ARGUMENT
Vol. 3 (1/2013)
pp. 9–26

ARTYKUŁY I ROZPRAWY / ARTICLES AND TREATISES

Moral Progress: A Present-day Perspective on the Leading Enlightenment Idea

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ABSTRACT

Most Enlightenment thinkers believed that the World's order (as ultimately based on divine laws) is good and thus every gain of knowledge will have good consequences. Scientific process was assumed to entail moral progress. In fact some moral progress did occur in the Western civilization and science contributed to it, but it is widely incommensurate with the progress of science. The Enlightenment's concept of a concerted scientific and moral progress proved largely wrong for several reasons. (1) Public morality and science evolve largely independently and may either enhance or inhibit each other. (2) There are no objective values to be read in the World's order and simply followed. Instead, our real, subjective values and the moral systems they fuel have all been generated and shaped by evolution rather than designed to be universally good, and thus ought to be managed rather than simply followed. (3) Our evolved morality is flawed, deficient, prone to doctrinal manipulation and refractory to progress. (4) The majority of people show metaethical incompetence in failing to take a reasoned critical stand toward the principles and assumptions of received morals. This makes moral progress largely dependent on those who reach metaethical competence by transcending the conventional stages of moral development.

KEYWORDS

ethics, value, axiology, moral development, metaethical incompetence

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* I thank Professor Adam Chmielewski (University of Wrocław) for constructive criticism and an anonymous reviewer for useful suggestions.

INTRODUCTION

Progress was one of the key ideas of the main stream Enlightenment thought. It involved both scientific and moral progress that we clearly differentiate today but both were just two aspects of the same process for Antoine Condorcet, the Enlightenment's premier progress theorist (FILIPOWICZ 2002: 222–224). Moral progress was made look inevitable by the Enlightenment's 'science of man' that has been construed using the Newtonian physics as a model. People were attributed a set of supposedly invariable, law-like universal properties or faculties (methodologically corresponding to mass and extension in physics), and then inferences were drawn from this set.

> According to most Protestant natural law thinkers, human reason could, unaided by revelation, derive from the character of human nature and human position on the world a certain guidance in morals and politics, and this is what these thinkers called the law of nature (HAAKONSSEN 1996: 103).

All people were believed to be equally endowed with the primary faculties of perception, reason and self-interest, which by inference made them equal holders of natural rights to liberty and property. This is because liberty and property were recognized to be necessary for the pursuit of one's own interest (HEXTER 1968: 172–178).

The Enlightenment made a deistic assumption that the received order of the World is good as governed by the laws that were once established by God. The (positive) value was placed in the World order that could be discovered by sensory perception and reason, hence Enlightenment's deep rationalism. All that is needed to achieve progress and to make the World better, is to discover, understand, and follow the laws that govern both nature and people. The value was out there or given, and there was no use for any emotional investment (HORKHEIMER and ADORNO 1969: 103) or, as we shall say below, for subjective values. Since the World order was by definition good, unraveling it must have been good as well, which led to a pervasive idea of knowledge as something good in and of itself (FILIPOWICZ 2002: 224). The growth of knowledge was tantamount to the moral progress.

So what if anything is left of the Enlightenment's idea of the universal, concerted progress as propelled by knowledge and rationality that inevitably improve the world? As a result of scientific progress alone we now know that there is nothing inherently good (or bad for that matter) in nature and that knowledge can be used for both good and bad ends. We are headed for the same conclusion with respect to ourselves (as *Homo sapiens*) although the progress of self-knowledge is ideologically hampered on many levels, both individual and societal. And yet scientific progress does have some impact on the evolution of morals, and some of it translates into a universal good and moral progress. Is it a fulfill-

