



Evolution and ethics viewed from within two metaphors: machine and organism

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Abstract How is moral thinking, ethics, related to evolutionary theorizing? There are two approaches, epitomized by Charles Darwin who works under the metaphor of the world as a machine, and by Herbert Spencer who works under the metaphor of the world as an organism. Although the author prefers the first approach, the aim of this paper is to give a disinterested account of both approaches.

Keywords Charles Darwin · Herbert Spencer · Mechanism · Organicism · Ethics · Progress · Naturalistic fallacy

1 Organicism

Start with the Greeks. You are a farmer, living on the land, with the seasons so very vital for you. Spring and the growth of crops; summer and their blossoming; fall and the harvest; and then winter, the death of the old year and waiting for the new. Of course, you are going to think of the world as an organism: birth, growth, full adulthood, decline, and eventually death, followed by renewal in the next generation. More than that, like a mother the earth works actively to aid the process: rivers, rain, sunshine, rich soil, and so much more. We are but its children who sup at her breast (Ruse, 2013).

Farmers most directly, but a worldview that was widespread. In his dialogue the *Timaeus*, Plato gave a more formal account, embedded in his Theory of Forms (Ruse, 2017). He argues that the world—meaning the universe—is or was essentially disordered. Then, a designing Mind imposed functioning order upon it. Most

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likely this Mind—what Plato called the Demiurge—was not a being who acted temporarily, imposing its will upon an existing universe. It was a principle of ordering, without beginning or end. The Demiurge is external to the world, but as a bonus, as it were, it imbues the world (meaning the universe) with a soul of its own. By “soul” here (and elsewhere) Plato is not so much thinking of the Christian sort of soul—something purely mental and conscious, although that is certainly involved, especially intelligence—but also (as comes across clearly in the *Republic* where Plato distinguishes but recognizes the appetitive part of the soul from the parts producing thinking and courage) something of the general life force that drives organisms forward (Ruse, 2003). So, in other words, the universe is a living entity. Hence, purposeful thinking, today called “teleological” thinking, is not just appropriate but demanded about the parts of the universe—both the living and the non-living: “the world is an intelligent being with its own soul, an arrangement ensuring that it is intelligently governed all the way down” (Sedley, 2008, 114).

Aristotle did not think of the world as one single organism. His belief that the world is governed by the Unmoved Mover precluded this. The Unmoved Mover is total perfection and so can only do what a perfect being can do: contemplate its own perfection! As with certain younger relatives of mine, this means that it can do nothing for—is probably totally ignorant of—anything but itself. However, as a sometime biologist, Aristotle’s thinking was purposeful, teleological, through and through (Lennox, 2001). He gave an analysis of causation, the most important forms of which are *efficient causes*, those which get things done, and *final causes* the reasons for getting things done. The sculptor fashioned a model of a soldier—efficient cause—in order to commemorate those who gave so much in war—final cause. This, together with Plato’s principle of ordering, proved incredibly attractive, and this way of thinking—looking at things through the “root metaphor” of the organism—was given a Christian interpretation, and lasted right through the Middle Ages.

2 Mechanism

As the organic metaphor was formulated and persisted in a society essentially rural, so as society became more urban and less in touch with nature as such and more in touch with the instruments and tools that made possible urban living, the old root metaphor fell out of favor being pushed aside by a metaphor more in tune with the times: the world (and its contents) as a machine. The universe of Copernicus was a universe governed by unbroken law, endlessly in motion, without beginning, without end, without purpose. A machine, of course, might have an ultimate purpose—a mill is to grind corn—but within the machine as a machine understood by an engineer, there is just blind law in motion. No final causes. A world of course might have an ultimate purpose—a home for God’s children—but within the world as a world understood by a scientist, there is just blind law in motion. No final causes.

At all times there used to be a strong tendency among physicists, particularly in England, to form as concrete a picture as possible of the physical reality behind the phenomena, the not directly perceptible cause of that which can

be perceived by the senses; they were always looking for hidden mechanisms, and in so doing supposed, without being concerned about this assumption, that these would be essentially the same kind as the simple instruments which men had used from time immemorial to relieve their work, so that a skillful mechanical engineer would be able to imitate the real course of the events taking place in the microcosm in a mechanical model on a larger scale. (Dijksterhuis, 1961, 497)

In England, Robert Boyle—he of the gas law—endorsed the new metaphor, explicitly using a machine by analogy to make his point.

