sup>

Allegedly, the perspective of inclusive fitness is a persuasive way of circumventing the “paradox of altruism,” although at the high price of imaging a fantastic diminutive self, able to manipulate all the instances of the macro-world in his own interest.<sup>170</sup> Darwin certainly ignored Gregor Mendel’s works and could not anticipate genetics; yet, even having that information, it is highly dubious that he would have subscribed to the gene selfishness view, not only because of the aforementioned argument of social instinct and his acceptance of genuine altruism, but also because Darwin was suspect of theories that tried to base social behavior on selfishness.

In *Origin*, Darwin speaks of “individuals” everywhere, but not once of “selfishness.” This word is used in *Descent* with significant restraint. Selfishness “adds” to the power of sympathy, says Darwin:<sup>171</sup>

The social instincts, which must have been acquired by man in a very rude state, and probably

even by his early ape-like progenitors, still give the impulse to many of his best actions; but his actions are largely determined by the expressed wishes and judgment of his fellow-men, and unfortunately still oftener by his own strong, selfish desires.<sup>172</sup>

Selfishness exists but is not the primary feeling; rather, it is deemed by Darwin as the motivation of the bad man:

If he has no such sympathy, and if his desires leading to bad actions are at the time strong, and when recalled are not overmastered by the persistent social instincts, then he is essentially a bad man; and the sole restraining motive left is the fear of punishment, and the conviction that in the long run it would be best for his own selfish interests to regard the good of others rather than his own.<sup>173</sup>

Darwin implies that selfishness is the behavior of the man who has no sympathy, in which case the only ways of restraining it are fear and punishment. Even more, in the concluding remarks of *Descent of Man*, where Darwin deals again with the problem of moral sense, he notes with no hesitation,

Philosophers of the derivative school of morals formerly assumed that the foundation of morality lay in a form of Selfishness; but more recently in the “Greatest Happiness principle.” According to the view given above antes [by Darwin], the moral sense is fundamentally identical with the social instincts; and in the case of the lower animals it would be absurd to speak of these instincts as having been developed from selfishness, or for the happiness of the community. They have, however, certainly been developed for the general good of the community.<sup>174</sup>

Darwin continues,

As the social instincts both of man and the lower animals have no doubt been developed by the same steps, it would be advisable, if found practicable, to use the same definition in both cases, and to take as the test of morality, the general good or welfare of the community, rather than the general happiness.<sup>175</sup>

Darwin explains that in an early period in the history of man, the wishes of the community naturally influenced the conduct of each member, becoming “a most

important secondary guide and object; the social instincts, including sympathy, always serving as the primary impulse and guide.”<sup>176</sup> Thus, he keeps saying, “the reproach of laying the foundation of the most noble part of our nature in the base principle of selfishness is removed, unless indeed the satisfaction which every animal feels when it follows its proper instincts, and the dissatisfaction felt when prevented, be called selfish.”<sup>177</sup> That is, unless we imagine that an altruist man must not have any natural feelings of satisfaction or dissatisfaction when acting altruistically, since feelings are always selfish or would be only allowed to the selfish one.

Darwin’s interest in differentiating himself from the “derivative school” also should not be underestimated. In fact, attempts at deriving morality from selfishness do not correspond to Darwin, but rather predate him, and were characteristically proposed by utilitarian thinkers, under the eminent inspiration of Thomas Hobbes, Bernard Mandeville, and James Mill.<sup>178</sup> From old utilitarianism comes the exclusive idea that “any sacrifice of our pleasure without the prospect of an equivalent reward, is a simple act of madness, and unworthy of a rational being,” not from Darwin.<sup>179</sup> It can be argued that in the confrontation between such individualistic utilitarianism and the influence of the Kantian theory of morality, Darwin felt closer to the second. In chapter 3 of *Descent of Man*, Darwin writes,

The moral sense perhaps affords the best and highest distinction between man and the lower animals; but I need not say anything on this head, as I have so lately endeavoured to shew that the social instincts, — the prime principle of man’s moral constitution — with the aid of active intellectual powers and the effects of habit, naturally lead to the golden rule: “As ye would that men should “do to you, do ye to them likewise”; and this lies at the foundation of morality.<sup>180</sup>

Clearly, Darwin affirms two key postulates: that the moral sense is the highest distinction between men and inferior animals, and that the social instincts lead to the golden rule: do to others what you want them to do with you. He continues,

I FULLY subscribe [Darwin’s caps] to the judgment of those writers who maintain that of all the differences between man and the lower animals, the moral sense or conscience is by far the most important . . . It is the most noble of all the attributes of man, leading him without a moment’s hesitation to risk his life for that of a fellow-creature;

or after due deliberation, impelled simply by the deep feeling of right or duty, to sacrifice it in some great cause. Immanuel Kant exclaims, "Duty!"<sup>181</sup>

In addition to corroborating the preeminent position that he gives to moral sense, in this statement, Darwin suggests that his reasoning agrees with the Kantian "duty." Dispelling any lingering doubts, he categorically concludes,

The imperious word *ought* [meaning the Kantian "ought"] seems merely to imply the consciousness of the existence of a persistent instinct, either innate or partly acquired, serving him as a guide, though liable to be disobeyed.<sup>182</sup>

In view of this, we might conclude that evolutionary sociobiology and biopolitics transit far from Darwin's assumptions on moral sense. It appears that, from the Darwinian model of individual's selection, neo-Darwinians jump too readily into self-interest; from self-interest into individualism; and from individualism into radical "selfishness," concepts that are not necessarily concocted in Darwin's works and should not be confounded at all within a realistic theory of human behavior. "Individual" is just the condition of physical existence of beings — otherwise, there will be just one being — while "selfishness" is an extremely individualistic psychological attitude. In W. E. H. Lecky's words, selfishness is the "condemnatory" phrase that applies to those "fed by the pains and privations of the fellow-beings."<sup>183</sup> Between the two conditions, there is a range of innate attitudes that need to be considered.

For these reasons, it is not strange to find in such individualistic visions a renewed version of socio-Darwinian biodeterminism. Among neo-Darwinians, the determinism might be even more stringent as far as they focus not so much on individuals — who, after all, have a certain freedom to decide — but on unattainable genes, which presumably do not provide behavioral options to the agents. They will be "selfish" by definition. While social Darwinism exalts competition among individuals and races, evolutionary theories exalt competition among selfish genes. The epistemological reductionism is so comparable and so evident that we might be tempted to agree with authors who describe evolutionary gene-based theories as "ultradarwinism,"<sup>184</sup> were it not because it is very unsafe to attribute to Darwin such extreme views.

