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Moral (and ethical) realism

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ABSTRACT
This article advocates a naturalist and realist ethics of solidarity. Specifically, it argues that human needs should be met; and that they should be met in harmony with the environment. Realism should include respect for existing cultures and the morals presently being practiced – with reasonable exceptions. Dignity must come in a form understood and appreciated by the person whose dignity is being respected. It is also argued that naturalist ethics are needed to combat liberal ethics, not least because the latter supports today's inflexible and dysfunctional institutions. In arguing for these positions, reference is made to the naturalist realist ethics of Georges Canguilhem, C.H. Waddington, John Dewey and David Sloan Wilson, all of whom embed the social order in the natural order.

KEYWORDS
Ethics; moral realism; Roy Bhaskar; Georges Canguilhem; John Dewey; biology of morals; Kant

1. Introduction

The naturalistic moral realism that I advocate in this article has three characteristics. First, it supports the ethical principle that people should act – and institutions should be organized so that people do act – to meet human needs in harmony with nature. It therefore agrees with Abraham Maslow's position that, 'The "good" or healthy society would then be defined as one that permitted man's highest purposes to emerge by satisfying all his prepotent basic needs' (Maslow 1943, 20). It also agrees with Carol Gilligan's position that practicing a *care ethic* requires attending to and responding to needs. This can be called an *ethic of solidarity*. Second, it is based on what humans have learned from science and from history; in other words, it systematically takes account of what we know – that is, it learns from experience – about how to motivate people and how to organize institutions in order to satisfy needs in harmony with nature. This can be called a *practical ethics*. Third, it respects and shows deference (Richards 1964) to people and to their existing morals that are practiced at a given time and place – with exceptions where there are good reasons to make exceptions. This can be called an *ethic of dignity*.

In the first section of this article, I briefly clarify aspects of my usage of certain terms such as 'naturalistic realism, 'scientific realism', 'ethics', 'moral order', 'practical moral order' and 'need'. In the second section, I discuss how I attempt to achieve respect for the diversity of moral orders whilst at the same time supporting a universal ethic. In the

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third section, I connect naturalist moral realism with first wave critical realism. The fourth section includes an outline of an assessment of the present situation of humanity that implies that it is important to offer naturalist moral realism as a constructive alternative to liberal ethics. In the last part of the article, I present some scientific contributions to understanding morals and ethics and their roles in human life. Specifically, I consider the relevant ideas of the following authors: the historian of biology, Georges Canguilhem (fifth section); the geneticist, C.H. Waddington (sixth section); the naturalist philosopher, John Dewey (seventh section); and the evolutionary biologist, David Sloan Wilson (eighth section).

2. Terminological clarifications

Some important terminological clarifications are as follows:

(a) A *naturalistic realism* counts the emergent powers and needs of human persons studied by Maslow, Christian Smith (Smith 2010) and others as parts of natural reality;
(b) A *scientific realism* 'supports' a practical morality that succeeds in meeting needs. It does not claim that what social norms ought to be can be deduced from the findings of natural science or social science. It does claim that morals should be and have always been responses to physical reality, as well as to human needs (like self-esteem) whose connections with physical reality are indirect or perhaps non-existent. Moral rules cannot properly be evaluated without taking both physical reality and social reality into account;
(c) The words *ethical* or *ethics* are used in the sense of 'philosophy of morals' and the words *moral* or *morals* refer here to customs with authoritative force, as do the German *sitten* and the French *moeurs*;
(d) The phrase *moral order* refers, for present purposes, to the referents of terms that for other purposes would need to be carefully distinguished, such as: custom, norm, role, rule, law, institution, social structure, culture, rights, values. Taken together, these comprise the *moral order* or *normative order* of a society. The phrase *moral order* reflects the fact that cultures (or societies, or nations or groups) have different ways of organizing themselves. Some *moral orders* meet needs better than others;
(e) A *practical moral order* motivates people and organizes institutions so that the needs of life are sustainably met. It does not assume a priori that people are or are not motivated by money, self-interest, pride, passion or anything else. Rather it is open to learning what in fact motivates pro-social behaviour from research and from experience. As in Maslow's writings, the meanings of the terms *needs* and *motivation* tend to overlap, so that a theory of human motivation is at the same time a theory of human needs; and
(f) The word *need* here does not name a constant or universally acknowledged signified idea or referent. Rather, it marks social processes and individual reflection that seek to discern alethic truth that evaluates (judges) the existing morals that are practiced at a given time and place. The idea that human needs should be met in harmony with nature (achieving 'flourishing' for short) is recommended as a universal practical guide. But it does not entail a blueprint specifying what the moral order should be. It is meant to authorize and advocate seeking to discern what needs are and

seeking to learn how to meet them. The qualifier 'in harmony with nature' does not cease to apply when it is omitted. It is beyond the scope of this article to define it.

In the next sections, I rely on these terminological clarifications as I elaborate on the importance of both the universal ethical principle introduced above and the respect for and valuing of diversity introduced above.

3. Diversity *and* universality

It is important to respect the existing morals that are practiced at a given time and place. Whatever improvements we may propose in order to meet human needs better, or to harmonize with nature more, we must start with *what is*. We do not make history on our own terms, but on terms that previous history has dealt us. Previous history has dealt us a diverse world. The assumption that it makes sense to meet human needs by reference to a universal ethic does not deny that it also makes sense to work with the local moral order, whatever it may be. In Paulo Freire's terminology, need 'hinges' to that which must be talked about to set humanity on course toward transformative changes with that which people can understand. 'Hinges' become 'invasions' or 'banking' when the worldviews of our interlocutors are insulted or ignored respectively. Given that there is no verified body of knowledge prescribing how best to cope with humanity's challenges, beginning but not ending with the challenge to become a sustainable species, the premises of our efforts to transform *what is* must necessarily be working hypotheses tailored to a particular here and a particular now.