[The world] is like a rare clock, such as may be that at Strasbourg, where all things are so skillfully contrived that the engine being once set a-moving, all things proceed according to the artificer's first design, and the motions of the little statues that as such hours perform these or those motions do not require (like those of puppets) the peculiar interposing of the artificer or any intelligent agent employed by him, but perform their functions on particular occasions by virtue of the general and primitive contrivance of the whole engine. (Boyle, 1686, 12–13)

The flies in the ointment were organisms. It is all very well to think of the universe as a machine, with planets endlessly cycling according to Newton's laws. Efficient causes with no call for final causes. There is no purpose to planets going in ellipses. They just do. But final causes seem still to be needed in the case of organisms. Boyle saw this, rather uncomfortably arguing that such talk really belongs to the realm of religion rather than science. In his "Disquisition about the Final Causes of Natural Things," he distinguished between acknowledging the use of final causes *qua* science and the inference *qua* theology from final causes to a designing god. First: "In the bodies of animals it is oftentimes allowable for a naturalist, from the manifest and apposite uses of the parts, to collect some of the particular ends, to which nature destined them. And in some cases we may, from the known natures, as well as from the structure, of the parts, ground probable conjectures (both affirmative and negative) about the particular offices of the parts" (Boyle, 1688, 18). Then, the science finished, one can switch to theology: "It is rational, from the manifest fitness of some things to cosmical or animal ends or uses, to infer, that they were framed or ordained in reference thereunto by an intelligent and designing agent" (19). From a study in the realm of science, of what Boyle would call "contrivance," in the realm of science, to an inference about design—or rather Design—in the realm of theology.

A solution, but not a very happy one. Enter Darwin. Notwithstanding Darwin's genius, and let not his rather gentle style conceal that he was a real genius, there were both internal and external reasons why Darwin was a champion of the machine metaphor. Internally, as an undergraduate at Cambridge, he had felt the full blast of the veneration of Cambridge's most famous scientist, Isaac Newton, and throughout his life this reflected in his work, not the least in the *Origin* where he strove successfully to satisfy the Newtonian requirements for causal (*vera causa*) understanding (Ruse, 1975). Externally, Darwin's early life was just at the time when

the Industrial Revolution was picking up again after the Napoleonic wars, and that meant machines. Darwin himself had a stake in this for he was the grandchild (as was his wife Emma) of Josiah Wedgwood of pottery fame, one of the most successful industrialists in Britain. As a teenager, Darwin and his older brother Erasmus used to spend long hours doing experiments in chemistry, a science in respects as crucial for engineers as is the more obvious physics (Browne 1995).

It is often said, by the New Atheists particularly, that Charles Darwin's theory of evolution through natural selection, expounded in his *Origin of Species*, spelt the end of religion (Ruse, 2019). News to Darwin, for one! "When I view all beings not as special creations, but as the lineal descendants of some few beings which lived long before the first bed of the Silurian system was deposited, they seem to me to become ennobled" (Darwin, 1859, 488–489). What Darwin's theory did do was complete the Scientific Revolution (Ruse, 2021b). It showed how final causes could be brought within the machine metaphor. Teleology without tears. Darwin's mechanism of natural selection, a process akin to the selection practiced by breeders and fanciers, brought on by the struggle for existence, produces change, but change of a particular kind. In the direction of adaptation. In the direction of features that exist to help their possessors in the struggle for existence. They have a purpose. Final cause! Produced by the efficient cause of natural selection. Although note it is purpose within the context of the discussion—relative final cause. No one is saying anything about absolute final causes—why we are here on Earth, for instance. Those are religious questions, beyond the scope of science.

After this, for the past 150 years, it has been skiing downhill, as science has increasingly worked within the machine metaphor, taking objects apart—reduction—to see how they work, and how the whole is something governed by unbreakable universal laws, without ultimate purpose or end. Tick-toc, tick-toc. A beautiful example is the discovery of the true function of those weird diagonal plates running down the back of the dinosaur stegosaurus. They cannot be for fighting, attack and defence, because they are extremely fragile. They cannot be for sexual attraction by competing males because females have them too. The answer, apparently, is that they are for heat regulation, cooling through breezes in the mid-day heat. For the stegosaurus particularly, this was something of major importance. It was a herbivore, with a five-ton body, so, like sheep and cows and other herbivores today, would have needed to spend a great deal of time foraging for the low-grade fuel on which it existed. Sleeping the day away under a bush was not an option. That is for carnivores, who need only few intakes of their high-grade fuel. Think how much time dogs spend sleeping.

The classic explanatory paper shows well the guiding root metaphor.