As I said before, Wilson and Lumsden moderated biological determinism, speaking in 1981 of "gene-culture

co-evolution": "culture is generated and shaped by biological imperatives while biological traits are simultaneously altered by genetic evolution in response to cultural innovation."<sup>185</sup> More recently, in *The Social Conquest of Earth*, Wilson introduced the concept of "eussocial evolution," which emphasizes the role of "group selection."<sup>186</sup> In this book, Wilson explains that human nature is not in genes, but rather, genes "prescribe the developmental rules of the brain, sensory system, and behavior that produce human nature."<sup>187</sup> This vision is certainly more comprehensive, although the idea that genes are prior to individuals and prior to society might be reasonably contended.

It is time to briefly consider the politics connected to sociobiology and biopolitics. None of the authors discussed here derive any explicit political conclusion from their theories, either conservative or leftist. However, just as it happened with socio-Darwinism, neo-Darwinians cannot avoid their theories being conflated in the political discourse, to the extent that they provide some biased arguments.

Notably, from the beginning, sociobiology was suspected of being part of the recurrent theories that "consistently tend to provide a genetic justification of the *status quo* and of existing privileges for certain groups according to class, race or sex."<sup>188</sup> For important critics, it was obvious that socio-Darwinians were inclined to naturalize "more frequent" competition, with the "most entrepreneurial" actors usually gaining "a disproportionate share of the rewards" and displacing the least successful.<sup>189</sup> Sociobiology was also likely to stiffen gender roles in favor of men, who were destined to occupy leadership positions in politics and public culture.<sup>190</sup>

Concordantly, authors such as John McGinnis are convinced that the scientific evidence of contemporary evolutionary biology makes a case for conservatism — that is, politics based on self-interest, natural inequality, the family unit, and private property.<sup>191</sup> John Caiazza has also suggested that "the rise of social biology has seriously undercut the rational case for a progressive and egalitarian social agenda which has forced the left to rely almost exclusively on cultural explanations."<sup>192</sup>

Such opinions should not be considered exaggerated. Sociobiology and biopolitics have had the effect of "demoralizing traditional sources of value," supporting a more nonegalitarian view of society.<sup>193</sup> The doctrine of selfishness, expediently named "rational choice" in economics, has served to justify policies such as an unrestricted "free market" (meaning exacerbated unruled

competition), deregulation of financial institutions, generalized privatization, the dismantling of welfare policies, disapproval of “populism,” and renewed attack on states’ social functions.

These certainly are the policies used in campaigns across the world since the 1970s, conforming to the so-called neoliberal agenda. The similarities between the neoliberal agenda and socio-Darwinian politics, particularly Spencer’s *laissez-faire*, cannot be underestimated: no social state intervention, praise the richest for being “efficient,” blame the poor for being losers, and let them go down. In short, support generalized competition and competitive politics to let the “natural selection” of the market accomplish its natural mission of evolution.

Elitism and insensitivity to inequalities — that is essentially what equates the neoliberal agenda with the socio-Darwinian politics of selection. These similarities remind us of the danger of transferring concepts from biology to politics, as was the case between the nineteenth and the early twentieth century, both in Europe and United States.<sup>194</sup> In that period, a combination of biological determinism, social evolutionism, and medical scientism produced the horrors of racism, eugenics, concurring wars, and genocide. These days, reductionist views in evolutionary biology, sociobiology, and the economic theory of selfishness appear to be feeding the extreme inequalities that the most recent annual reports give notice of across the world.<sup>195</sup>

## 7. Darwin, Darwinists, and missing points

The review to this point confirms that Naomi Beck was right when she wrote that “under the auspices of the theory of evolution the most disparate conceptions of progress and diametrically opposed political positions were heralded.”<sup>196</sup> Darwin’s theory of natural selection supports the most diverse, opposed, even bizarre political conclusions, whether conservative, leftist, anarchist, social democratic, socialist, communitarian, conservative, neoliberal, or authoritarian. These variants are latent in Darwin’s ideas or may be compatible with some of their main assumptions.

At first, this indicates that if it is valid to speak of “Darwinists,” “socio-Darwinists,” and “neo-Darwinists,” referring to the authors who invoke Darwin’s name to justify their political theories, it is harder to speak of “Darwinism” because of the difficulty of specifying the core of Darwin’s politics. It is not easy to say which reading better matches Darwin’s texts, even less his inner political beliefs. One can feel scandalized by the

horror of eugenics and racist policies boosted during the first half of the twentieth century, but the fact is that social Darwinists sponsored such policies, which are somehow compatible with the main message of natural selection theory. Darwin surely would have been shocked by such consequences, but he would have had little or nothing to argue against them in theoretical terms, as far as his theory does not provide any solid argument to avoid such derivations.

It is just unfortunate that, on balance, the most outrageous interpretations of natural selection theory have been prevalent in conventional political discourse, installing an image of Darwinism mostly identified with selfishness, racism, unrestrained competition, ostentation of power, indolence for the poor, fierce struggle, and, ultimately, a love of war. This was the culture of “Darwinism” particularly extended in the first half of the twentieth century, but assuredly it has not yet disappeared. Arguably, it still pervades some political contexts and discourses, in popular media as well as in academic, business, and governing circles.

A touch of such “Darwinism” can be perceived, for instance, behind important social theories, notably in economics. It is known that not a few economic concepts have been developed analogizing Darwin’s most popular biological ideas. “Free markets” become the natural order of selection; the struggle for existence turns into competition and “competitiveness”; the survival of the fittest resembles the survival of the most “efficient”; and economic “development” — for many years central to government and international agencies’ messages — models the path of evolution.