Further, as Aristotle observed – more than two millennia before Emile Durkheim made the same observation – the result of the wholesale sweeping away of existing norms is *anomie*. For this reason, and others, realism should be cautiously transformative. The deep structural defects of the system now dominant call for transformation; the corrigibility of knowledge and many lessons from history (see e.g. Richards and Swanger 2006) call for caution. Still further, it is not feasible to challenge the rise of the extreme liberalism that Frédéric Vandenbergh (2013, 86–89) has called *pathological autonomy* by crafting a new alternative moral code on which the bulk of humanity can agree. It is much more likely that a global consensus promoting functional norms like social responsibility, respect for diversity, and solidarity will be achieved by discourse coalitions drawing on the moral codes of already existing cultures. For example, a Muslim, a capitalist, a socialist, a Hindu, and so on, can agree – applying a universal ethic of solidarity while articulating it each in their own terms – that everybody ought to have clean drinking water and that desertification ought to be reversed. Each will frame the practical moral imperatives to achieve these goals in their own way (Hoppers and Richards 2010). But the process of forming discourse coalitions objectively leading toward sustainability and human flourishing can only be formed if dialogues begin with mutual respect.

The ethics above, combined with the morals above, lead to a realism that is at once universal and multicultural. For example, everybody needs dignity; or, put otherwise, the word 'dignity' names a need every normal human being has. In Maslow's terminology (Maslow 1943, 10), dignity is the same as, or similar to, self-esteem, where it is understood that to have self-esteem a normal person needs some confirmation of her or his worth from others (Kant's German, translated 'dignity' is *Würde,* a cognate of the English

'worth'). Human dignity is a universal human need, and therefore (following the first of three suggested principles) having it is a universal human right. It is something that, universally, should exist. Some say dignity is a premise from which all the other human rights can be deduced. However, what confirms or confers dignity, varies enormously from culture to culture, from family to family, and from person to person. Evelin Lindner eloquently illustrates this point when she explains why – based on her clinical experience as a practicing psychologist in Cairo – modern western human rights talk can be humiliating, not dignifying, for millions of human beings (Lindner 2001). I quote a few of her words:

> Feelings of humiliation are triggered when Westerners, who preach human rights and the inclusion of every human being within a global 'us,' are perceived as violators of their very own preaching. This is seen as 'double standards.' Those who believe in human rights, but are deprived of them, feel humiliated. (Lindner 2001, 63–64)

Therefore, a one-size-fits-all approach to honouring the dignity of every person is a non-starter. If every human being is to be respected for her or his inherent worth, it must be respect that is both meaningful to, and valued by, the person being respected. In addition to the existence of the need for dignity and thus diversity, there also exists a universal ethic. It starts with universal needs. It commands respect for every human being. Each person has a right to confirmation of his or her worth. However, the universal ethic can only be implemented in the life-worlds of diverse groups and individuals.

The next section of this article looks towards science for the validation of moral (and ethical) realism, as outlined in the early classics of critical realism.

4. Critical realism and moral realism

Suppose that in our imagination we turn back the calendar to 1979, a time when the essential content of critical realism was expressed in *A Realist Theory of Science* (RST) (Bhaskar [1975] 2015) and *The Possibility of Naturalism* (PON) (Bhaskar [1979] 2015). Suppose that, because of RTS, what first comes to our mind when we think of the transitive dimension of knowledge are the materials and tools of Charles Darwin's scientific labour. When we think of its intransitive dimension we think first of the causal powers of the underlying generative structural mechanisms of evolution. These generated single-celled life and then slowly, by natural processes, they generated human beings. Suppose that, because of PON, we know that a naturalist social science can be science in the same sense that natural science is science. In both cases, the causal powers of generative structures produce the phenomena that are observed, when and if they are activated, and when and if they are not neutralized or overshadowed by other causal powers of other generative structures. We human beings ourselves possess causal powers. No account of why 'what happens' happens can be complete without considering, *inter alia,* our intentions, reasons and decisions; and, of course, our institutions.

In terms of this thought experiment, we do not know anything about the later works of Roy Bhaskar, or about the contributions that others are going to make in subsequent years. However, we do know that Bhaskar's charter for science authorizes it to make evaluative (moral or ethical) claims (e.g. PON, 121). One can, and one often does, pass from facts to values (e.g. PON, 170). We are authorized to believe that Bhaskar thought, and, moreover, that it is true, that scientific knowledge leads to (or constitutes) practical imperatives

derived from natural science as well as from social science (PON, 160), even though Bhaskar's main example, Marx's explanatory critique of the exploitation of labour, is taken from social science (e.g. PON, 79).

Let us now lift our veil of ignorance just enough to glimpse a sneak preview of these words included in a post-script to the 1989 and later editions of PON:

> Now were I to rewrite PON today I would stress the ways social order is embedded and conditioned by the natural order from which it is emergent and on which it in turn acts back. An ecological orientation to social life is as important as is our recognition of our biological being – both are insufficiently elaborated in the book. (PON, 173)

Later sections of this article will call attention to some contributions of three biologists and a philosopher to understanding 'the ways the social order is embedded and conditioned by the natural order from which it is emergent and on which it in turn acts back.'