Stegosaurus plates have been viewed as "armor" or as anatomical structures that enhanced species-specific agonistic and sexual displays. Whatever the merits of these suggestions, the plate morphology and experimental and computational evidence assembled and discussed below suggest an important thermoregulatory function. We hope to demonstrate that their arrangement, size, shape, and probable vascularity ensured their value as convective heat loss

fins, not unlike those currently used to enhance forced convective heat transfer in compact engineering devices. (Farlow, Thompson, and Rosner 1976, 1123)

You take apart the fossilized reptile, you see how the parts resemble the parts of human-designed artifacts, and from the function of these artifacts you puzzle out the function of the plates on the back of the stegosaurus: “Wind tunnel experiments on finned models, internal heat conduction calculations, and direct observations of the morphology and internal structure of stegosaur plates support this hypothesis, demonstrating the comparative effectiveness of the plates as heat dissipaters controllable through input blood flow rate, temperature, and body orientation (with respect to wind).” Mechanisms all the way down! Mechanisms, but not to the exclusion of final cause. The “compact engineering devices” explain how the plates exist and work, *in order to* keep the animal at a functioning temperature.

3 Romanticism

Or is this all a tad too fast? Around the change from the eighteenth century to the nineteenth, a group of thinkers—primarily in Germany—started to ask if the problem of organisms was too difficult for the machine metaphor. Perhaps we should return to the organic metaphor. Thus thought the “*Naturphilosophen*,” who included the poet Johann Wolfgang von Goethe, the philosopher Friedrich Schelling, and the anatomist Lorenz Oken (Cunningham & Jardine, 1990; Richards, 2003). Underlying their thinking was the philosophy of Plato, especially the Form of the Good, integrating everything into one whole and giving underlying purpose to everything. The adolescent Schelling wrote a sixty-page essay on the *Timaeus*! The physical and the mental are not things apart. In an important way, the mental—the rational world of the Forms (or ideas)—is the cause, certainly the informer of the physical, the changing world of experience. “The key to the explanation of the entirety of the Platonic philosophy is noticing that Plato everywhere carries the subjective over to the objective” (Schelling 1833–34[2008], 212). A conclusion set within the root metaphor of the organism, with purpose or final cause.

Note one significant aspect differentiating this way of thinking, this paradigm, from mechanism, the alternative paradigm. For the mechanist, the world is drained of value. You may, for instance, value the smile of a small child, but it is you putting the value into the picture. For the organicist, the world, with the rational informing the physical, value is out there to be discovered. The smile of the small child is of value, even if you hate children and cannot see anything there. It is you who is blind. Note also that machine versus organism is not a question of evolution versus non-evolution. Evolution comes with organicism! The organism unfurls and develops, from the acorn to the oak tree, from the caterpillar to the butterfly. So, likewise, organisms in the whole, species, unfurl and develop—evolution. Or, as it is said, phylogeny (the evolution of organisms in groups) mirrors ontogeny (the development of the individual organisms). But whereas change for the mechanist comes from pressures without, the struggle for existence bringing on natural selection, the

change for the organicist comes from within, as with the individual so the group. Once set in motion, change happens.

4 Organicists

One who took up organicism with enthusiasm was Darwin's English contemporary and fellow evolutionist, Herbert Spencer (1852a, 1852b). Like Darwin, he started with the Malthusian struggle for existence, but where for Darwin this led to the external influence of natural selection, for Spencer—who was an enthusiastic Lamarckian, believing in the inheritance of acquired characteristics—the struggle was a spur for the individual to do better and thus develop new features that could then be inherited by future generations—internal forces. Spencer combined this with an organicist view of society, so in effect one has a super-organism developing—evolving—through time. And by Spencer's own admission, this was all directly inspired by the philosophy of Schelling. "I should add that the acquaintance which I accidentally made with Coleridge's essay on the Idea of Life, in which he set forth, as though it were his own, the notion of Schelling, that Life is the tendency to individuation, had a considerable effect. In this same chapter it is referred to as illustrated alike in the individuation of a living organism, and also in the individuation of a society as it progresses" (Duncan, 1908, 541).

Progress! Another thing separating organicism from mechanism. For the organicist, progress is part of the package, from acorn to oak, from caterpillar to butterfly. For groups, progress is obviously directed to the evolution of the organisms of greatest worth. Human beings! The whole process points to us. The Darwinian almost certainly regards humans as the apotheosis of the evolutionary process, but this comes from a personal judgment not from the theory or the physical world (Ruse, 2021a). In fact, Darwinism in respects, is anti-progress (Ruse, 1996). What works is what works. If food is abundant, then being big is probably a good adaptation. If food is scarce, then the premium might well be on being small. As the paleontologist John J Sepkoski put it colorfully: "I see intelligence as just one of a variety of adaptations among tetrapods for survival. Running fast in a herd while being as dumb as shit, I think, is a very good adaptation for survival" (Ruse, 1996, 486). So much for "four legs good, two legs better."