Analogies between markets and natural selection may certainly be right or wrong, but what the persistence of Darwin’s language in social and political contexts reveals is that the classic debate of Spencer, Wallace, Huxley, Kropotkin, and others on the politics of natural selection has not been completely superseded. Some sort of socio-Darwinism remains barely camouflaged under new categories and languages, even though the mainstream of political theory has shown occasional discomfort with any biological determinism. These views may be found not only among evolutionary biologists and economists but also among writers, as shown, for instance, by Ayn Rand’s opinion in 1982:

The new “theory of justice” [referring to John Rawls’s theory] demands that men counteract the “injustice” of nature by instituting the most obscenely unthinkable injustice among men: deprive

“those favored by nature” (i.e., the talented, the intelligent, the creative) of the right to the rewards they produce (i.e., the right to life) — and grant to the incompetent, the stupid, the slothful a right to the effortless enjoyment of the rewards they could not produce, could not imagine, and would not know what to do with.<sup>197</sup>

In Rand's view, nature consists of individuals with different natural endowments, some of them with better rational selfishness who meet the criterion of selection that politics must promote, not justice. The consequence of this and other views — unpolished expression of the worst of Darwin's interpretations — was already predicted by Henry George in the nineteenth century:

The practical effect of this theory is a sort of hopeful fatalism: progress is the result of slow, steady, remorseless forces. War, slavery, tyranny, superstition, famine, and poverty are the impelling causes that drive humans on. They work by eliminating poor types and extending the higher. Advances are fixed by hereditary transmission. The current individual is the result of changes perpetuated.<sup>198</sup>

This is certainly common of all Darwinians. They assume that selection is law-alike and that evolution is somewhat *inevitable*. In this aspect, Spencerism, socio-Darwinism, and evolutionary neo-Darwinism become indistinguishable. Then “evolution” became the word of the last century. Scientists or politicians, says Stack, were driven to reason according to this unavoidable syllogism: “if evolution was the rule of nature, and man was part of nature, then evolution must be the rule of human society.”<sup>199</sup> Thinkers develop the conviction that biology, society, culture, and politics are inextricably governed by evolutionary tendencies.

To be sure, such deterministic appeal to biology by modern thinkers seems to be truly enigmatic. Throughout the history of Western political thought, there has been a reverential, inspirational, and rhetorical tendency to use nature in support of political visions, as in the theories of “state of nature,” for instance. Yet in modern times, appeals to nature become curiously more rigid.

Sutter compares socio-Darwinians' attitude with that of the Founders and the Progressives in the United States, finding illustrative differences. Those of the eighteenth century were interested in nature to find similarities by society and natural law, “but they stopped short of saying that men could evolve like the natural world

could. They never lost sight of the fact that human societies were different than the natural world.”<sup>200</sup> The Progressives and social Darwinists “did not make this distinction” says Sutter.<sup>201</sup> The latter may also be true for current evolutionary theories, insofar as they claim that the history of nature, society, culture, and politics can be exhausted by the models of biology.

No doubt human life and social institutions are not infinitely plastic.<sup>202</sup> There are biological constants. Yet we need to consider that not all organic constants weigh in the same way in all individuals, in all populations, in all circumstances, in all territories, in all histories, in all cultures, and for all men and women. Moreover, not all biological constraints can be reduced to individualism and biological selfishness. More importantly, biological traits are not the sole factors accounting for social existence and so-called evolution, as Darwin already asserted.

This brings us to a second consequence arising from the previous revision. In contrast to socio-Darwinians but closer to Wallace, Huxley, Ritchie, and Kropotkin's positions, Darwin — as we saw before — recognizes the existence of social instincts and moral propensities in the biological conditions of humans and animals. This means that he does not ignore the role of consciousness as a complex of instincts, feelings, and intellect, present particularly in the behavior of human societies' members. Human consciousness is undoubtedly engaged in evolution. Therefore, there must be some essential differences between social evolution and purely natural evolution.

The recognition of consciousness in Darwin's view becomes even more evident to the extent that he recognizes the role of *artificial selection*, made by humans in accordance to their desires, thoughts, and will. Obviously, without human consciousness, artificial selection would not be possible. At this point, the concept of *artificial selection* acquires preponderance. We could say that the recognition of the role of consciousness leads us to accept that the evolution of societies depends more on *artificial selection* than on *natural selection*. We enter an era in which crude natural selection does not govern or is possibly being displaced.

## 8. From natural to artificial selection

Almost all interpretations of Darwin underestimate the problem of autonomy of consciousness in so-called evolution, particularly those “hard” versions of social Darwinism and neo-Darwinism. In the same way,

the problem of artificial selection is missed. Yet the concept of *artificial selection* is central in Darwin's reasoning.

We know that Darwin speaks of "natural selection" just in a "metaphorical" sense, in comparison with "artificial selection" as practiced by breeders at that time. Selecting certainly implies consciousness. Saying that nature "selects" obviously contains one strong allegorical side. It may be accepted that breeders "select," in the sense that they look for some expected variety (even if they do not know what exactly will be the outcome), but it makes little sense to say that nature truly "selects," unless we assume some natural intelligence or a teleological purpose leading evolution toward a predefined destination. The expression "natural selection" fails to keep this subtle distinction between human purposefulness and unconscious natural circumstances. This restraint has been recently pointed out by Thierry Hoquet, who says that "[t]he great fault of the term 'natural selection' is that it tends to personify nature: one should never forget that it is a metaphorical expression."<sup>203</sup>

To be precise, Darwin was already alerted to this difficulty by Spencer, who noted that "selection supposes a selector."<sup>204</sup> The perils of using man-based metaphors were also anticipated by Wallace in 1867: "Mr. Darwin has laid himself open to much misconception, and has given to his opponents a powerful weapon against himself, by his continual use of metaphor [such as "contrivance"] in describing the wonderful co-adaptations of organic beings."<sup>205</sup> Darwin's metaphor entails the danger of wrongful teleological inferences, a consequence that could not be avoided in the past, as evidenced by the widespread popular belief that nature really "selects" and promotes some sort of hierarchical order, furthermore acting for the sake of the "fittest," as socio-Darwinians assumed.

The metaphor threatens to lead Darwin in wrong directions, but the fact that he uses it shows the peculiar meaning and importance he attributes to the social. As a result of this — as noted earlier — a latent incompatibility between Darwin's theory of the evolution of moral sense and the politics of selection by struggle may be perceived. This conflict was not satisfactorily solved by Darwin, although we might think of it as only formal, as much as in the real world, the coexistence of opposing instincts is always possible. The flaw affects particularly neo-Darwinians, who believe the conflict can be solved by reducing moral behavior to exclusive selfish, nonmoral, biological premises.

The neo-Darwinist version of natural selection theory displays an evident difficulty of accounting for specifically social facts. It misses the originality of social in which concurs not only biology, but also purposes and human designed social rules. Thus, neo Darwinists may not expect that society or politics display an autonomous behavior, neither rise emergent properties nor cause unintended consequences; but the facts of real world fully contradict such assumptions.

Obviously, human society is not passive at all. It is having an enormous impact on the world, species included, so we cannot think that it has no implications for expected evolution. If we think of the massive biodiversity extinction caused by human developments, of the increase of transgenic industry, and even of the extended poverty of human groups eventually condemned to disappear, we might agree that there is more than "natural selection" present in the contemporary world, or that the "selection" is not "natural" at all. This is where the concept that inspired Darwin's very notion of natural selection might render more valuable guidance: selection is becoming increasingly *artificial*.