What this thought experiment suggests, is that in the light of its beginnings, one might have expected the subsequent development of critical realism to engage more than it has with the naturalistic contributions to moral (or ethical) realism of Georges Canguilhem, C.H. Waddington, John Dewey, David Sloan Wilson and others. Biology, often overlapping with anthropology and psychology (and in Canguilhem's case with medicine), has a great deal to say about right and wrong, good and bad. (For an exception, written by a critical realist who has engaged contributions of biology to ethics, see Vandenbergh 2013).

That said, one must also think about what to make of passages like this in PON:

> Now it is certainly the case that to say of some belief P that it is illusory is *ceteris paribus* (henceforth CP) to imply that it is detrimental to the achievement of human goals and the satisfaction of human wants. But it is not *because* of this, on the argument that I have advanced, that P is bad. (PON, 64)

One might take this to mean that P is bad only for the Habermasian quasi-Kantian transcendental reason that denying that it is bad violates the conditions of possibility of discourse in general. Bhaskar goes on to say that while science can increase our rational autonomy of action, it cannot tell us what to do.

One might perhaps interpret such passages to mean that critical realism is only a philosophy, where the word 'philosophy' is taken to refer only to what can be deduced from transcendental arguments without doing any research or establishing any theories. And to mean that a belief P can only be pronounced good or bad for transcendental reasons. However, one might also say – and it would be more congruent with underlabouring for a naturalist social science to say – that 'P is bad' 'on the argument that I have advanced' 'because' it violates the conditions of possibility of discourse in general. Nevertheless, 'P is bad' might also be demonstrated by *some other argument*. Given that I cannot deny that 'P is bad' without violating the conditions of possibility of discourse in general, it does not follow, as a matter of ontology, that my inability to deny its badness is what made or caused its badness. It does not rule out retroduction or judgmental rationality, or, in general, non-transcendental arguments.

'P is bad' might be supported by an argument that relies on scientific findings, for example by the findings of a biopsy showing a tumour to be malignant, or for example by the findings of Richard Wilkinson and Kate Pickett showing higher levels of inequality to be regularly associated with lower levels of human welfare (Wilkinson and Pickett 2009). Bhaskar has not advanced such an argument in the passage quoted; nor could he while he

takes his province to be only 'philosophy.' However, he might be in favour of other people, or himself when he is not wearing his 'philosophy' hat, advancing such arguments. Bhaskar might have applauded some forms of naturalistic moral realism precisely because they rely on scientific findings and theories to support an ethic of solidarity, making the ontological point that we need not rule out – in terms of making ethical choices – scientific understandings of the underlying generative mechanisms or structures that tend to produce, or cause, goodness or badness.

The following section will suggest that it is important to commit to an ethics that learns from physics, chemistry, biology, ecology, psychology and other sciences; and that uses what it learns to serve the cause of human flourishing.

5. Why it is important to promote naturalist moral realism

I do not expect the following sketch of the unsatisfactory state of the world, and of the role of liberal ethics in creating and maintaining its unsatisfactory state, to convince anyone who has not already been thinking along similar lines. Those who already see a need for a critical realist naturalist moral realism to constructively contest liberalism, most likely will already have formulated the issues in their own (perhaps superior) ways. With respect to them, the objective of this sketch is to remind them of their own thoughts. With respect to those who do not already see such a need, or something along similar lines formulated differently, it aims to contribute to opening opportunities for fruitful dialogue.

At the present time (2019), the world is governed – not entirely, but excessively – by what Louis Althusser might have called a structure-in-dominance (Althusser and Balibar 1966). Its dynamic, that is to say its motive power, its *dynamis,* is capital accumulation. However, let us not jump to the conclusion that the best name for today's structure-in-dominance is 'capitalism.' It may be better to say, drawing on the work of André Orléan (2011) that capitalism is an effect, and that the exchange relation, what Orléan calls *la relation marchande* or *la séparation marchande*, is its cause. Equivalently, the cause is an ethics: liberal ethics. Liberal ethics is a more or less equivalent concept because it prescribes the individualism that *séparation marchande* describes. This idea can be fleshed out by mentioning several others who have described more or less the same thing in somewhat different terms. Without claiming that any two of the authors mentioned express identical meanings, it can be claimed that at an ontological level the social structures these authors describe exist, foster capitalism and move history – whatever the best terminology for describing them may be. And that 'liberal ethics' is one among several more or less equivalent names for those social structures. (For definitions of 'social structure' see Porpora 1993.)

Following Karl Polanyi, one might name the structure-in-dominance 'market society.' Following Theodor Adorno, one might name the ethics constituting the exchange relation, the *Tauschprinzip* and name humanity's presently dominant form of life a *Tauschgesselschaft* (Adorno [1966] 2004). Sir Henry Maine: 'contract' or 'contract plus property' (Maine 1861). Charles Taylor: 'bargaining society' (Taylor 1971). (Remember that the ontological identities of the intransitive objects of science survive re-description, and that all descriptions are corrigible.)

It might be, especially in the future, best to refrain from identifying the capitalism of which the *relation marchande* formalized in civil private law and liberal ethics can be

regarded as the cause, with the wage relation. It might be better to define capitalism as the species of the genus market society whose principal dynamic is accumulation. As Karl Marx put it: where there is capitalism there is accumulation, and where there is accumulation there is capitalism (Marx 1968, Chapter 25). Of course, the context of Marx's remark is his analysis of re-investing the *Mehrwert* appropriated by exploiting labour to engage in successive and ever larger rounds of exploitation; but, of course, as Joan Robinson has pointed out, it is counter-productive to insist that exploiting labour is the *only* way to accumulate (Robinson 2004). As John Maynard Keynes expressed the central causal role of accumulation: investment expecting profit is the *causa causans* of economic activity (Keynes 1937, 221). As Mikhail Kalecki put it, capital has a veto power over public policy, because any policy capital opposes, for any economic reason, for any political reason, or for no reason at all, will cause a crisis (Kalecki 1943).