After Spencer, notable is the French philosopher Henri Bergson (1907, 1911). He is better known as a "vitalist" rather than an "organicist," but he is part of the same tradition. Evolution, evolution to humans, powered by internal forces, the *élan vital*. Crossing the Atlantic to America, to Harvard in New England, all important was the English-transplant, the logician Alfred North Whitehead. In a series of lectures, published as *Science and the Modern World* (1926), he argued for "the abandonment of the traditional scientific materialism, and the substitution of an alternative doctrine of organism" (99). Affirming: "Nature exhibits itself as exemplifying a philosophy of the evolution of organisms subject to determinate conditions" (115). And where did he get all of this? "Virtually every idea in science that inspired Whitehead was influenced in some way by Schelling's philosophy of nature" (Gare, 2002, 36). First Schelling:

Nature should be Mind made visible, Mind the invisible nature. Here then, in the absolute identity of Mind in us and Nature outside us, the problem of the possibility of a Nature external to us must be resolved. (Schelling, 1797, 42).

Then Whitehead:

The doctrine that I am maintaining is that neither physical nature nor life can be understood unless we fuse them together as essential factors in the composition of 'really real' things whose interconnections and individual characters constitute the universe. (Whitehead, 1938, 205).

Not just life, but mind. Hence: "I conclude that we should conceive mental operations as among the factors which make up the constitution of nature" (214). For Whitehead, as for Spencer and Bergson, the ultimate influence is Schelling's organicism, where nature is developing, self-organizing, like a plant or animal, with humankind the ultimate result. No need of external forces like natural selection.

What of today? A coterie of Anglophone philosophers are enthusiastic organicists. Many are non-believers—Thomas Nagel (2012) for instance—so they are drawn less towards Platonism and its Designer and more towards Aristotelianism and its directed laws. John Dupré, to take an example, has little time for the mechanical world picture. "There are powerful reasons for thinking that emancipation from the mechanistic paradigm is a precondition for true insight into the nature of biological processes" (2012, 83). Naturally, there is distaste for reductionist thinking. "Traditional reductionist views of science, with their focus on "bottom-up" mechanisms, do not suffice in the quest to understand top-down and circular causality and a world of nested processes". In short, we need to be organicists: "there are limits as to how far conventional mechanistic explanations can take us in understanding the dynamic stability of processes at this hierarchy of different levels. Such understanding will require models that incorporate both the capacities required by mechanistic or quasi-mechanistic constituents, and the constraints and causal influences provided by properties of the wider systems of which these constituents are parts" (203).

What of progress? It is the underlying framework for all these thinkers. Spencer believed that the further up the ladder you go, the less you use your vital bodily fluids for making offspring and the more for making brains—from herrings to primates. Humans of course are at the top. Spencer was so far advanced that he never married and had no offspring. Bergson tells us that "not only does consciousness appear as the motive principle of evolution, but also, among conscious beings themselves, man comes to occupy a privileged place. Between him and the animals the difference is no longer one of degree, but of kind" (Bergson 2011, 34). More briefly: "in the last analysis, man might be considered the reason for the existence of the entire organization of life on our planet." Whitehead (1926) was of the same opinion. "The whole point of the modern doctrine is the evolution of the complex organisms from antecedent states of less complex organisms"; "the organism is a unit of emergent value"—little variation on the same theme (110). Today Dupré is explicit:

Though I certainly don't accept that only humans are capable of thought, our forms of consciousness of which we are capable, are very different from

those of other terrestrial animals. And human culture, though not unprecedented, involves the articulation and synchronization of a variety of roles and functions that is different in kind from anything else in our experience. (Dupré, 2003, 75)

The world is of value, and that value increases as we get closer to human beings.

5 Organismic ethical thinking

Turn to theories of morality: ethics. In any ethical system, there are two levels. What should I do? Substantive ethics. Why should I do what I should do? Metaethics. In the Christian system, for example, the Love Commandment gives you substantive ethics. Most would say the metaethical justification is that you are doing God's will. This does raise the Euthyphro problem: Is it God's will to follow the independent rules of morality, or are the rules of morality created by God's will? There are ways around this problem, notably Catholic natural law theory (Ruse, 1988). God created organisms including humans and what He wants us to do is that which is natural. Of course, this still leaves open the question of what is "natural." Heterosexual intercourse is clearly natural; but, what of homosexual intercourse? Walking is clearly natural; but, what of hopping in an automobile or grabbing a flight in a 747? Leave this fascinating by-way and turn to secular ethics. Since the organismic/Spencerian position is better known, let us deal with that first. After we can deal with the mechanical/Darwinian position.