ment of the Enlightenment program? The answer depends on the perspective: in the broadest view, the French *philosophes* were right in viewing the future of civilization as being dependent on progress of knowledge and morals, and in stressing a link between the two. However, their model of progress as a direct, linear translation of knowledge into a betterment of the entire world including people is mistaken on at least two accounts. One of them is that the link between science and morals is not and cannot be nearly as close as Nicolas de Condorcet imagined. Progress, if any, is achieved independently in each domain. In science at least, progress is achieved on a winding, dialectic path (as described by Thomas Kuhn) with the consecutive replacements of scientific paradigms that merely coincide with the dominant trends of moral thinking, and may either reinforce or oppose them. As a result, the moral progress (as seen in retrospect) can be temporarily (in terms of generations) hampered by the offshoots of science (such as Social Darwinism) and vice versa, progress in research of critically important matters can be impeded by morally motivated false beliefs about the world.[1] For example, as a result of all sorts of social inequalities resulting in discrimination, all but most visible differences between sexes and races tend to be negated by legions of moral progressivists, who are clearly at odds with science and reveal what Michel Foucault (1984) calls 'our impatience for liberty'. By ignoring well-established scientific facts, progressive moral doctrines tend to take shortcuts that are ultimately doomed even if they seem to make things better for a while, because sooner or later they clash with the real world.

Another reason why scientific progress does not easily translate into moral progress is the state of ethics or moral philosophy as an academic discipline. In contrast to science that progresses through a dialectic succession of theories, ethics persists (and hopefully progresses although not everybody would agree) as several apparently incompatible systems of thought:

> I noted earlier how the great Enlightenment theorists had themselves disagreed both morally and philosophically. Their heirs have, through brilliant and sophisticated feats of argumentation, made it evident that if these disagreements are not interminable, they are such at least that after two hundred years no prospect of termination is in sight. Succeeding generations of Kantians, utilitarians, natural rights' theorists, and contractarians show no signs of genuine convergence (MACINTYRE 2005/2009: 264).

The pluralistic fragmentation of academic ethics spares it dramatic swings of paradigms that affect science, especially the soft or semi-soft social sciences and psychology, but presents a formidable obstacle to moral progress by mak-

[1] Excluded from this discussion is all too well-known, overtly religious interference with science. Rightly condemned by the Enlightenment thinkers among the burdens of artifice, convention, and custom (see e.g. HEXTER 1968: 182), religion continues to exert its destructive influence by manipulating the moral agency of believers (ELZANOWSKI 2010).

ing ethical arguments weak or impotent in politics and corporate world, where power and money decide in the absence of ethical consensus (MACINTYRE 2005/2009: 265). I dare to believe that more reliance on scientific axiology would promote communication and some agreement (at least at the level of practical recommendations) between the competing systems of ethics (as it does in the ethics of treating non-humans), and that the greatest obstacle to the progress of ethics is the attitude of 'splendid isolation' of many traditional moral philosophers, who entertain misconceptions (commonly under the heading of naturalistic fallacy) about the absolute autonomy of ethics and irrelevance of any factual knowledge.

Aside from the intricate relationships of progress in science and ethics, here I address two most fundamental and interrelated errors of the Enlightenment thought, errors so deeply entrenched that they have not been overcome even today. One is the placement of the source of value in the received world order. The other is the assumption of a law-like equality of people in their ability to reason and, at least according to the Kantian vision, to act morally as a transcendental, supraindividual self or universal subject (HORKHEIMER and ADORNO 1969: 100).

THE PRIMACY OF SUBJECTIVE VALUES OVER REASON

The physical world is value-free because it is goal-free. The only goal-directed systems on the Earth (and in the Universe as far as we know it) are organisms or systems created by them to pursue their goals. Values appeared about three billion years ago when the first biological systems emerged. They are objective, biological values of factors that control the reproductive success (strictly: Darwinian fitness that is, a share of one's descendants in the next generation/s). Certainly, nobody would identify them as values if no intelligent beings interested in understanding their world had recently evolved.

In the course of vertebrate evolution the objective, biological values were converted into subjective, experiential values that are felt by individuals as good or bad according to their impact on the fitness, e.g., the negative impact of a predator got converted into fear, and the safety of a sheltered place into a comfortable feeling of relaxation. Likewise, the obvious biological value (the inclusive fitness) of supporting relatives and, in many species, sexual partners, got converted into love and other family feelings. Animal suffering (and certainly most of human suffering except for some secondary effects of disease) reflects the actual or expected costs to fitness (see e.g. DAWKINS 1990) and positive experience (pleasure) reflects the actual or expected gains of fitness although here the conversion may be less exact as some animals (certainly all hominids) tend to engage into pleasurable activities, especially play, beyond calculable fit-

ness gains. The conversion of biological to experiential values was concomitant with the transition from reflexive (hard wired) behavior to behaviors that are motivated by value-laden mental representations of objects and situations. The transition is perfectly understandable in biological terms: starting from a certain level of intelligence (and thus the advancement of the brain) it has become more advantageous to choose among available ways or means of achieving or avoiding something than to follow a pre-programmed behavioral sequence of reflexes. And the freedom of choosing the means must have conveyed an even greater advantage to every gain of intelligence.