As the Grenoble school suggested (Aglietta 1973) with respect to a few key variables, and as David Harvey later elaborated (Harvey 1987), insights like those of Marx, Keynes and Kalecki mentioned above, can be summed up by saying that we live today in one or another *regime of accumulation* – if not a Keynesian/Fordist regime or a neo-liberal regime or an East Asian developmental state regime – then some other regime of accumulation. All institutions must facilitate accumulation, because production and therefore life, go forward if and only if production is profitable. It is not just that we live in rigid societies incapable of changing their institutions to solve their problems. It is not just that, as Thomas Piketty has recently confirmed empirically, the basic social structure tends, *ceteris parabis,* to produce ever-growing inequality (Piketty 2014). It is that ending with regimes of accumulation is a necessary consequence of starting with the model of human relationships prescribed by liberal ethics and put into practice in the *relation marchande*. To be sure, society is an open system where many diverse causal powers produce many diverse effects, but nevertheless some central tendencies prevail over time. Dependence on a regime of accumulation and a tendency toward growing inequality are two of them. Both can be regarded as consequences of the basic social structure, or basic liberal ethic.

What is orthodox economics if it is not an elaborate study of exchange relations? It follows that if the *Tauschprinzip* itself is the root cause of the now dominant global economy's excess of rigidity and deficit of solidarity, as Adorno and others have held, then within orthodox economics there is no such thing as a right set of policies. No economic policies (except possibly some heterodox ones that modify the basic social structure) can set modern societies on a path toward reliably meeting human needs in harmony with nature, or toward sustainability. Two crucial problems are: (1) mass unemployment; and (2) threats to the delicate equilibria of nature.

In terms of mass unemployment, the growing obsolescence of labour-power as a factor of production will make it impossible – indeed it is already making it impossible – for growing multitudes to meet their needs by exchanging labour power for wages. Although, currently, certain countries may now be exceptions, even a cursory look at the International Labour Organisation's (ILO's) statistics shows that the world is plagued by massive and increasing unemployment. Summing precarious 'working poverty' with no work at all, the total comes to a little more than half the work force in countries classified as 'emerging' and four out of five in 'developing' countries (ILO 2017, 2 and *passim*). Such harsh realities are dramatically illustrated by the economic immigrants attempting to enter

the USA and Europe. However, the empirical evidence on the surface is less important than the mechanisms that generate the underlying trend. Both social structures and accelerating scientific progress tend, *ceteris parabis,* to replace human labour with more efficient ways of producing goods and services (regarding accelerating scientific progress see Diamandis and Kotler 2012; regarding social structures, see Magdoff and Foster 2010).

In terms of threats to nature, Magdoff and Foster (2010) outline how the physical dependence of the human species on the profitability of investments to generate production and employment is incompatible with protecting the delicate equilibria of nature. Liberal ethics supports the liberal jurisprudence and liberal economics that are dysfunctional for the two crucial reasons of mass unemployment and threats to nature. Coping with these two existential challenges, and others, calls for more flexibility and solidarity than are available inside what Maine (1861) called a *contract society*.

One way to substantiate the claim that starting with a liberal social structure constituted by the ethics of exchange leads inexorably to the dysfunctional world we live in today is to consider the implications of what Alfred Marshall called 'the law of substitution.' The law of substitution states that more efficient production will drive out less efficient production. Marshall writes:

> … the mind of the undertaker is ceaselessly striving so to modify his arrangements as to obtain greater results with a given expenditure or equal results with a less expenditure. He is continually comparing the efficiency and the supply prices of different factors of production which may be used in obtaining the same result, so as to hit upon that combination which will give the largest incomings in proportion to any given outlay; or in other words, he is ceaselessly occupied with the action of the law of substitution. (Marshall 1920, location 7122)

Similarly, the growing physical dependence of livelihoods on accumulated capital motivated by profit can be seen as a consequence of what Eugen von Bohm-Bawerk dubbed 'roundabout production' (Cachanovsky and Lewin 2014). The larger accumulated capitals, in a position to hire better research scientists to do product development, to test a series of prototypes, and to do sophisticated market research and marketing (Procter and Gamble and Apple are two good examples) end up offering consumers better (or at least more desired) products at prices that are both affordable to buyers and profitable to sellers. Although at any given moment the replacement (Marshall's 'substitution') of smaller capitals by larger capitals is only a tendency; nevertheless, *ceteris parabis* over the long-term, the concentration of wealth and the physical dependence of human life on regimes of accumulation become inevitable, or at least virtually inevitable. What begins as simple exchange of a goose for a peck of barley ends by making the maintenance of the profitability of investments into a physical necessity. Public policies and legislation that facilitate capital accumulation are prerequisites if the population is going to be provided with the necessities of life. No investment = no production = no meeting of physical needs. In other words, to the extent that needs are met they are met, they are met in what have become non-standard ways.

Therefore, transformation, to be effective, needs to challenge, overcome and create viable working replacements for the dominant liberal ethic. Amending the effects, while leaving their generative structural causes in place, is not likely to be effective. The dominant liberal ethic constitutes the *relation marchande* that is at the heart of the deep structural causes. Liberal ethics is named by Adam Smith as 'natural liberty' or 'perfect liberty'

(Smith 1969, 111, 159, 347 and *passim*). It is inscribed in custom, common-sense, law, and economics under many names, some of which are mentioned above, and among which perhaps the most common is 'freedom.' For an exposition and critique of John Rawls' recent version of liberal ethics see Barry (1973).