The idea behind the organismic approach is really very simple. Rather than God's will, the metaethical justification is to cherish the results of evolution (Ruse, 1986). Hence, substantive ethics is to help evolution on its way and not hinder its course. The Harvard entomologist and sociobiologist Edward O. Wilson is an exemplar. His prescriptions reflect the challenges of our era. Wilson worries about the environment, specifically about biodiversity (Wilson, 1984, 1992, 2012). This comes through in his "biophilia" hypothesis. "To explore and affiliate with life is a deep and complicated process in mental development. To an extent still undervalued in philosophy and religion, our existence depends on this propensity, our spirit is woven from it hope rises on its currents" (1984). He is firmly in the organicist tradition, seeing all of life as an interconnected whole. Organisms, individually or in groups are part of a larger network. No one organism or group of organisms can be understood or thrive in isolation. Morally, therefore, our obligation is to preserve life.

All well and good. However, notoriously this approach has historically had an appalling reputation. Somewhat misnamed "Social Darwinism"—better had it been called "Social Spencerianism"—it is held responsible for many of the vile things of the last century and a half, not excluding—very much including—Adolf Hitler and the Third Reich. Google the topic (O'Connell and Ruse, 2021a, 2021b). "The concept of Social Darwinism attempted to justify and rationalize ideas of imperialism, hereditarianism and racism." Big business gets involved. "The theory of Social Darwinism was used to support Free Enterprise and 'laissez-faire' capitalism combined

with politician conservatism during the Gilded Era.” The poor and the sick. Sorry! “The belief that it was not the function of the Government to cure social problems.” And Adolf Hitler. “The most infamous instance of Social Darwinism in action is in the genocidal policies of the Nazi German Government in the 1930s and 40 s. It was openly embraced as promoting the notion that the strongest should naturally prevail, and was a key feature of Nazi propaganda films, some which illustrated it with scenes of beetles fighting each other.”

“Beetles fighting each other.” You don’t get much lower than that. I am afraid there is evidence for much that is claimed. Herbert Spencer: “We must call those spurious philanthropists, who, to prevent present misery, would entail greater misery upon future generations. All defenders of a Poor Law must, however, be classed among such. That rigorous necessity which, when allowed to act on them, becomes so sharp a spur to the lazy and so strong a bridle to the random, these pauper’s friends would repeal, because of the wailing it here and there produces” (Spencer, 1851, 323). Andrew Carnegie, the Scottish-born founder of US Steel: “The law of competition may be sometimes hard for the individual, [but] it is best for the race, because it insures the survival of the fittest in every department” (Carnegie, 1889, 655). General Friedrich von Bernhardt, sometime member of the German General Staff, shortly before the Great War (the First World War): “War is a biological necessity,” and hence: “Those forms survive which are able to procure themselves the most favourable conditions of life, and to assert themselves in the universal economy of nature. The weaker succumb” (Bernhardt, 1912, 10). Hitler fits right in:

All great cultures of the past perished only because the originally creative race died out from blood poisoning.

The ultimate cause of such a decline was their forgetting that all culture depends on men and not conversely; hence that to preserve a certain culture the man who creates it must be preserved. This preservation is bound up with the rigid law of necessity and the right to victory of the best and stronger in this world.

Those who want to live, let them fight, and those who do not want to fight in this world of eternal struggle do not deserve to live (Hitler 1939, 1, chapter 11).

Little surprise that many argued that ethics—substantive ethics—means going against evolution rather than with it. Thomas Henry Huxley, Darwin’s “bulldog,” in his well-known 1893 lecture, “Evolution and Ethics,” argued just this. He stated flatly that doing the moral thing was fighting the biological urges—struggle for existence and so forth.

Man, the animal, in fact, has worked his way to the headship of the sentient world, and has become the superb animal which he is, in virtue of his success in the struggle for existence. The conditions having been of a certain order, man’s organization has adjusted itself to them better than that of his competitors in the cosmic strife. In the case of mankind, the self-assertion, the unscrupulous seizing upon all that can be grasped, the tenacious holding of all that

can be kept, which constitute the essence of the struggle for existence, have answered. For his successful progress, throughout the savage state, man has been largely indebted to those qualities which he shares with the ape and the tiger; his exceptional physical organization; his cunning, his sociability, his curiosity, and his imitativeness; his ruthless and ferocious destructiveness when his anger is roused by opposition.

But, in proportion as men have passed from anarchy to social organization, and in proportion as civilization has grown in worth, these deeply ingrained serviceable qualities have become defects. After the manner of successful persons, civilized man would gladly kick down the ladder by which he has climbed. He would be only too pleased to see "the ape and tiger die." (Huxley, 1893, 52)