Socio-Darwinians and neo-Darwinians overlook this concept. None of them speak of the possible exacerbation and disturbances that "artificial selection" might be provoking on natural tendencies, although it is at least a theoretically possible course.

In general, this criticism may be extended to the current state of the conventional theory of natural selection, in which artificial selection has no place. For Darwin, there was more than natural selection in nature. He also spoke of sexual selection, transmutation, Lamarckian use and disuse, habits, other instincts, and the influence of environment, apart from artificial selection. In concordance, in 1988, Richard C. Lewontin prudently noted that "all evolution, perhaps even most, does not occur by natural selection."<sup>206</sup> Since then, the list of implied factors has significantly increased.<sup>207,208,209</sup> Furthermore, recent epigenetic studies<sup>210</sup> indirectly grant more space to the role of artificial selection. According to Maurizio Meloni, after the completion of the Human Genome Project, it became evident that

[O]nly a very small fraction of the genome (slightly more than 1 per cent in fact) is "devoted to protein-coding sequences" — the orthodox definition of gene — whereas the large part of the genome is employed in regulation, that is, in responding to environmental signals, from the cell, the organism and the environment around it.<sup>211</sup>

This indicates that the environment plays a more active role than was traditionally assumed by evolutionary studies.<sup>212</sup> Lamarck's acquired characters reappear on the horizon. The role of human contrivances and "artificial selection," acting through the environment that man modifies, becomes more evident and needs to be reassessed. Wallace was already aware of this turning point when he said,

Man has not only escaped "natural selection" himself, but he is actually able to take away some of that power from nature which before his appearance she universally exercised. We can anticipate the time when the earth will produce only cultivated plants and domestic animals; when man's selection shall have supplanted "natural selection;" and when the ocean will be the only domain in which that power can be exerted, which for countless cycles of ages ruled supreme over all the earth.<sup>213</sup>

Certainly, society, culture, and politics are extraordinarily diverse and cannot be explained by a simple one-to-one connection based on biological traits. This is not only a cautionary epistemological principle, but a fact abundantly confirmed from different experiences, whether scientific, moral, religious, or based in common sense. Society is more liable to be appreciated as a *human construction*, in which politics is performed by human liberty, human intelligence, human-designed institutions, human will, and human decisions. It depends upon human contrivances, and it is ultimately oriented toward human ends, whether strategic, anthropocentric, religious, ecological, or any other. Hence, if there is any selection occurring in politics, ultimately affecting the natural world, this might be properly described as "artificial."

Darwin's concept warns us to be aware not only of what humans do with plants and animals but also what they do among humans, aspects both already considered by him. In *Origin*, he uses the concept of "artificial selection" mainly to allude to the selection of species that "feeble man [meaning breeders]" practice, and plants that are artificially fertilized.<sup>214</sup> In *Descent of Man*, he indirectly refers to human selection, speaking of the building of asylums for the imbecile, the Poor Laws, vaccinations, and other artificial means of presumably preserving the weak. Darwin also deals with sexual selection, which may be another case of artificial selection, since this is performed by conscious acts, sometimes established by cultural traditions.

We might say, then, that in Darwin's framework, "artificial selection" may be distinguished in two senses: *direct selection*, as in the breeder's actions, and *indirect selection*, as in altering the environment in which species evolve. This is also the distinction made by John R. Commons, who says that "[d]irect selection is highly artificial, but it is only negative. It consists in segregating the degenerates to prevent propagation"; indirect selection "also is artificial, but in a less mechanical way. It consists in so adjusting the political, industrial, and social environment as to affect personality, either to suppress or develop it."<sup>215</sup>

Commons is one of the few authors who, in the context of socio-Darwinian discussions, has paid attention to the concept of "artificial selection." Like Spencer and Wallace, Commons considers the term "natural selection" a "misnomer," since "selection" properly involves intention and belongs to human reason. Selection by man, he says, "we call artificial," and this not only operates with animals but also with man by means of social institutions.<sup>216</sup> Commons also speaks of "social selection which would be "partly natural and partly artificial."<sup>217</sup> Clearly, for him, institutions are artificial, as are corporations, and therefore he prefers to speak of "institutional economics" rather than of "natural economics."

It is surprising that — apart from Commons and, perhaps, Lester Ward — the notion of "artificial selection" has been dismissed by all Darwin interpreters, disregarding the overwhelming incidence of human interventions upon the entire world.<sup>218</sup> Although, to be sure, eugenicists were conscious that eugenics, either positive or negative, meant "artificial selection". It was not infrequent to speak of "artificial barriers" presumably deterring natural selection, as Bernard Shaw used to say speaking of "artificial social hierarchies of social distinction, wealth and manner."<sup>219</sup> It is just paradoxical. Despite praising natural selection, eugenicists and socio-Darwinians enthusiastically advocated for political — that is, *artificial* — measures favoring competition and the selection of the "fittest," such as segregation of the feeble, the wretched, and criminals and the fostering of abortion, sterilization, and population control policies.

Nor is it uncommon for neo-Darwinians to share the conviction that humans are the main evolutionary force, as in the expression of Gregory Stock, who believes that these days humankind can "redesign humans," "allowing us to seize control of our evolutionary future."<sup>220</sup> They are ready to support the most recent



DNA manipulation techniques, the growth of transgenic industry, and fertility markets but surprisingly remain stuck on the doctrine of “natural” selection. Regardless of whether these practices must be approved, they certainly portray some sort of *artificial* measures. They are guided by human criteria and oriented toward humans’ purposes. This reveals that, in the name of “natural” selection, socio-Darwinian and neo-Darwinian discourses produce the effect of disguising “artificial,” conspicuously anthropocentric maneuvers, as “natural.”

More importantly, such measures are mainly promoted by political means, within political processes. Politics undoubtedly selects people, selects means, and selects goods, and it does so by artificially designed mechanisms. The selection of representatives, the framing of institutions, the building of leadership, the choice of officials and the selection of bureaucracy, the adoption of policies, and the assignment of taxes and goods are clearly not a matter of “natural selection” but of formed preferences, education, social learning, interests, political proselytism, discussion, agreement, voting, political decisions, and enacted norms.

First and foremost, the adoption of constitutions, laws, and policies ruling upon societies presupposes the choosing of rational principles, ends, goals, and norms, which undeniably impact the assignment of goods and resources, as well as the distribution of wealth, social merits, and political hierarchies. Those institutions also have an impact on the environment and biodiversity.