A naturalistic moral realism is today a promising candidate for describing and orienting changes that have become imperative. Although it is not well known, it is commensurable with today's ecological consciousness. Even the most ardent libertarian, committed to the principle that all values are created and justified by individual choice, will admit that if humans poison rivers, then the fish in the rivers die; and that if the humans themselves have no clean water to drink, then they die too. Modern human beings everywhere in the world study physics, chemistry and biology in school. Without these scientific disciplines, our technologies would not work. Advocating naturalist ethics thus appeals to the intellectual prestige that science, technology and ecological awareness already have.

Liberal market ethics, in contrast are underpinned by seventeenth- and eighteenth-century European myths: social contracts, commands of pure reason, self-evident truths, human rights to property granted by Nature and Nature's God, what Michel Foucault at the end of *Les mots et les choses* called *l'homme,* (Foucault 1966) natural liberty, natural prices revealing natural values, sovereign subjects creating value by buying (Douzinas 2000), and others. However, a caveat is in order: Naturalistic moral realism *can* in principle offer an ethics that is less mythical and more informed by research. It *can* offer an ethics that is corrigible, multicultural, fraternal and flexible. Intellectual history makes it clear, however, that it is by no means certain that it *will.* Famous authors of the past (although none of the authors canvassed in this article) have pressed their versions of naturalist ethics into the service of the opposite: dogmatic scientism, imperialism, racism, patriarchy, homophobia, free market fundamentalism and legal rigidity. Naturalism's sordid past makes it all the more urgent to consider the contributions of authors who seek to construct a post-liberal ethics 'embedded and conditioned by the natural order'.

The remaining sections of this article will consider three biologists and one philosopher who have contributed to making naturalistic moral realism more credible and persuasive, and therefore more likely to be put into practice. Canguilhem illumines ways in which an ethic of solidarity is inherent in the practice of medicine and, more generally, in working against pathology and for health.

6. Georges Canguilhem

Georges Canguilhem makes some claims similar to Roy Bhaskar's concurrence in PON with Isaiah Berlin's comparison of four statements about the holocaust: (1) The country was depopulated. (2) Millions of people died. (3) Millions of people were killed. (4) Millions of people were massacred. Although all four are true, the fourth is best. While being the most evaluative, the fourth is also the most precise and accurate. The other three are more likely to mislead a reader. The fourth contributes the most to the scientific process of description-explanation-redescription. It contributes the most to maximizing explanatory power (PON, 59).

Bhaskar held that the heavily evaluative word 'massacres' corrigibly but correctly describes material facts that were already heavily (negatively) normative before they were correctly described by that word. The gravamen of Bhaskar's critique of Winch's

overly hermeneutic approach to social science is that because it recognizes no intransitive dimension it is incapable of dealing with the material reality of the social objects it studies. If moral realism is part and parcel of the claim that social science and natural science can be sciences in the same sense of the word 'science,' and if that sense is inseparable from Bhaskar's anti-positivist critique of the epistemic fallacy, and inseparable from his affirmations of the differentiated and stratified nature of reality, then choosing the word 'massacres' should not be interpreted as a speech act imprisoned in a prison house of language. It should be interpreted rather as seeing alethic truth. It should count as a material act in a material environment that has material consequences. It should count as a virtuous adjustment of language to non-linguistic reality; as an adjustment of culture to its physical functions. In Bhaskar's words, 'It is an error to suppose that ethics must have a linguistic foundation; just as it is an error to suppose that it can be autonomous from science or from history' (Bhaskar 2011, 88).

Canguilhem was a medical doctor as well as a philosopher and historian of science. As an historian of biology, and as an historian of medicine, he found the two histories to be intertwined – not only as a fact of history but also as a necessity of logic. In his context, positivist thinking excluding ethics from science took the form of asserting that from a scientific view there was no difference between the normal and the pathological. The same chemistry and the same physics applied to both. The normal was not normative. However, Canguilhem took a different approach. Far from defining the pathological as a quantitative deviation from a pre-given normal – for example treating diabetes as essentially a quantitative deviation from normal blood sugar levels – Canguilhem finds it necessary to start with disease and injury to define and to understand normality and health. Pain and suffering imply practical imperatives that guide the work of researchers and practitioners. It is only by taking this approach that we can understand the history of science as it has in fact happened or make sense of biology as a science and medicine as a profession: 'The physician has sided with life. Science serves him in fulfilling the duties arising from that choice' (Canguilhem 1991, 226).

Whilst Canguilhem concedes that there are not two chemistries or two physics – there is not one chemistry for molecules outside the human body and another for molecules inside it – it does not then follow, however, that there is no pathology. To describe a disease or an injury as a chemical and physical phenomenon that is not in principle different from a normal state of a healthy person, is like calling a massacre a depopulation. It defines health as a statistical average, not as an ethical value established by its contrast with suffering. It reads history backwards, as if humans solved their problems first, before they had problems to solve. Canguilhem's (1991) *Essay on Some Problems Concerning the Normal and the Pathological* was originally a doctoral dissertation submitted to the University of Strasbourg in 1943. In 1966 he added *New Reflections Concerning the Normal and the Pathological*, including 'From the Social to the Vital'. In 2014, his disciple Frédéric Mathieu published *Les Valeurs de la Vie*. Mathieu repeated Canguilhem's earlier reflections, adding references to more recent developments in biology and in medicine. Mathieu derived from Canguilhem's work an ethics of *la vie* that deduces practical imperatives from scientific knowledge of what it takes to sustain life. In the biology of Canguilhem and Mathieu, as in the psychology of Maslow, the good tends to be identified with health.