Well, perhaps so. Huxley rarely, if ever, got Darwin right, so no reason to expect he would here. Shortly, we shall see that Charles Darwin himself had a very different take on the evolution of (substantive) ethics. Here, note that there is another side to the supposed emergence of traditional Social Darwinism from the evolutionary process. For a start, Spencer was writing (at a time, incidentally, before he became an evolutionist) less about the poor and helpless and more about the greedy rich who held all power. True, he had little time for those unwilling to make an effort; but, as truly, he was more concerned about opening up opportunities so the gifted and hardworking could rise up in society. Remind you of anyone? Margaret Thatcher. She came from the same segment of the non-conformist (Protestant, non-Anglican), lower-middle class in the English Midlands as did Spencer. Later in life, he was strongly in favor of trade between nations to promote interdependence and peace, arguing forcibly against the end-of-the century naval arms race between Britain and Germany. Andrew Carnegie is rightfully better known for a similar philosophy. Use your money for the good of society. "Under its sway we shall have an ideal state, in which the surplus wealth of the few will become, in the best sense the property of the many, because administered for the common good, and this wealth, passing through the hands of the few, can be made a much more potent force for the elevation of our race than if it had been distributed in small sums to the people themselves" (Carnegie, 1889, 655). He sponsored public libraries so the poor, but gifted, children could go and read and thus lift themselves up.

Von Bernhardi was drawing less on Darwin—apart from anything else, he hated the British—and more on home-grown philosophies. "Life merely as such, the mere continuance of changing existence, has in any case never had any value for him; he has wished for it only as the source of what is permanent. But this permanence is promised to him only by the continuous and independent existence of his nation. In order to save his nation, he must be ready even to die that it may live, and that he may live in it the only life for which he has ever wished" (Fichte 1922, 136). And so on and so forth. Hitler likewise was drawing on home-grown sources. The passage quoted above is about the Jews. He could get little help on that topic from Darwin, who hardly mentioned Jews at all, and when he did was worrying if the need to go on circumcising was a sign that Lamarckism does not work. More significant in Hitler's development were things like the anti-Semitic sentiments of Karl Lueger,

mayor of Vienna, where Hitler lived as a young man. In any case, distancing both Darwin and Spencer, Hitler did not believe in evolution and he certainly was not going to endorse a theory that put Arians and Gentiles on close branches of the tree of life (Richards, 2013).

More positively, in the modern era, Wilson has been far from alone in his enthusiasm for this kind of evolutionary ethics. Julian Huxley, the biologist grandson of Thomas Henry Huxley and older brother of the novelist Aldous Huxley, wrote enthusiastically on the relationship between evolution and ethics. He argued that evolution justifies an obsession with technology, science, and major public works: “the individual is meaningless in isolation, and the possibilities of development and self-realization open to him are conditioned and limited by the nature of the social organization. The individual thus has duties and responsibilities as well as rights and privileges, or if you prefer it, finds certain outlets and satisfactions (such as devotion to a cause, or participation in a joint enterprise) only in relation to the type of society in which he lives” (Huxley, 1934, 138–9).

6 Organicist metaethics

Turn now to metaethical justification. The answer in one word: progress! All these people were or are organicists. They all saw evolution heading up to human beings at the top. Hence, our ethical command is to help this process, furthering it along, and helping to prevent or to repair decline. Herbert Spencer: “Ethics has for its subject-matter, that form which universal conduct assumes during the last stages of its evolution” (Spencer, 1879, 21). Adding: “And there has followed the corollary that conduct gains ethical sanction in proportion as the activities, becoming less and less militant and more and more industrial, are such as do not necessitate mutual injury or hindrance, but consist with, and are furthered by, co-operation and mutual aid.” Friedrich von Bernhardi: “Without war, inferior or decaying races would easily choke the growth of healthy budding elements, and a universal decadence would follow” (1912, 20). In the words of an enthusiast for the Third Reich.

All in all, the National Socialistic conception of state and culture is that of an organic whole. As an organic whole, the *völkisch* state is more than the sum of its parts, and indeed because these parts, called individuals, are fitted together to make a higher unity, within which they in turn become capable of a higher level of life achievement, while also enjoying an enhanced sense of security. The individual is bound to this sort of freedom through the fulfillment of his duty in the service of the whole. (Harrington, 1996, 176).

And in a very different key, Julian Huxley:

I do not feel that we should use the word purpose save where we know that a conscious aim is involved; but we can say that this is the most desirable direction of evolution, and accordingly that our ethical standards must fit into its dynamic framework. In other words, it is ethically right to aim at whatever will

promote the increasingly full realization of increasingly higher values. (Huxley, 1927, 137)

Edward O. Wilson:

Human beings face incredible social problems, primarily because their biology cannot cope with the effects of their technology. A deeper understanding of this biology is surely a first step towards solving some of these pressing worries. Seeing morality for what it is, a legacy of evolution rather than a reflection of eternal, divinely inspired verities, is part of this understanding. (Ruse & Wilson, 1985, 108)