After the origin of life itself which ushered in the realm of teleonomy, that is, goal-directed but mindless organisms, the subjectivization of biological values was the next paramount step which ushered in the realm of teleology in which agents pursue consciously perceived goals even if not all of them are capable of setting goals themselves. Probably the first biological value that has become subjectivized in vertebrate evolution was the negative value of assault or injury, which is felt as pain and involves a representation of one's own body. While it is easy to explain why every incipient ability to receive a bad feeling from the assaulted spot of one's body would have been enhanced by natural selection, the way this incipient ability emerged in Cartesian animals at some stage of metazoan evolution (probably around the vertebrate ancestry) remains unclear. We seem to know how feelings motivate our voluntary (even though not always well controlled) actions but we have no understanding of how feelings are generated even when we know what evokes them. The emergence of subjectivity and the transition from brain to mind may prove as challenging to our human comprehension as is the origin and extent of the Universe.

The vertebrate brain is the only known source of all known experiential values, and at least the human brain can generate value-laden abstract ideas or conceptual values. Conceptual values vary in their relationships to experiential values. Some of them, such as well-being, happiness, beauty, are generalized and verbalized apperceptions. Others, such as reciprocity, honesty, freedom, and justice control access to experiential values. Justice which is a universal and one of the most abstract values, is about equitable distribution of experiential values, and would not make sense if there were nothing valuable to share. Freedom is necessary for the pursuit of individual preferences or self-realization which is expected to enhance one's positive value experience (unfortunately, sometimes at the expense of others).

All genuine conceptual values must be translatable into experiential values by the same token as all scientific concepts must be supported by observational data, which are acquired through our sensory equipment. No value can be created by pure reasoning that serves for calculation and planning, but cannot alone set any ends. Although all this may seem obvious, it is often forgotten because of the deeply entrenched and heavily misleading religious notions of values as

descending from heavens rather than emerging from individual lives. In particular the so-called transcendental origin of purported values helps to market special interests or group values as universal ones, e.g., the means of furthering the reproduction ('procreation') of followers are vigorously enforced as universal moral principles by competing Abrahamic religions. Conceptual values can move human societies to either prosperity or destruction (DIAMOND 2005) and thus call for ethical and scientific scrutiny in order to determine who, if anybody, is the beneficiary.

In the Enlightenment's view, the objective values resided in the ultimately divine order of the world, and could be implemented simply by following the natural order as discovered and understood by pure reason. What we know today is that all ethically relevant values are subjective values that reside in the agents themselves and determine the goals for their actions. The mind selects the means for reaching the goals and the reason may in addition choose or prioritize the goals but no action can be started and no goal can be set without an actual or expected value experience. Reason manages value experience and, at the most, can modulate but cannot create or destroy it (without destroying the subject). Subjective values are primary (both logically and causally) to reason as were the objective values of the Enlightenment deists. However, while the following of objective values as found in the world's order may have logically guaranteed progress, the simple following of our evolved subjective values, whether primary ('extra-moral') or secondary (moral) does not guarantee anything, and may lead to chaos and destruction. All received values should be managed by science-informed ethics and all purported conceptual values should be tested for their translatability into value-laden experience in any sentient beings, both human and non-human.