In 1966, Canguilhem summarized a central argument of his complex thought in this one sentence:

> In the 1943 *Essay* we called 'normativity' the biological capacity to challenge the usual norms in case of critical situations, and proposed measuring health by the gravity of the organic crises which are surmounted by the establishment of a new physiological order. (Canguilhem 1991, 284–285)

It has been claimed above that one thing we must do to survive as a species is to end the hegemony of the liberal ethics that constitutes the structure-in-dominance establishing the *körperliche Organisation* of the means of subsistence. Liberal ethics is an ethics of liberty, also called autonomy (classically formulated by Kant, according to whom heteronomy is the principle of all spurious ethics, while autonomy is the principle of all genuine ethics) (Kant 2002b). I suggest that Canguilhem's philosophy of life, like Amartya Sen's (2000) philosophy of freedom as capacity, strengthens the case for flexibility and solidarity by incorporating into realism affirmations of the validity of key liberal insights. It gives credit where credit is due to an ethics of autonomy. Life itself is a struggle for autonomy; its battles against disease are battles to re-establish its freedom.

Further, in many traditions, perhaps in all traditions, the emotional appeal of ethics has been linked to cosmology. If one commit one's life to serving the good, one joins the ranks of the servants of God, or of History, or of some other great ideal that makes one into an ally of cosmic forces that guarantee the eventual triumph of the good. As Boethius (2004) explains:

> Our hopes and prayers also are not fixed on God in vain, and when they are rightly directed cannot fail of effect. Therefore, withstand vice, practice virtue, lift up your souls to right hopes, offer humble prayers to Heaven. Great is the necessity of righteousness laid upon you, if ye will not hide it from yourselves, seeing that all your actions are done before the eyes of a Judge who seethe all things. (Boethius 524, location 2098)

Canguilhem's philosophy of life (and Dewey's considered below) similarly enhances the emotional appeal of ethics by linking pro-social behaviour to a cosmology, in his case a naturalistic one. A naturalistic cosmology, sometimes called 'the earth story' has the advantage that it is true. It is increasingly part of post-modern common sense, reflecting what most people learn in school and believe. Here are some representative quotes from Canguilhem and Mathieu:

> When we think of the object of a science, we think of a stable object identical to itself. In this respect, matter and motion, governed by inertia, fulfil every requirement. But life? Isn't it evolution, variation of forms, invention of behaviours? Isn't its structure historical as well as histological? (Canguilhem 1991, 203)

> … as this capacity to establish new constants with the value of norm has seemed to us to be characteristic of the living being's physiological aspect, we cannot admit that physiology can be constituted before and independently of pathology …. (Canguilhem 1991, 211)

> The normal is the effect obtained by the execution of the normative project, it is the norm exhibited in the fact. In the relationship of the fact there is then a relation of exclusion between the normal and the abnormal. But this negation is subordinated to the operation of negation, to the correction of the operation summoned up by the abnormality. Consequently, it is not paradoxical to say that the abnormal, while logically second, is existentially first. (Canguilhem 1991, 243)

> The cure reinscribes the individual in a new form of normativity. (Mathieu 2014, location 227–228).

Waddington, a biologist specializing in animal genetics, considered next, takes us farther back in time, making important points concerning the distant past when

humans properly so-called acquired the characteristics that distinguished them from their pre-hominid ancestors and relatives.

7. C.H. Waddington

I will briefly call attention to just three points made by Waddington, in his book *The Ethical Animal* (Waddington 1966). One is that if we are going to give up the idea of function (and consequently the negative evaluation of behaviour or institutions as dysfunctional) we must also give up the idea of organization. In biology, if 'function' makes no sense, then 'organisation' makes no sense (Waddington 1966, 60–64). Another is that, for pre-hominids to cross the threshold to becoming hominids, it was necessary to acquire communication capacities to facilitate cooperation. But it was also necessary to acquire cooperation capacities to facilitate communication. Waddington's point reinforces Bhaskar's point that it is an error to suppose that ethics must rest on linguistic foundations. There was not a sequence where language came first and was a prerequisite for morals. Rather, the two co-evolved (Waddington 1966, 138–154).

The communication that both required and made possible cooperation had to possess *authority*. Humans became humans, they became what Waddington calls 'ethicizing animals,' when they became capable of behaving in obedience to normative signals (Waddington 1966, 29, 155–174). In support of his view, Waddington cites Jean Piaget's finding that in the moral development of children, children first acquire habits of obedience to (normally) parents, as a necessary prerequisite to later acquiring the capacity to follow authoritative rules in horizontal relations among peers (Piaget 1932).

John Dewey developed a progressive naturalist moral realism in and for an epoch close to our own.

8. John Dewey

Dewey's vocabulary is slightly different from the one I have been using. Sometimes where I write 'morals' he will write 'customs.' This is slightly different from my calling morals customs with authoritative force. But for Dewey, 'ethics' is more than the philosophy of morals or customs. Where there is no rational deliberation there is no ethics. Ethics is associated with modernity, and with higher stages of other civilizations like those of ancient Greece and Rome. Conduct becomes ethical when rational deliberation applies ethical principles to evaluate and guide conduct. Ethics aspires to be universal, as opposed to the customs of a tribe or of the way of life of people with a particular ethnic identity.