My aim in this essay is more to expound than to criticize, but my tale would be incomplete if I did not note that a noisy gang of critics, mainly professional philosophers, will have none of this. It is less the substantive ethics, people may not be very favorable to war, but no one is going to be against founding public libraries or defending and cherishing the environment. It is the metaethics that is found wanting. The objection goes back to Hume. You cannot legitimately go from “is” to “ought.” Hume wrote: “For as this ought, or ought not, expresses some new relation or affirmation, ’tis necessary that it should be observed and explained; and at the same time that a reason should be given, for what seems altogether inconceivable, how this new relation can be a deduction from others, which are entirely different from it” (Hume 1739–40[1978], 302). In the post-Darwinian era, this was translated as saying you cannot go from the way evolution occurs—a fact of nature—to this is what evolution tells you should do—a moral prescription. Famously, in the much-celebrated, beginning-of-the-twentieth-century book, *Principia Ethica*, by G. E. Moore, Spencer’s attempt to get morality out of evolution is taken to be an egregious example of someone committing what Moore labeled the “naturalistic fallacy,” trying to get ought from is: “he tells us that one of the things it has proved is that conduct gains ethical sanction in proportion as it displays certain characteristics. What he has tried to prove is only that, in proportion as it displays those characteristics, it is more evolved” (Moore, 1903, 31). Alas, “more evolved” is a matter of fact. “Conduct gains ethical sanction” is a matter of obligation. You cannot legitimately go from the one to the other.

The pattern was set for the rest of the twentieth century. Moore’s student C. D. Broad (1944) in turn berated Julian Huxley. By the time I started doing philosophy in the 1960s, the absoluteness of the naturalistic fallacy was one of the eternal verities. I accepted it then and I accept it now. However, before I turn to a way in which one might get an ethical system from evolution, a mechanistic/Darwinian evolution, let me simply note that the people I have been discussing in this section are simply unfazed by the naturalistic fallacy. The organic root-metaphor does put value into the world. You can get “is” from “ought.” I once wrote a paper (quoted above) on evolution and ethics with Edward O. Wilson. It was a clarion call to philosophers to start taking seriously the fact that we are modified monkeys rather than, as T. H. Huxley joked, modified mud. Perhaps disingenuously, in that quoted passage, where Wilson read “legacy of evolution” as “evolution justifying morality,” I read “legacy of evolution” as “evolution explaining morality and hence showing there is

no justification"! I will pick up on my position shortly. What I want to note here is that it wasn't that Wilson rejected the naturalistic fallacy, but that he simply couldn't see it! Under his root-metaphor, within his paradigm, the world has value. Saying it doesn't is like saying you cannot get the coronavirus if you don't wear a mask and if you shake the hand of everyone you meet. You are just blind to the other point of view.

This completes my aim in this (part of) the essay. I am less trying to refute the traditional way of linking evolution to ethics, and more trying to show how its supporters function. And why they are simply unfazed by the critics who do not share their viewpoint. Of course, even if you do share this viewpoint, that doesn't mean that all your troubles are over. You have still got to explain how uncomfortable facts fit into the drive upwards to the ultimate good. Does one have to say, for example, that the suffering of the antelope in the jaws of the lion is for the good? One might argue that much we find bad, like lions eating antelopes, is in fact a lot less common than Darwinians suppose. John Muir, the Scottish-born founder of the Sierra Club, and ardent organicist, used to claim he had never seen blood in the wild. To be expected, if the main force of evolution is internal, not from external factors like natural selection. Unassisted, the acorn grows into an oak, the zygote into a human.

Let's take that for what it's worth. The point is not to say that the organicist position now tumbles down, or alternatively it is without problems. What we can now say is that we can see why people hold it, why they do not crumble before traditional arguments, meaning those of the mechanist/Darwinian, but that there is clearly work to be done before they can offer their position as one without blemishes.

7 Debunking

What if you are a mechanist/Darwinian? Well, first, you take it as a given that Thomas Henry Huxley was completely wrong. Morality—substantive morality—arises naturally from natural selection. Tribes of people who get along and help each other do better than tribes who don't.

It must not be forgotten that although a high standard of morality gives but a slight or no advantage to each individual man and his children over the other men of the same tribe, yet that an advancement in the standard of morality and an increase in the number of well-endowed men will certainly give an immense advantage to one tribe over another. There can be no doubt that a tribe including many members who, from possessing in a high degree the spirit of patriotism, fidelity, obedience, courage, and sympathy, were always ready to give aid to each other and to sacrifice themselves for the common good, would be victorious over most other tribes; and this would be natural selection. (Darwin, 1871, 1, 166)

How is natural selection powering all of this? Immediately after this passage, Darwin implies that, what today is known as "reciprocal altruism," is a major causal factor. You scratch my back and I will scratch yours: "as the reasoning powers and foresight of the members [of a tribe] became improved, each man would soon learn

from experience that if he aided his fellow-men, he would commonly receive aid in return” (1, 163). The individual alone is benefiting. But it seems also in the passage above that Darwin is appealing to the interests of the group: “sacrifice themselves for the common good.” Actually, he is more nuanced than that. Darwin has in mind a kind of proto-version of what is known as “kin selection.” Darwin agrees that all tribes—bands of hunter-gatherers—are going to be related or think of themselves as related. Hence, inasmuch as you are helping anyone in your group, indirectly you are helping yourself. You share heredity, so if one of you passes on their heredity, they are at the same time passing on yours.