FLAWS AND DEFFICIENCIES OF EVOLVED MORALS

The Enlightenment thinkers assumed not only that the moral endowment of humans is intrinsically good (an assumption still commonly made today) but also that the combination of reason and self-interest suffices for the progress of human condition, an idea exploited in full in Adam Smith's economic theory. However, the human moral agency, as we now know it, is a product of biological and biocultural evolution (ELZANOWSKI 2010) rather than being part of a divine order. Therefore, taking any received morality as intrinsically good proves to be unwarranted on the basis of Hume's law. As Peter Singer stated "if moral intuitions are the biological residue of our evolutionary history, it is not clear why we should regard them as having any normative force" (SINGER 2005: 331). In addition, human morality evolved in small groups and thus cannot be expected to be well-suited for controlling behavior within groups the size of a nation, let alone between nations (MAXWELL 1990).

A significant progress has been achieved in the understanding of moral agency in humans and other hominids including its brain substrates (e.g. KOENIGS, YOUNG, ADOLPHS, TRANEL, CUSHMAN, HAUSER and DAMASIO 2007), motivational mechanisms (HAIDT 2001; GREENE and HAIDT 2002; KAHNEMAN and SUNSTEIN 2005; HAUSER 2006), ontogenetic development (GIBBS, BASINGER, GRIME and SNAREY 2007; GIBBS 2010) as well as its evolutionary origins (DE WAAL 1996; KATZ 2000). The resulting overall picture of moral agency is that of an innate, intuitive mechanism operating primarily at the experiential rather than rational level of consciousness (e.g. KAHNEMAN and SUNSTEIN 2005) and using ready, modal emotional reactions to one's own or others' intentional actions. Reason or the rational level of consciousness generates post-hoc reflections that can modulate rather than generate a moral judgment. Remarkably convergent conclusions have been reached by a prominent contemporary moral philosopher, Richard M. Hare (1981: 25–26, 61ff.), who distinguished between the intuitive and critical level of normative moral thinking.

The human moral agency is a complex psychological mechanism that results from the assembly of several affective and cognitive abilities, in particular empathy (or affective role taking) and responsibility attribution. Some insights into the evolution of these faculties have recently been gained by the combined effort of social and personality psychology of humans and other primates (BROSNAN, NEWTON-FISHER and VAN VUGT 2009). The most important ethical consequence that follows from the increasing understanding of moral agency as a product of evolution is that every received morality is ethically flawed, none can be taken as a paragon of goodness, and each needs corrections by science-informed ethics.

Every evolved morality relies on reciprocity which makes it more or less pragmatic and contractarian rather than intrinsically good as it usually pays off to obey your own moral agency (FRANK 1988). Reciprocity as the organizing principle of moral action may be responsible for the common underestimation of the harms of omission (inaction) compared to the harms of action when, e.g., a few deaths caused by a vaccine are perceived as worse than many more deaths resulting from the failure to approve a vaccine (BARON 2006: 180–181). This may well be because an omission tends to be less threatened with retribution than an action.

Cross-cultural studies of moral thinking confirm reciprocity as the organizing principle of an average human morality. At the mature stages of moral development, reciprocity is executed in the Humean triad in which a spectator (an arbiter) that can be internal (conscience) or external (a third party) attributes responsibility to either an agent (or actor) or a receiver. This evokes a modal, negative or positive emotion that motivates a retributive or rewarding action or attitude, e.g., a moralizing aggression that is motivated by an agent's mali-

cious deed. The third party as an arbiter, a distinctive feature of human moral agency (HAIDT 2001), may implement 'moralistic blueprints' of a group and serve as the 'leading moralist' to admonish or reprimand potential or actual deviants (BOEHM 1999). The enforcement of common standards by a third party intervention clearly strengthens group cohesion but also opens up a way for imposing behaviours that do not serve either the group or its members, and may actually prove destructive to them. This often seems to be the case with the massive intervention of religions that use institutionalized 'leading moralists' to manipulate innate moral agency to execute the virtual reciprocity between believers and their god(s). In exchange for the benefits (in fact the outcomes of evolution, human work or coincidence) that are portrayed as god's great gifts, a clergyman acting on behalf of this god can essentially make any demands even if they are evidently destructive for the believers (e.g., not using condoms despite the epidemic of AIDS). The potential for the manipulation of human moral agency lies in the reciprocal exchange with imaginary persons who may request (via their earthly proxies, of course) essentially anything, leading some populations to self-destruction (DIAMOND 2005) and some to prosperity depending on the pragmatic rather than ethical value of the imposed standards. Even if some religious standards work well for the community of believers it does not mean that they are universally good.