In this way, human beings are remodeling life on the planet, and we should expect that this job is being done well, although numerous signs indicate that the established models of human politics have largely exceeded biology, distorting patterns of adaptation, surpassing habitat’s resilience, and causing a generalized stress among beings. The dismissal of the eminent artificial character of political contrivances and its products entails realizing that human acts may not necessarily be adaptive in ecological terms. They may be contrarily producing ecological failures of unforeseeable long-term consequence. Some of them are implied by mismatch theory, which postulates that traits of species that evolved in one environment may have negative consequences in another that has been substantially changed by humans. “The turtles’ instinct works well in a natural environment, without artificial light. In a man-made environment, it is often fatal,” says Andrew Price.<sup>221</sup>

Such issues might be better appreciated through Darwin’s lens of “artificial selection,” a notion entailing

at least two advantages over “natural selection.” On one side, it helps better to elude the dangers of a hopeless biological determinism. On the other, in terms of theory of knowledge, it prevents a relapse into a basic version of positivism that denies the relevance of the subject’s inventiveness. This concept is more apt to describe the specific, plastic, and creative nature of humans interacting with other species, without having to ignore the biology from which we come.

Certainly, humans have evolved biologically since oldest times with all species, but it is somehow mystical to assume that social achievements are due to some invisible forces other than the effort of human intelligence and willingness. Human experience is driven by instincts or passions, but also by reason; by hunger, sex, fear, and wicked passions, but also by love, sympathy, morality, and solidarity. In this perspective, history appears to be a strenuous experience for managing human freedom, restraining bad impulses and expanding good ones — using consciousness for designing better levels of comfort, peace, and safety, rather than it being dictated by hidden forces either maliciously or generously manipulating people’s evolutionary destiny.

## 9. By way of conclusion

Darwin’s theory obviously belongs to his time, and it must be read in that context; however, as with any influential scientific theory, it is always exposed to being revised in its validity, ambivalences, and inaccuracies by each generation, considering updated facts and new ideas. The foregoing revision has tried to move in such direction.

A first emerging conclusion is that there is certainly a politics of selection in Darwin’s writings, tendentiously loyal to the theory of natural selection by struggle for existence; yet this tendency is latent, ambivalent, and not conclusive, to the extent that Darwin also recognized social instincts and moral propensities in individuals and human societies. Darwin’s theory pulls in two different directions. This explains the interpretative divergences among his many followers.

Social instincts and moral propensities were plainly ignored by the mainstream of Darwinian interpreters, lastly named socio-Darwinians, who developed their politics of selection by exacerbating Darwin’s ideas on individuals’ natural struggle for existence. On the other side, authors such as Wallace, Huxley, and Kropotkin stick more to the role of social instincts and morality, although their positions were usually dismissed.

Strictly speaking, we should say that Darwin's exposition is ambivalent but not contradictory, or the contradiction is only formal, as soon as it is recognized that, in the real world, the coexistence of different, even opposite, instincts is always possible. Rather, this demonstrates the realism of Darwin's research, trying to be faithful to the differences he found in real world, which tendentially distances him from any biological determinism. Neither the natural world nor society are bound to depend on a single principle.

The ambivalence also confirms that, for Darwin, consciousness plays a central role in human societies, implied in his recognition of social instincts, moral feelings, and intellectual awareness. Consciousness allows to distinguish the cardinal differences existing between natural evolution and social — cultural — evolution. Consciousness is also involved in Darwin's concept of *artificial selection*, which describes the human capacity to intervene in spontaneous processes in nature. Once the faculties of consciousness are recognized, it is possible to observe that natural selection does not explain everything in the world.

These days, *artificial selection* is directly happening not only in breeders' labor on plants and animals, but also in large-scale agriculture and livestock farming projects, and obviously by the increasing transgenic industry, fertility, organ, and others life markets. In addition, the environment that in Darwin's view also participates in selection is being radically changed by the unstoppable development of human apparatuses and institutions, mostly established through political arrangements. The dominant position of human artifices over the entire web of beings of the planet cannot be underestimated.

In such conditions, it is illusory to believe that some natural selection is truly leading our evolutionary future. If selection is occurring in society and in the natural world, it seems to be not natural but mainly promoted by human artifices. Of course, this does not mean that human developments should be suspended or condemned, but rather that our actions as a species should be considered in terms of what we, humans, are doing, and without hastily charging our actions to a presumably biological tendency.

This makes natural selection theory an unsatisfactory model for thinking about politics, whether in descriptive or normative terms. Epigenetic criticisms and mismatch theory should also be considered. If we want to explain current facts in the planet in Darwin's language, probably the concept of *artificial selection* better serves,

although it may also be called *cultural evolution*. From this perspective, some important points, in relation to the links between biology and politics, need to be highlighted.

First, we need to realize something rather obvious: political processes are mostly human designed. They are arranged by human interest; they correspond to human wishes, human aspirations, human strategies, and, sometimes, human consensus. Men and women set the rules of the social game, and therefore they determine the way in which selection, if any, takes place. This interpretation also suggests that political design is susceptible to improvement. There is always a chance for trying different options.

Second, as important as figuring out how biology affects politics is paying attention to the way in which politics affects biology, possibly oppressing natural tendencies, or exacerbating destructive factors, causing a generalized stress within the biological world. After all, as Paul Erlich said in 2001, "There is no question that *Homo sapiens*, in addition to causing the sixth major spasm of biotic extinction (1–4), is also altering the course of evolution for millions of years in the future."<sup>222</sup>

Third, the notion of *artificial selection* makes it possible to criticize the eventual ideological bias of some explanations defended in the name of nature. Someone may think that appealing to naturalistic explanations is only an indication of our biological dependence on nature, in which case the theories of biopolitics would have to be consistently confirmed; but it could also be an indication of our social-economic preferences conveniently disguised as "natural," in which case Marx's theory of ideological alienation would be required.

Choosing a political viewpoint is certainly a challenge to our intelligence, to our freedom, and to our material interest. It is obviously a decision-making process that can be based on moral, economic, cultural, technological, or other considerations. First and foremost, it is an "election." It is a human election to be precise, and "political election" to put this under real circumstances.

It does not deny the influence of biology on human behavior. The *artificial selection* viewpoint does not imply that biology ceases to be relevant to politics. Nature remains a basic and indispensable argument, even a restriction; but it seems disproportionate to suppose that biology invincibly determines the politics adopted by humans. There must be strong reasons to postulate that politics should just follow biological tendencies.

