## **A**RTIGOS

## Science and morals

## Ciência e moral

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ABSTRACT: The author discusses the relationship between Science and Morals: the ethical dilemmas related to the advancements of Science and the contention concerning Moral in the light of scientific methods. Included are such questions, as "What is right in criticizing Science from a moral point of view?" – "What is justifiable in the reaction against the present way of thinking and acting?" –and, moreover, "What is legitimate in the accusation that current moral codes were surpassed by the advancements of scientific knowledge of man, as a thinking and social being?" – more generally: "What are, in fact, the different aspects of the relationship between Science and Ethics?" – "Is it true that Science is amoral and Morals cannot be scientific?" – which, thus, leads the reflection towards a critical review of the authoritarian aspect of an imposed Morality. The author states that the moral decision, must be rooted in knowledge, emotion and as much freedom, as possible.

KEYWORDS: Ethics; Bioethics; Moral; Science.

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"Veracity is the very heart of morality"

Thomas Henry Huxley

will be examining the controversial and present day issue of the relationship between Science and Morals: the ethical dilemmas related to the advancements of Science and the contention of Morality in the light of scientific methods. In other words, either the amorality of Science or the unscientific aspect of current moral codes.

Some people criticize the partnership of Science and the "establishment", others incriminate Science itself for the war, the unemployment, the pollution and even the devastation of nature. Most of them complain that men stepped on the moon without previously tidying their own home.

In short, it is no more accepted that Science is intrinsically good and the ruling "moris" wise. On the contrary, there is a trend to consider Science an evil power and to downplay Ethics as something useless.

We look upon two plays at the same time: the Science apotheosis and its moral judgment by a New nonconforming Ethics. This judgment sometimes reaches to the point of an open revolt against the scientific method and the Science-oriented culture and civilization. In name of this new ideal the computer centre of a Canadian university was set ablaze in 1969, as to exorcise the cruel symbol of the new culture.

However it is not so simple just to ignore such *technoclast* attitude. There is something reasonable and fair in the revolt which is not precisely against Science and Technology, but an opposing cry against **the misuse** of the conquests of Science and Technology.

What is right on criticizing Science from a moral point of view? What is justifiable in the reaction against the present way of thinking and acting? And more, what is legitimate in the accusation that current moral codes were surpassed by the advancements of scientific knowledge of man as a thinking and social being? More generally: what are, in fact, the relationships between Science and Ethics? Is it true that Science is amoral and Morals can not be scientific?

Up to a certain time ago, Ethics was an almost exclusive occupation of philosophers and theologians. And, even so, **not of all of them!** However, some philosophers with a leaning towards Science were not at all interested in moral problems and were rather dismissive about them to the point of despise, by considering them not analyzable with scientific and logical tools. But that is changing in recent times.

Scientists are becoming worried with the problems of moral thinking and behavior, in the exact proportion they became aware how easily Science and the scientists could be corrupted. National-socialism, party-oriented Science, atomic bomb and so on, were little by little

awakening Science men from that sort of moral "siesta" they were experiencing.

This must be the reason why many post-war scientific journals publish - in addition to scientific papers - discussions on Ethics and problems related to scientific collaboration with government departments which are involved with sensitive areas of research.

In turn, the analytical philosophers started to understand that emotional theories on values and rules - they endorsed by passion more than by reason - do not clear up problems, neither help to rationalize life; on the contrary, they can be an excuse for any sort of arbitrariness.

As a matter of fact, the ethical talk is beginning to be contingent to linguistic and methodological analysis. As a whole it is time to consider that value judgments and even rules, have a very particular importance an there is no excuse to allow them to continue being monopoly of illogical and anti scientific minds.

This confluence of experience and reason, empirical investigation and logical and methodological analysis is a new phenomenon, typical of contemporary culture, although it does not seem to be noticed by classical ethicists that proceed judging through "universal" patterns, with theories of values constructed as extra-custom subjects, blind and deaf to reasoning.

Anyway, the deepening of moral reflection and the confluence of the main ethical streams defined by reasoning, give us the very hope the humankind will soon abandon the concept of Ethics as a mere showcase or list of freakish beliefs, caprices and utopias of thinkers (it does not matter how time-honored) and start to develop a real scientific Ethics as the Science of desirable behavior that use if not the scientific knowledge itself, at least the same kind of impartiality, free from prejudice, of the genuine scientific methodology, for the sake of individual and social welfare.