The major flaw of moral agency is its in-group orientation. It evolved for the enhancement of cooperation and reduction of conflicts between group members rather than the promotion of universal good. The flip side of the adaptation to promote intra-group loyalty reveals the most tragic aspect of natural, received moralities, that is, the discrimination against out-group members, which is obviously conducive to intergroup conflicts and exploitation of losers. The greater the threat of a conflict, the more important intra-group loyalty and discrimination of potential enemies. As observed by Frans de Waal "the profound irony is that our noblest achievement — morality — has evolutionary ties to our basest behavior — warfare" (DE WAAL 2006: 55). However shocking it may sound to the believers in traditional values of God and fatherland, nation, and family, these values are mostly based on various combinations of reciprocity, groupism, and nepotism (ELZANOWSKI 2010: 65–76), and thus turn out be primitive biologisms in disguise of noble virtues.

Morality is refractory to ethical improvements because of what is here called m e t a e t h i c a l i n c o m p e t e n c e of the majority of humans who are incapable to take a critical stand toward a received in-group morality and to oppose its evil consequences that are either not perceived as evil or somehow justified (e.g. as a necessary or lesser evil). Compelling evidence of metaethical incompetence has been provided by independent studies in social and developmental psychology. Recent studies of the psychology of collective cruelty and abuse (BROWNING 1992; ZIMBARDO 2008; BOND 2010) demonstrate that

most ordinary, normal people engage in cruelties in response to the expectations of a group and/or superiors, that is, following the hierarchy of values in a group. People generally tend to rationalize a status quo (JOST and HUNYADY 2005; BOND 2010) and accept an existing social order, which, after all, reflects the conventional moral maturity of the 4th stage of standard moral development (GIBBS 2010). Accordingly, the majority of an apparently representative group of German policemen, who were ordered to shoot Jews, followed the order after overcoming an initial repulsion and only a few declined (BROWNING 1992). Normative obedience turns decent people into 'moral idiots' (NELL 2006: 222).

Metaethical incompetence is deeply rooted in human development that necessarily involves the process of socialization whereby an individual's standards, skills, motives, attitudes, and behaviors change to conform to those regarded as desirable and appropriate for his or her present and future role in any particular group. Some studies (e.g. HARRIS 1995) show that the peer groups of childhood and adolescence have much stronger influence on the transmitted cultural standards than any parental guidance (that may or may not conform to societal expectations). Extensive research of the individual (ontogenetic) development of moral reasoning (Table 1) largely confirms initial Lawrence Kohlberg's findings that the conventional stages of moral development that involve socialization are stable across human populations, but only a minority of individuals in some populations are capable of justifying and even less of transcending the allegiance to in-group standards that they acquired as a result of socialization. It must be stressed that the transcendence of conventional stages depends on a concerted intellectual and emotional (experiential) development rather than pure intellectual powers. Accordingly, John C. Gibbs (2010) emphasizes the role of extraordinary events (such as near-death experience) in the lives of people who reach 'existential development'.

The first stage of human moral development is identified in small children who obey whoever is big and powerful in order to avoid punishment and follow momentary desires to get pleasure. Every mammal or bird would be scored at that stage if she/he could report on her/his motivation but the motivation at this stage is not really moral as it does not consider anybody else's wellbeing or, as Gibbs (2010: 72) concedes, at this stage morality is "confused with egocentric biases and motives". So why is it consistently, ever since Jean Piaget's pioneering studies, adduced as the first stage of moral development? It is because it brings about the apperception of basic, the so-called extra-moral values, that is, everything that feels good or bad no matter what anybody else thinks about it. Those are the primary, ultimate or existential values (ELZANOWSKI 2008) that are traded between these individuals once they turn into moral agents at the later stages of development. There would be no morals without basic or 'extra-moral' values, and their apperception early on in life. The very term 'extra-moral' for

Table 1. Development of moral judgement reconstructed from verbal evaluations of imaginary moral dilemmas (originally of a man who stole a medicine to save his dying wife because he could not afford to buy it). A simplified outline based on KOHLBERG 1976; GIBBS, BASINGER, GRIME and SNAREY 2007; GIBBS 2010.