## References

1. P. J. Hale, *Political Descent: Malthus, Mutualism, and the Politics of Evolution in Victorian England* (Chicago: University of Chicago Press, 2014).
2. P. Crook, *Darwinism, War, and History: The Debate over the Biology of War from "Origin of Species" to the First World War* (New York: Cambridge University Press, 1994).
3. R. Weikart, *From Darwin to Hitler: Evolutionary Ethics, Eugenics, and Racism in Germany* (New York: Palgrave Macmillan, 2004).
4. T. Hoquet, "The evolution of the origin (1859–1872)," in *The Cambridge Encyclopedia of Darwin and Evolutionary Thought*, M. Ruse, ed. (New York: Cambridge University Press, 2013), p. 160.
5. Hale, p. 352.
6. P. J. Bowler, "The changing meaning of 'evolution'," *Journal of the History of Ideas*, 1975, 36(1): 95–114, at p. 102.
7. R. Chambers, *Vestiges of the Natural History of Creation* (London: Churchill, 1884).
8. Bowler, p. 110.
9. Bowler, p. 104.
10. Comment by R. L. Carneiro, in D. Freeman *et al.*, "The Evolutionary Theories of Charles Darwin and Herbert Spencer [and Comments and Replies]," *Current Anthropology*, 1974, 15(3): 211–237, at p. 223.
11. Michael Ruse, ed., *The Cambridge Encyclopedia of Darwin and Evolutionary Thought* (New York: Cambridge University Press, 2013), introduction.
12. T. Hoquet, p. 162.
13. J. A. Rogers, "Darwinism and social Darwinism," *Journal of the History of Ideas*, 1972, 33(2): 265–280, at p. 273.
14. Rogers.
15. R. Weikart, "A recently discovered Darwin letter on social Darwinism," *Isis: A Journal of the History of Science*, 1995, 86(4): 609–611.
16. C. Darwin, *The Descent of Man and Selection in Relation to Sex* (Princeton, NJ: Princeton University Press, [1871], 1981), pp. 167, 168.
17. S. S. Schweber, "Darwin and the political economists: Divergence of character," *Journal of the History of Biology*, 1980, 13(2): 195–289, at p. 197.
18. N. Papavero and C. F. Moraes dos Santos, "Darwinian evolutionism? Contributions of Alfred Russel Wallace to the theory of evolution," *Revista Brasileira de História*, 2014, 34(67), at p. 16.
19. J. Fodor and Massimo Piattelli-Palmarini, "What Darwin got wrong," April 7–8, 2012, p. 6, <http://www.math.chalmers.se/~ulfp/Review/darwinwrong.pdf>, accessed January 30, 2019.
20. Comment by D. Freeman, in Freeman *et al.*, p. 218.
21. Darwin, [1871] 1981, p. 390.
22. Hale, p. 41.
23. C. Darwin, quoted in Ruse, p. 15.
24. C. Darwin, *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life* (New York: D. Appleton and Company, 1861, p. 92.
25. Darwin, [1871] 1981, pp. 152–153.
26. Darwin, [1871] 1981, p. 180.
27. Darwin, [1871] 1981, p. 403.
28. Darwin, [1871] 1981, pp. 136, 154.
29. Darwin, [1871] 1981, p. 403.
30. Hale, p. 139.
31. D. Stack, *The First Darwinian Left: Socialism and Darwinism 1859–1914* (Cheltenham, UK: New Clarion Press, 2003), p. 86.
32. Crook, 1994, p. 24.
33. N. Beck, "Social Darwinism," in *The Cambridge Encyclopedia of Darwin and Evolutionary Thought*, M. Ruse, ed. (New York: Cambridge University Press, 2013), p. 200.
34. Hale, p. 115.
35. D. Hodgson, "Piers J. Hale, political descent: Malthus, Mutualism, and the politics of evolution in Victorian England," *Population and Development Review*, 2015, 41(4): 721–724, at p. 722.
36. Hale, p. 149.
37. Hale, p. 15.
38. T. H. Huxley, quoted in Hale, p. 49.
39. Hale, p. 66.
40. A. R. Wallace, *Contributions to the Theory of Natural Selection* (New York: Macmillan and Co., 1870), pp. 265–267.

## Darwin's politics of selection

41. Hale, p. 43.
42. Hale, p. 126.
43. W. Bagehot, *Physics and Politics* (Kitchener, Ontario, Canada: Batoche Books Limited, 2001), p. 120.
44. Hale, p. 73.
45. T. Gondermann, "Progression and retrogression: Herbert Spencer's explanations of social inequality," *History of the Human Sciences*, 2007, 20(3): 21–40, at p. 28.
46. H. Spencer, *Social Statics: or, The Conditions Essential to Happiness Specified, and the First of Them Developed* (London: John Chapman, 1851), p. 268.
47. Spencer, p. 280.
48. Spencer, p. 200.
49. Spencer, p. 196.
50. Spencer, p. 199.
51. Hale, p. 76.
52. Gondermann, p. 24.
53. Gondermann, p. 28.
54. Gondermann, p. 22.
55. Gondermann.
56. Gondermann, p. 25.
57. Gondermann, p. 25.
58. H. Spencer, quoted in Gondermann, p. 26.
59. Gondermann, p. 27.
60. Gondermann, p. 29.
61. H. Spencer, quoted in Gondermann, p. 29.
62. A. R. Wallace, "Human Selection," 1890, Alfred Russel Wallace Classic Writings, Paper 5, [http://digitalcommons.wku.edu/dlps\\_fac\\_arw/5](http://digitalcommons.wku.edu/dlps_fac_arw/5), accessed February 4, 2019.
63. Wallace.
64. H. M. Stanley, quoted in Wallace.
65. F. Galton, *Inquiries into Human Faculty and Its Development* (New York: Macmillan, 1883), electronic ed. published by Galton Archives, 2004, <http://galton.org/books/human-faculty/text/human-faculty.pdf>, p. 198, accessed March 9, 2019.
66. Galton, [1883] 2004, p. 220.
67. F. Galton, *Hereditary Genius*, 2nd ed. (New York: Macmillan, 1892), p. 345., [galton.org/books/hereditary-genius/text/pdf/galton-1869-genius-v3.pdf](http://galton.org/books/hereditary-genius/text/pdf/galton-1869-genius-v3.pdf), accessed February 4, 2019.
68. N. R. Holt, "Darwinism: Evolution or revolution?," *Magazine of History*, 1989, 4(2): 30–33, at p. 33.
69. A. de Gobineau, *The Inequality of Human Races*, trans. Adrian Collins (London: Heinemann, 1915).
70. Hale, p. 76.
71. Hale, p. 312.
72. Hale, p. 330.
73. Holt, p. 32.
74. E. Haeckel, *The Riddle of the Universe*, trans. Joseph McCabe (London: Watts & Co, 1939), p. 4.
75. Haeckel, quoted by Anton Pannekoek, *Marxism And Darwinism* (Chicago: Charles H. Kerr & Company, 1912), pp. 20–30.
76. R. Hofstadter, *Social Darwinism in American Thought* (Boston: Beacon Press, 1992).
77. R. C. Bannister, *Social Darwinism: Science and Myth in Anglo-American Social Thought* (Philadelphia: Temple University Press, 1979).
78. E. Sutter, "The great generalization: The theory of evolution in American political and social thought after the Civil War," Ashbrook Statesmanship Thesis, Ohio State University, 2013, <http://ashbrook.org/wp-content/uploads/2013/06/Sutter-Printable.pdf>, accessed January 30, 2019.
79. Sutter, p. 3.
80. Sutter.
81. Sutter, p. 13.
82. W. Sumner, quoted in Sutter, p. 15.
83. Sutter, p. 15.
84. J. Barret, quoted in Sutter, p. 21.
85. C. Cobb, foreword to H. George, *Progress and Poverty* (New York: Robert Schalkenbach Foundation, 2006), p. ix.
86. Comment by M. Harris, in Freeman *et al.*, p. 226.
87. Wallace, 1890.
88. Wallace, 1870, p. 330.
89. Wallace, 1870, p. 330.