Thinking on this subject is virtually identical today. We need a theory to explain why we get along so well. We need a theory of “ingroup altruism.”

Such a theory starts from the recognition that group living represents the fundamental survival strategy that characterizes the human species. In the course of our evolutionary history, humans abandoned most of the physical characteristics and instincts that make possible survival and reproduction as isolated individuals or pairs of individuals, in favor of other advantages that require cooperative interdependence with others in order to survive in a broad range of physical environments. In other words, as a species we have evolved to rely on cooperation rather than strength, and on social learning rather than instinct as basic adaptations. The result is that, as a species, human beings are characterized by obligatory interdependence. (Brewer, 1999)

As Darwin says above, a key enabling factor in all of this, is morality. “Love your neighbor as yourself.” Simple, when you think about it. A bit too simple in certain respects because what you are not going to find is metaethical justification. You have given a mechanistic/Darwinian explanation of substantive ethics. But remember. No “ought” from “is.” What is one to do? The daring hypothesis is to suggest that there is no metaethical justification to substantive ethics! As an author close to my heart has said: “morality is an illusion put in place by our genes to make us good cooperators” (Ruse & Wilson, 1985). (Don’t ask me how Wilson came to argue this; and I won’t tell you that he had no idea what I was talking about.) The case is that, fundamentally, moral imperatives are emotions, that selection puts in place for our own good. They must be a special kind of emotion. One that makes us think they have an objective referent. Instead of I don’t want you to beat that child—my feelings—it is that it is wrong for you to beat that charge—a moral imperative imposed from without on both of us. We “objectify” moral claims.

Isn’t the claim that there is no foundation to morals just a claim. Perhaps there is an objective foundation, but we just don’t know about it? A kind of ethereal set of Platonic Forms? Darwin scotches this.

I do not wish to maintain that any strictly social animal, if its intellectual faculties were to become as active and as highly developed as in man, would acquire exactly the same moral sense as ours. In the same manner as various animals have some sense of beauty, though they admire widely different objects, so they might have a sense of right and wrong, though led by it to follow widely different lines of conduct. If, for instance, to take an extreme case, men were

reared under precisely the same conditions as hive-bees, there can hardly be a doubt that our unmarried females would, like the worker-bees, think it a sacred duty to kill their brothers, and mothers would strive to kill their fertile daughters; and no one would think of interfering. Nevertheless the bee, or any other social animal, would in our supposed case gain, as it appears to me, some feeling of right and wrong, or a conscience. (Darwin, 1871, 1, 73)

There can be no objective morality because morality is dependent on the organism. Change the organism, change the morality. Could we even be human-like and yet have a different moral code? Suppose we had the John Foster Dulles system of morality (Ruse, 1986). He was Eisenhower's secretary of state during the Cold War. He hated the Russians. He believed he ought to hate the Russians. But he knew that they felt the same way about him. So, they got along. Judged by today's standards, not too badly either. Notice what this all means. There is no direction to evolution. This means that we could have the Dulles morality, thinking that hating others is morally obligatory. We go all the way—born, live, die—with this. We would be totally ignorant of what we humans as we are call “morality”: love your neighbor as yourself. Surely what this all adds up to saying is that one of us perhaps coincides with the true objective morality. The other does not; yet gets through life in a perfectly satisfactory manner ignorant of true objective morality. All I can say is that this does not sound like the way that objective morality is usually presented. It can be a lot of things. It cannot be redundant. If you are a mechanist, then you are a Darwinian, then you believe in an evolved morality, and then you also believe that your theory “debunks” claims about objective morality. In the trade, you are known as a “moral non-realist.”

8 Conclusion

“Evolutionary ethics,” so-called, tends not to have a very savory reputation, certainly not in respectable philosophical circles. G. E. Moore saw to that. However, the time has perhaps come to think through things a little. As I have said several times, my aim in this essay is more to lay things out than to push for one particular position. As it happens, I make no secret of my strong commitment to Darwin's theory of evolution through natural selection, and so you know where I stand on moral thinking—I assure you than I am more a conventional moralist than a Dulles-style moralist! I will feel satisfied now, however, if I can simply persuade the reader that perhaps there is more to evolution and ethics than you might think, and so the whole topic deserves a second look. Or, perhaps for you, a first look.

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