Standard development

Immature (preconventional) stages: egocentrism, no consideration of the group/society. [Preschool and early school age].

Stage 1 — Obedience to what is big and strong to avoid punishment and be rewarded. Following momentary desires.

Stage 2 — Pragmatic exchanges that have to be *fair*. Perspective taking in dyads: do for another if she/he did or will do it for you. [Probably the final stage for most chimpanzees. Also capuchin monkeys show the sense of egocentric fairness].

Mature (conventional) stages: taking a third party perspective and applying the Golden Rule within one's social environment: How would you wish to be treated by others? [Constructed during late childhood or early teenage through adolescence. Final for the majority of humans].

Stage 3 — Mutualities or ideal (principled) reciprocity: building good interpersonal relationships and trust.

Stage 4 — Law and order: systemic application of reciprocity through obeying rules, fulfilling one's duties, and respecting authority.

Existential (postconventional) development

Metaethical reflection, justification and/or revision of received norms [Present only is a minority of humans, from adolescence on.]

basic values reflects the traditional idealistic bias of ethical thought that suffered from its programmatic detachment from science.

The proper moral agency appears at the second stage or the stage of bilateral (dyadic) pragmatic exchanges. This is the stage of direct immediate reciprocity, with partners considering each other's interests only for the sake of gaining concrete expected benefits ("do for others as they did and will do for you"). Some adult humans may end their moral development at this stage but most of them reach the third stage, the stage of good interpersonal relationships or mutualities, and pay attention to ideal reciprocity and potential interactions within their group by building mutual trust. The third party perspective appears at this stage together with the Golden Rule ("do for others as you would be done by them"). The fourth stage, the last stage of standard moral development, features the importance of fulfilling one's duties and maintaining the social order with its institutions that all guarantee beneficial exchange of services.

Only a small minority of people can think about any justification of their moral norms (and those who do, commonly end up with some sort of con-

tractualism which is a doctrine of reciprocity) and even less people apply any universalizing ethics. Only some 12–17% of people with an average education (COLBY and KOHLBERG 1984) and nobody (0%) in three studied rural semi-literate communities (GIBBS, BASINGER, GRIME and SNAREY 2007) spontaneously reach the postconventional stages, mostly through contractualistic justification of the received moral order. Only a few individuals reach the level of universal ethics of any kind.[2] That is why Gibbs (2010: 73) prefers to call it existential development rather than postconventional stages. Aside from these differences in conceptualization, the rarity or absence of any spontaneous metaethical reflection testifies to metaethical incompetence of the majority of humans, who have no other choice than to accept the received, prevailing norms. The majority of humans are to some extent moral but not ethical apes. Besides, both the moral significance of reason and the role of moral motivation in the life of an average human tend to be widely exaggerated as once observed by Edvard Westermarck (1912–1917).

In the famous manifesto-like article *Was ist Aufklärung?*, Immanuel Kant outlined a model of human intellectual and moral progress. A large proportion of people are thought to live in a state of self-incurred dependence (*Unmündigkeit*[3]) because of their lack of will to get independent, their laziness and cowardice, and only "a few, by cultivating their own minds, have succeeded in freeing themselves from dependence" (KANT 1794: 483). The rarity of intellectually and morally independent individuals is in agreement with today's statistics of metaethical incompetence even in best educated countries, which, paradoxically, shows a major failure of the Enlightenment's vision of a total progress involving all humanity. While this failure is due in part to the species-specific variation of human intellectual and moral powers, it also is clear that a substantial potential for moral development continues to be inhibited by social and/or professional environment, for example people in small rural communities end their moral development at an earlier stage (GIBBS, BASINGER, GRIME and SNAREY 2007), and medical and veterinary students regress or at least fail to progress in their moral development scores.[4] Since there are very few studies of this kind,

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[2] Depending on culture, i.e., not necessarily Kantian or other European style, sometimes derived from religion as in the case of Hindus.

[3] Frequently translated as 'immaturity', e.g. in: FOUCAULT 1984. Kant himself defines *Unmündigkeit* as "the inability to use one's own reason without the guidance of another" (KANT 1784: 482).