90. J. van Wyhe, "Alfred Russel Wallace," in *The Cambridge Encyclopedia of Darwin and Evolutionary Thought*, M. Ruse, ed. (New York: Cambridge University Press, 2013), p. 167.
91. Wallace, 1870, pp. 318–319.
92. Wallace, 1870, p. 312.
93. Wallace, 1870, p. 319.
94. D. Stack, "The first Darwinian left: Radical and socialist responses to Darwin, 1859–1914," *History of Political Thought*, 2000, 21(4): 682–710, at p. 691.
95. Wallace, 1870, pp. 327–328.
96. Stack, 2000, p. 693.
97. Wallace, 1870, p. 329.
98. Stack, 2000, p. 693.
99. Hale, p. 69.
100. Wallace, 1890.
101. Wallace, 1890.
102. Wallace, 1890.
103. N. Beck, "Social Darwinism," Working Paper 2012-15, Papers on Economics and Evolution, Philipps University Marburg, Department of Geography, 2012, p. 198, <http://hdl.handle.net/10419/88263>, accessed February 4, 2019.
104. J. Marchant, *Birth-Rate and Empire* (London: Williams and Norgate, 1917), p. 101.
105. T. H. Huxley, "Natural Rights and Political Rights," 1890, <http://aleph0.clarku.edu/huxley/CE1/NatR.html>, accessed February 4, 2019.
106. T. H. Huxley, "The Struggle for Existence in Human Society," 1888, <http://aleph0.clarku.edu/huxley/CE9/Str.html>, accessed February 4, 2019.
107. Thomas H. Huxley, *Evolution & Ethics and Other Essays* (London: Macmillan And Co., 1895), p. 203. <https://ia802909.us.archive.org/35/items/a588314000huxluoft/a588314000huxluoft.pdf>, accessed March 9, 2019.
108. Huxley, [1893] 2002, p. 92.
109. T. H. Huxley, quoted in M. Freeden, "Biological and evolutionary roots of the new liberalism in England," *Political Theory*, 1976, 4(4): 471–490, at p. 473.
110. Hale, pp. 168–172.
111. Hale, p. 196.
112. D. Ritchie, *Darwinism and Politics*, 2nd ed. (London: Swan Sonnenschein & Co., 1891), p. 8.
113. Ritchie, p. 141.
114. Ritchie, p. 8.
115. Ritchie, p. 14.
116. Ritchie, pp. 19–21.
117. Ritchie, pp. 26–27.
118. Ritchie, pp. 21–29.
119. Ritchie, pp. 141.
120. P. Kropotkin, *Mutual Aid: A Factor of Evolution* (New York: New York University Press, 1972), introduction.
121. Kropotkin, introduction.
122. Kropotkin, introduction.
123. Kropotkin, introduction.
124. Kropotkin, chap. 8.
125. Stack, 2000, p. 699.
126. Kropotkin, chap. 8.
127. Edward Aveling, *The Gospel of Evolution, From "The Atheistic Platform", Twelve Lectures* (London: Freethought Publishing Company, E.C., 1884). Kindle edition, location 13 of 367, <http://www.gutenberg.org/files/36270/36270-h/36270-h.htm>, accessed 9 March of 2019.
128. Edward Aveling, location 87 of 367.
129. Edward Aveling, location 226 of 367.
130. George, p. 265.
131. K. Marx, *A Contribution to the Critique of Political Economy* (Moscow: Progress Publishers, 1993), preface.
132. P. Crook, *Darwin's Coat-Tails: Essays on Social Darwinism* (New York: Peter Lang, 2007).
133. R. Weikart, "Darwinism and death: Devaluing human life in Germany 1859–1920," *Journal of the History of Ideas*, 2002, 63(2): 323–344.
134. P. Naour, E. O. Wilson, and B. F. Skinner, *A Dialogue between Sociobiology and Radical Behaviorism* (New York: Springer, 2009), p. 22.
135. E. O. Wilson, *Sociobiology: The Abridged Edition* (Cambridge, MA: Belknap Press of Harvard University Press, 1998), p. 3.