At the same time, Dewey sides in his own way with the ancients and not with the moderns in some important respects. Typical moderns, for example, James Buchanan and Gordon Tullock, two neoliberal scholars, in their seminal book *The Calculus of Consent* (Buchanan and Tullock 1962) treat questions about what should be done, or about legitimate collective decisions, as questions about freedom. What is right is what is freely agreed. Kant begins his *Critique of Practical Reason* telling his readers that it is going to be a book about the realm of freedom (Kant 2002a). Older traditions, as Costas Douzinas points out, tended to regard the human will as the source of the problem, not as the source of the solution. There was an ethical revolution during the Enlightenment.

Distinguishing right from wrong ceased to be a matter of discerning God's will and submitting to it. It became a matter of consent (Douzinas 2000, Part I). On the other hand, for Kant (and for today's neoliberals) there are strict limits to government by consent. For Kant the basic principles of property rights and contract that constitute the deep structure of market society are fixed and final. They can be deduced by pure reason from *Freiheit* (Kant 1965).

Dewey recognizes, as a naturalist and a realist, that we have to start with the customs of a time and place, because that is what there is and because *anomie* is usually worse. But he holds no brief for custom as a source of wisdom. He writes, '… the rules which sum up custom are a confused mixture of class interest, irrational sentiment, authoritative pronunciamento, and genuine consideration of welfare' (Dewey and Tufts 1908, position 5481). He advocates for modern rational ethics, but his reason is not Kant's reason. Dewey writes in an essay on the impact of Darwin on philosophy:

> The conceptions that had reigned in the philosophy of nature and knowledge for two thousand years, the conceptions that had become the familiar furniture of the mind, rested on the assumption of the superiority of the fixed and final; they rested upon treating change and origin as signs of defect and unreality. In laying hands upon the sacred ark of absolute permanency, in treating the forms that had been regarded as types of fixity and perfection as originating and passing away, the *Origin of Species* introduced a mode of thinking that in the end was bound to transform the logic of knowledge, and hence the treatment of morals, politics, and religion. (Dewey 1910, 1)

Socializing property in whole or in part is a legitimate option, not because ethics reverts to tribalism, but because ethics advances to Darwinism. Further, Dewey criticizes Bentham, not because Dewey opposes the greatest good of the greatest number, but because following Bentham's egoistic psychology would make it impossible to achieve the greatest good of the greatest number. The human will must be improved, and not, as in Bentham's philosophy, treated as inevitably propelled by pleasure and repelled by pain, and simultaneously as the touchstone for deriving criteria for distinguishing right from wrong. Dewey ends up siding with the ancients by insisting on the need for moral education. As Saint Ignatius Loyola (2000) proposed spiritual exercises to purify the soul and unite their will with the will of God, Dewey proposed mass public education, where every subject offered opportunities to teach democracy, to transform people as they were into responsible citizens (Dewey 1916).

Like Canguilhem, Dewey weds ethical living to a naturalist cosmology. In 1897 he gave a lecture during the summer quarter at the University of Chicago intervening in debates that were then raging. The issues might be summarized briefly in a trilemma: (1) The theory of evolution is incompatible with ethics. (2) The theory of evolution implies a conservative ethics. (3) The theory of evolution implies a progressive ethics. Dewey's option was the third.

For Dewey as for Canguilhem, the ethical life of humans is a continuation, and not a reversal, of natural processes.

> … the process and the forces bound up with the cosmic have come to consciousness in man. That which was instinct in the animal is conscious impulse in man. That which was 'tendency to vary' in the animal is conscious foresight in man. That which was unconscious adaptation and survival in the animal, taking place by the 'cut and try' method until it worked itself out, is with man conscious deliberation and experimentation. (Dewey 1898, 340)

To be sure, on Dewey's view, there are no ethics in nature. Ethics by definition requires conscious reflection. Dewey: 'We have, however, no reason to suppose that the cosmic process has become arrested or that some new force has supervened to struggle against the cosmic.' On the contrary, a naturalist worldview provides a rational basis for ethics and for spirituality. Dewey again:

> … I question whether the spiritual life does not get its surest and most ample guarantees when it is learned that the laws and conditions of righteousness are implicated in the working processes of the universe; when it is found that man in his conscious struggles, in his doubts, temptations, and defeats, in his aspirations and successes, is moved on and buoyed up by the forces which have developed nature; and that in this moral struggle he acts not as a mere individual but as an organ in maintaining and carrying forward the universal process. (Dewey 1898, 341)

Without pretending to survey all of the natural scientists who have contributed to seeing ethics and morals as evolving patterns of behaviour that can be more or less functional, I consider just one more.

9. David Sloan Wilson

David Sloan Wilson is a contemporary American evolutionary biologist who has written several studies of social organization in humans and in other species. His book entitled *Darwin's Cathedral* (Wilson 2011) is a study of a random sample of 25 religions. Wilson suggests that a church can be regarded as an organism, and that its adaptive success or failure can be regarded as determined by the three principles of evolution: phenotypic variation, heritability and fitness consequences (Wilson 2011, position 137). HIs book, as a whole, can therefore be regarded as a meditation on Darwin's hypothesis expressed in his *The Descent of Man* (Darwin 1871, 166) as follows:

> 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 increase in the number of well-endowed men and advancement of the standard of morality, will certainly give an immense advantage of one tribe over another. There can be no doubt that a tribe containing many members, who, from possessing to a high degree the spirit of patriotism, fidelity, obedience, courage and sympathy, were always ready to aid one another, and to sacrifice themselves for the common good, would be victorious over most other tribes; and this would be natural selection. At all times throughout the world, tribes have supplanted other tribes; and as morality is one important element in their success, the standard of morality and the number of well-endowed men will thus everywhere tend to rise and increase.