[4] As shown by the whole slew of studies published primarily in journals dedicated to veterinary and medical education, e.g. SELF, OLIVAREZ, BALDWIN and SHADDUCK 1996, and references therein for veterinary students, and PATENAUDE, NIYONSENGA and FAFARD 2003 and HELKAMA, UUTELA, POHJANHEIMO, SALMINEN, KOPONEN and RANTANEN 2003 for human medicine students.

one can reasonably expect inhibitory influences in many areas of education such as biology and all applied 'animal science' studies. And yet there seems to be very little interest in promoting research on the impact of education on moral development, probably because of its potentially disturbing consequences, which is in itself telling about the causes of slow moral progress.

The third major reason why the assumption of human goodness is wrong in principle is the natural variation of moral faculties. There can be hardly a more misleading concept than the assumption of a unitary 'human nature' that continues to be discussed as if nothing has changed since the Enlightenment. In fact, *Homo sapiens*, as every other species, shows a range of variation that it caused by the interplay of genetic and environmental factors. The moral agency as a motivational system has a great potential for variability because of its complexity that includes at least eight major brain areas (GREENE and HAIDT 2002). Each area contains differentiated groups of neurons and each varies, in part independently, leading to differences in the final stages of moral development that are reached by adult humans (GIBBS, BASINGER, GRIME and SNAREY 2007) as well as in the performance, e.g., of the prefrontal cortex (SPITZER, FISCHBACHER, HERRNBERGER, GRÖN and FEHR 2007). About 50% of variation in the neural substrates of moral agency (MOFFITT 2005) and as much as 90% variation in the volume of gray matter (that is, neuron bodies) in the prefrontal cortex (THOMPSON, CANNON, NAR et al. 2001) is under genetic control.[5] At least seven genes responsible for 'antisocial' behavior have been identified (RAINE 2008). In addition, the control of behaviors by moral agency depends on the strength of other motivations.

Some antisocial inclinations may have been favored by simple, individual natural selection (as opposed to the cultural group selection that may have been instrumental in the evolution of Homininae). As in many other species (such as lions), human populations sustain a balanced polymorphism of the majority of socially oriented cooperators and a minority of egoistic cheats (FEHR and FISCHBACHER 2004; GÄCHTER and HERRMANN 2009). While the nature of this polymorphism is not entirely clear, it is likely to result from an intuitively obvious dependence of cheating gains on the cooperation levels in a group: the more cooperative is the majority, the more can be gained by cheating. It is a special case of the free rider problem, in which the abused common good is represented by mutual trust. By current standards that are clearly influenced by traditional Enlightenment-style beliefs in the essential goodness human nature, some of these free riders and cheats are categorized as sociopaths or even psychopaths (RAINE and YANG 2006).

[5] Even though the growth of this cortex continues even beyond the age of 20 years (GOGTAY, GIEDD, LUSK et al. 2004).

Cooperation and thus group integrity are permanently threatened by selfish cheats who therefore have to properly punished — a group breaks down without punishing measures (FEHR and FISCHBACHER 2004). Punishing behaviors are motivated by retributive moral emotions such as grudge, anger, indignation or disdain. However, the control of retributive behaviors poses a problem — they are easily exaggerated and misused as it happens in the spiral of harm and revenge which keeps causing immense suffering. It has been proposed that cruelty, the very epitome of personal evil, evolved in the moral context as a motivational means for intraspecific aggression including punishment although it is at least equally likely to have evolved as adaptation for hunting and killing (NELL 2006). Those two hypotheses are not mutually exclusive and both can be true in part. In any case, cruelty is a widespread human faculty that is shared by men, women and children of all studied societies and cultures (KRAEMER 2006; TAPPER 2006). Whatever its ultimate (evolutionary) causes "cruelty will not be contained through obscurantism. Its reinforcers must be understood, and if these have evolutionary origins, effective prevention requires that they be revealed" (NELL 2006: 212). It is a primary task of science-informed ethics to understand and first of all demythologize personal evil by showing its earthly sources that for ages remained in the shrouds of religious mythology and metaphysics.