## Darwin's politics of selection

136. E. O. Wilson, quoted in A. Somit, "Wilson's on Human Nature," *Political Psychology*, 1980, 2(1): 59–63, at p. 60.
137. Somit, p. 61.
138. E. O. Wilson, quoted in Somit, p. 61.
139. E. O. Wilson, quoted in Somit, p. 61.
140. E. O. Wilson, *On Human Nature* (Cambridge, MA: Harvard University, 1975), chap. 5.
141. E. O. Wilson, quoted in Somit, p. 63.
142. Somit, p. 60.
143. Naour, p. 32.
144. C. Darwin, *The Origin of Species* (New York: P. F. Collier & Son, 1909), p. 179.
145. R. Alexander, "The evolution of social behavior," *Annual Review of Ecology and Systematics*, 1974, 5: 325–383, at pp. 326, 377.
146. Alexander, p. 377.
147. A. Somit and S. A. Peterson, "Biopolitics after three decades — A balance sheet," *British Journal of Political Science*, 1998, 28(3): 559–571, at p. 567.
148. Somit and Peterson, 1998, p. 562.
149. A. Somit and S. A. Peterson, "Rational choice and biopolitics: A (Darwinian) tale of two theories," *Political Science & Politics*, 1999, 32(1): 39–44, at p. 40.
150. R. D. Masters, "Evolutionary biology and political theory," *American Political Science Review*, 1990, 84(1): 195–210, at p. 196.
151. R. D. Masters, "The biological nature of the state," *World Politics*, 1983, 35(2): 161–193, at p. 188.
152. Naour, p. 28.
153. Somit and Peterson, 1998, p. 566.
154. Darwin, [1871] 1981, p. 71.
155. Darwin, [1871] 1981, p. 71, n. 5.
156. Darwin, [1871] 1981, p. 98.
157. Darwin, [1871] 1981, p. 73.
158. Darwin, [1871] 1981, pp. 72–73.
159. Hale, p. 127.
160. Darwin, [1871] 1981, p. 83.
161. Darwin, [1871] 1981, p. 163.
162. Darwin, [1871] 1981, pp. 163–164.
163. Darwin, [1871] 1981, pp. 165–166.
164. George C. Williams, *Adaptation and Natural Selection* (New Jersey: Princeton University Press, 1966).
165. Richard Dawkins, *The Selfish Gene* (Oxford University Press, 1989).
166. E. Sober and D. S. Wilson, "A critical review of philosophical work on the units of selection problem," *Philosophy of Science*, 1994, 61(4): 534–555, at p. 534.
167. Wilson, *Sociobiology*, p. 3.
168. Richard Dawkins, cap. II.
169. D. S. Wilson, "Richard Dawkins, Edward O. Wilson, and the consensus of the many," Evolution Institute, January 1, 2015, <https://evolution-institute.org/article/richard-dawkins-edward-o-wilson-and-the-consensus-of-the-many>, accessed February 4, 2019.
170. S. J. Gould, *The Structure of Evolutionary Theory* (Cambridge, MA: Belknap Press of Harvard University Press, 2002), p. 613ff.
171. Darwin, [1871] 1981, p. 82.
172. Darwin, [1871] 1981, p. 86.
173. Darwin, [1871] 1981, p. 92.
174. Darwin, [1871] 1981, pp. 97–98.
175. Darwin *The Descent...*, pp. 97–98.
176. Darwin, [1871] 1981, pp. 98.
177. Darwin, [1871] 1981, pp. 98–99.
178. W. E. H. Lecky, *History of European Morals, from Augustus to Charlemagne*, 3rd ed., vol. 1 (New York: D. Appleton and Co., 1869), pp. 7–14.
179. Lecky, p. 14.
180. Darwin, [1871] 1981, p. 105.
181. Darwin, [1871] 1981, p. 70.
182. Darwin, [1871] 1981, p. 92.
183. Lecky, pp. 12, 13.
184. N. Eldredge, *Reinventing Darwin: The Great Evolutionary Debate* (Phoenix, AZ: Giant Paperback, 1995).
185. Quoted in H. Rolston III, *Genes, Genesis, and God: Values and Their Origins in Natural and Human History* (New York: Cambridge University Press, 1999, p. 126.

186. E. O. Wilson, *The Social Conquest of Earth* (New York: Liveright Publishing, 2012).
187. Wilson, 2012.
188. E. Allen, B. Beckwith, J. Beckwith, S. Chorover, and D. Culver *et al.*, “Against Sociobiology,” *New York Review of Books*, November 13, 1975.
189. S. Rose, R. C. Lewontin, and L. J. Kamin, *Not in Our Genes* (New York: Penguin, 1984), p. 245.
190. Rose, Lewontin, and Kamin, p. 133.
191. J. O. McGinnis, “The Origin of Conservatism,” *National Review*, 1997, pp. 49, 31.
192. John Caiazza, “Political Dilemmas of Social Biology”. *Political Science Reviewer*, Fall, 2005 – Vol. 34, No. 1. [https://isistatic.org/journal-archive/pr/34\\_01/caiazza.pdf](https://isistatic.org/journal-archive/pr/34_01/caiazza.pdf), p. 225.
193. Caiazza.
194. G. Becchio and G. Leghissa, *The Origin of Neoliberalism* (New York: Routledge, 2017), pp. 172, 173.
195. Becchio and Leghissa, p. 294.
196. Beck, 2012, p. 12.
197. A. Rand, *Philosophy: Who Needs It?* (London: A Signed Book, 1984).
198. George, p. 266.
199. Stack, 2000, p. 688.
200. Sutter, p. 28.
201. Sutter, p. 28.
202. Caiazza, p. 239.
203. Hoquet, p. 160.
204. Carneiro, p. 223.
205. Wallace, 1870, p. 269.
206. R. C. Lewontin, “The structure and confirmation of evolution theory,” *Biology and Philosophy*, 1991, 6: 461–466.
207. J. Fodor and M. Piattelli-Palmarini, “What Darwin got wrong: Update for the paperback edition: Replies to our critics,” p. 12, [http://www.scienceonthenet.eu/files/palmarini\\_darwin\\_got\\_wrong.pdf](http://www.scienceonthenet.eu/files/palmarini_darwin_got_wrong.pdf), accessed February 4, 2019.
208. J. Sapp, *Evolution by Association: A History of Symbiosis* (New York: Oxford University Press, 1994).
209. Gould.
210. M. Meloni, “How biology became social, and what it means for social theory,” *Sociological Review*, 2014, 62(3): 593–614, at p. 601.
211. Meloni.
212. P. Beattie, “The ‘chicken-and-egg’ development of political opinions: The roles of genes, social status, ideology, and information,” *Politics and the Life Sciences*, 2017, 36(1): 1–13.
213. Wallace, 1870, p. 326.
214. Darwin, *The Origin of Species* (New York: P F Collier & Son, 1909), pp. 120, 300, 301.
215. J. R. Commons, “Natural selection, social selection, and heredity,” in *The Arena*, J. C. Ridpath, ed. (Boston: Arena Company, 1897), vol. 18, pp. 90–98.
216. Commons.
217. Commons.
218. L. F. Ward, “Mind as a social factor,” *Mind*, 1884, 9(36): 563–573.
219. Hale, p. 297.
220. G. Stock, “quoted in D. Sewell,” in *The Political Gene* (London: Picador, 2002), p. 216.
221. A. Price, “You’re an animal: The fatal human impact of evolutionary mismatch,” *Good*, December 22, 2013, <http://www.good.is/features/the-fatal-human-impact-of-evolutionary-mismatch>, accessed January 30, 2019.
222. P. R. Erlich, “Intervening in evolution: Ethics and actions,” *Proceedings of the National Academy of Sciences*, 2001, 98(10): 5477–5480.