Wilson's study and other studies of religion are of special importance in the context of raising the level of morality and the level of human motivation above the level of the *séparation marchande*. As a matter of history, Wilson find it plausible to say, and seeks to demonstrate by studying a random sample of 25 religions, that religion has been one of the main ways, perhaps the main way, that human solidarity has been achieved in the past. I would suggest that in the future, psychology and moral education may play greater roles (Richards 2018).

Wilson reports that twenty-first-century biology has moved beyond the 'selfish gene vs. altruism' dichotomy of a few decades back. Today, after the pioneering work of Lynn

Margulis, the very cells that compose living tissues and organs, known as eukaryotic cells, are understood as social organisms. Their remote ancestors were smaller units. The smaller units have now banded together as cells for their mutual benefit (Margulis 1970). Altruism, although it exists, is no longer seen as the main alternative to selfish anti-social behaviour.

> Wilson: Social control, rather than highly self-sacrificial altruism, appears to solve the fundamental problem of social life at the individual level. A whole lexicon of words describing social control in human life has been borrowed to describe genetic and developmental interactions; 'sheriff' genes, 'parliaments' of genes, 'rules of fairness' and so on. (Wilson 2011, position 369)

The multiplicity of ways that religion has achieved social control (sometimes with disastrous consequences, sometimes with desirable consequences) is demonstrated in all of the chapters of the book. It is especially clear in the chapter on Calvinist Geneva (Wilson 2011, Chapter Three). The chapter begins with a quote from R. E. Michod: 'The major transitions in evolutionary units are from individual genes to networks of genes, from gene networks to bacteria-like cells, from bacteria-like cells to eukaryotic cells with organelles, from cells to multicellular organisms, and from solitary organisms to societies' (Michod 1999, 160). Wilson adds another evolutionary unit: 'moral systems'. When it comes to humans, the cultural animals, what nature selects are moral systems. Calvinist Geneva was a moral system.

Calvin wrote a catechism and insisted that it be learned by every inhabitant of Geneva. Wilson claims that both its concept of God and its concept of charity owed to one's neighbour must be regarded, from a functional standpoint, as adaptations to regulate human conduct. The sixth of thirteen specific instructions actually orders the people of Geneva to behave as one single organism. Ordinary people, like bakers and farmers, are sanctified as much as pastors, because they too are ministers. Those who are slow to forgive and persistent in enmity are threatened with expulsion. Internalization is encouraged by prayer. The catechism was backed up by a social organization to enforce it: pastors, doctors, elders and deacons. The pastors were to hold quarterly meetings whose express purpose was to criticize each other. Calvinism was structured in many ways to control the leadership as well as the led. The ecclesiastical ordinances included establishing an educational system, a healthcare system and a welfare system (Wilson 2011, Chapter Three).

Wilson also finds that biology has come to terms with functionalism. In the 1960s, functionalism was definitely out of fashion. This meant, especially, that there could be no adaptive groups. Adaptation took place only at the scale of the individual. Its mechanism was mutation and selection. Social organization played no role. Biologists now realize that, although it does not make sense to speak of the functions of entities that have no functions, there are entities that do have functions (Wilson 2011, positions 113-129).

10. Conclusion

The recovery of the legitimacy of describing characteristics of living tissues in terms of varying degrees of biological functionality or dysfunctionality suggests a similar recovery in ethics. Whatever may be the fate of functionalism or structural-functionalism in sociology, if institutions can be described as aiming at some good or goods, such as health, or (as I suggest) meeting needs in harmony with nature, then they can be ethically evaluated. But institutions like the wage relation, property law, inherited wealth, the exchange

relation, and much else tend to be set in stone by liberal ethics. Positivist social science tends to silently assume them as given.

From an ethical point of view, the question is not whether functionalist biological or social theory can explain the phenomena that are observed. Trying to make the world more functional and less dysfunctional does not commit any of the errors canvassed by Anthony Giddens (1976), who is often regarded as having written a post-mortem marking the death and burial of functionalism.

Speaking of functions also serves the cause of making ethics universal and diverse at the same time, and returns us to where this article began. A universal function would be – to repeat, in slightly different words, the example used above – analogous to making clean drinking water available for everyone. Realist social action must be diverse because it starts where the diverse cultures of the world are. It honours their values (with appropriate exceptions). It strives to find and to implement the best among innumerable possible ways to meet the need for water together with other universal needs such as love, self-esteem and agency. It collides with structural rigidities. These structural rigidities include, for example, rigid property rights. They include the overriding but questionable necessity to keep investor confidence up and accumulation going. These structures have been socially and historically constructed. Liberal ethics tend to be an obstacle to deconstruction and reconstruction. The moral realism here proposed is cautiously transformative.

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Howard Richards did undergraduate work at Yale, where his teachers included Richard Rorty, Richard J. Bernstein and Richard Schmitt. Next, he earned a law degree at Stanford, followed by a doctorate in philosophy from the University of California and a doctorate in educational planning with a specialty in applied psychology and moral development from the University of Toronto. He spent a year at Oxford where his tutors were Alfred Yates, Rom Harré and A.J. Ayer. He also took Lawrence Kohlberg's summer school course at Harvard, where he was in the 'advanced' discussion group with Carol Gilligan, Anne Colby and others. As a practising attorney he specialized in bankruptcy law and volunteered for Cesar Chavez's National Farm Worker's Association. He is currently Research Professor of Philosophy at Earlham College and a part time lecturer in management science at the University of Santiago and the University of Cape Town.

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