At this point it's quite relevant to introduce the principle that looks like (to me) the most important of all to deal with peace among countries and people's understanding. Even more than the traditional four signaled by Beauchamp and Childress<sup>1</sup>. In short, what must be prevailing in ethical discussion is to allow, without demand, in other words, the kingdom of Tolerance. When we say Tolerance, we are not meaning the benevolent arrogance of the powerful ones, but attending to the uncontested fact that the human society is pluralistic, in the moral sense, despite the nowadays plague of humanity is, for sure, the fundamentalism. Any sort of fundamentalism – religious, ideological, academical, political, scientific, etc. So, the urgent need for Tolerance and not only a rhetorical one.

For any thing to be accepted as valid, it must be subjected to a deep criterion and to an emotionally and rationally careful analysis. If we then judge them solid, reasonable and justifiable, it's not because they were said by a pope, a scientist, a rabbi, a mullah, a politician, a jurist or any other person supposedly infallible or sacred.

We agree with Baran<sup>2</sup>, from MIT, when he says:

"I do not think any peer groups presently have the objectivity or capability to function as coherent and humane social controls. The members of a peer group share the narrow confines of their discipline, and individual success is measured by the degree to which one plunges more deeply into and more narrowly draws the bounds of his research. There are no peer group rewards for activities or perceptions that extend beyond the discipline or relate it to social problems. Members are therefore neither motivated nor trained to refer their peer activity to broader social problems".

Self-enclosed professional groups can not be entrusted in self-control, because our educational system does not foster development of ethical and humanistic values in an interdisciplinary way. What to say then of the politicians?...

We strongly recommend a humanistic ethics. The affective-rational ethics that arises from competence. The authority to be respected exercises with competence the task it was given by those who attributed to him/her such authority. Despise intimidations or amaze, through magical properties. His authority is rooted in affective-rational motives and does not need any sort of special respect plenty of fear. This authority not only allows, but demands continuous examination and critical analysis from those who are subordinated to it, so it is always temporary and its acceptance depends on its competent work.

The Old Testament, on describing the beginning of History, shows a clear example of not humanistic ethics, but an authoritarian one. The Sin of Adam and Eve is not explained by the act itself – to eat the fruits of Good and Evil, was not bad *per se;* in fact, both the Christian and Jewish religions agree on the declaration that the ability to distinguish the Good from the Evil is a basic virtue. The sin was in the act of Disobedience, on defying the

authority of God who fearing that man "becoming already like US, knowing the Good and Evil", could "extend his hand and to take also the fruits of the Tree of Life, and to live for ever".

The authoritarian ethics can be distinguished from the humanistic ethics by two criteria: one formal and another material. Formally, the authoritarian ethics denies the capability of man to know what is Good or Evil; who makes the rules is always an authority who transcends the individual. A system like that is not based on reason and knowledge, but on fear of authority and on the sensation of weakness and dependence of those subjects; the transference to authority of the ability to decide, comes from the magic power of the authority itself; its decisions can not (and must not) be object of discussion. Materially, or according with the meaning, the authoritarian ethics answer to the question Good or Evil, mainly considering the interests of the Authority, not based on the interests of subordinates; it is an explorer, despite the fact the subjects could get a lot of benefits, psychological and material.

In our view, every moral decision must be rooted, fundamentally in three aspects: the maximum of knowledge you can get on the matter, the use of emotion as spice (not subordination over reason) and as much freedom as possible to make the choice. That adds human predication to our ethical dimension and furnishes actual responsibility to the choice. Without knowledge, emotion, absence of prejudice, and freedom to decide there is no possible moral action. There is only imposition, commandment and obedience. And every one of these is morally unjustifiable, subversive of human dignity, theologically heretical, and, worst of all, obscurantist and spiritually oppressive.

There is no moral quality in a member of a lot of sheeps to the voice of the shepherd, as well as in a "marionette" theatre. At least not in the sheep nor in the doll.

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RESUMO: O autor discute as relações entre Ciência e Moral: os dilemas éticos relacionados aos avanços da Ciência e os questionamentos da Moralidade à luz dos métodos científicos. A partir de questões como "O que há de correto na crítica da Moral à Ciência?"; "Que reações aos modos de pensar e atuar atuais são justificáveis?"; "O que é legitimo na acusação de que os códigos morais estão sendo descartados pelo conhecimento científico?" e, em especial, "É verdade que a Ciência é amoral e que a Moral não pode ser científica?" o autor desenvolve uma reflexão crítica a respeito do aspecto autoritário presente em uma Moral imposta. A conclusão é que a decisão moral deve levar em conta e ter seus fundamentos no conhecimento científico, nas emoções e no máximo possível de liberdade.

PALAVRAS-CHAVE: Ética; Bioética; Princípios morais; Ciência.

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