As with any other outcome of evolution, every received morality needs ethical corrections in terms of its consequences for the well-being of concerned subjects (ELZANOWSKI 2010: 65–76), and accepting it as a paragon of what should be is a special case of naturalistic fallacy, known as moralistic fallacy. The research of both moral development and collective wrongdoing demonstrates that that the majority of humans are incapable of rationally justifying the received norms, which means that societies or nations, and even more so, the humanity as a whole, have no or at the most a limited autonomy in the sense of deciding what they really want to want rather than doing what they were told to do. The notion of human goodness or superior value as conveyed by their moral nature turns out to be part of our narcissistic mythology. To paraphrase a common reference (and reverence) to *Homo sapiens* as the ethical animal,[6] we are all (more or less) moral animals (as no group of self-aware agents can possibly cooperate for any time without some morals), but only some of us are ethical. Albert Schweitzer is as representative or non-representative for *Homo sapiens* as a criminal — both fall in the variation range that can be predicted from the developmental studies even if they occupy the opposite ends of this range. In the light of the present knowledge of human behaviors and motivations, the philosophers' idea of all normal humans being equally endowed as moral agents is dead wrong and deeply misleading. The human condition can be properly

[6] As for example in the title to a book by the known biologist Conrad H. Waddington (1960).

understood only in terms of the entire range of variation between benevolent and evil 'psychopaths', with only a minority of humans capable of examining the very sources of the principles they are following.

CONCLUDING REMARKS

The Enlightenment program turns out to be strikingly preformist, with the uniform human nature assumed to have a full potential for moral progress. All that seemed to be needed to unfold it was to remove dogmas, bad traditions, and conventions. From the present-day perspective it seems fair to say that the Enlightenment thinkers may have correctly identified many extrinsic barriers to moral progress, even though they left out or at least underestimated one important category, that is, socioeconomic factors — suffice it to say that extreme poverty precludes any participation in moral progress because of the ultimate deontological truth that o u g h t is contingent upon c a n, or that we ought to do only what we possibly can do. On the other hand the Enlightenment vision of how moral progress will or should be achieved seems to be largely in error, primarily because of its heavy misconception of human morality and thus intrinsic barriers to its improvements.

Metaethical incompetence constitutes probably the heaviest instrinsic obstacle to moral progress. In conjunction with tradition and manipulation of human moral agency by both lay and religious doctrines, metaethical incompetence allows for collective evil that is acceptable and not perceived as evil by in-group standards. Even without counting the unspeakable harm to non-humans, in terms of the number of people who were more or less brutally killed and abused over the millenia of wars, genocide, slavery, and bloody religious rituals, the harm done by collective evil seems to be an order of magnitude higher than the harm caused by personal evil that has been in the focus of all discussion about evil in general. The Enlightenment thinkers were right in advocating the abolition of harmful traditions and conventions, but they could not appreciate the genuine moral acceptance that allowed many of them to persist.

Since metaethical competence is achieved only by a fraction of humans, moral progress seems to be driven by an elite who transcend conventional stages in their moral development. However, the very ability to reach a postconventional (or existential) stage of moral development may be a necessary but not sufficient condition to promote moral progress. It is not enough to come up with some (especially contractarian) justification of one's belief in response to an inquiry. One has to f e e l a need for such justification, and most importantly, for one's action in case of a dissonance between one's own justified standards and those prevailing in the society. Since no motivation can arise without a value factor, taking a critical stand (attitude or action) toward the prevailing standards may

require as much specific moral emotional input as does any moral judgment (even if this input may require higher level processing or apperception). It follows that the dependence of moral progress on metaethical competence does not imply its dependence on pure reasoning skills only. As demonstrated by histories of anti-discrimination movements, the elite responsible for moral progress is not limited to academic philosophers, and I posit that even they have to f e e l the subject in order to bring about any change.

To sum-up, the Enlightenment idea of moral progress can be described as a hopefully right prophecy for mostly wrong reasons. The qualifier 'hopefully' is meant to warn of the uncertainty resulting from the 'poverty of historicism' — while the moral progress s e e m s certain to continue in our Western civilization, the future existence and influence of our civilization is uncertain. The qualifier 'mostly' is meant to indicate the grains of truth in the Enlightenment's naive optimism.

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