Chapter 3
How Can the Problems of An Ethical Judgment on Science and Technology Be Correctly Approached?

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ABSTRACT
Two opposite positions are currently dividing the field of discussion regarding the ethical evaluation of science and technology. On the one hand, many people maintain that such a judgment must not be introduced or, less radically, that it needs not be looked for; on the other hand, several scholars maintain that such a judgment is legitimate or, more radically, mandatory. Therefore, it is advisable to examine the arguments of both parties in order to see not so much which viewpoint is right but, perhaps, to what extent both might be right.

POSITION A
Let us first consider what reasons are proposed by those who, more or less strongly, deny the legitimacy of an ethical questioning of science and technology. We can summarize these reasons under the following headings:

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More strongly:

1.1. Permitting that science (and also technology from a particular point of view) be subjected to moral judgment would jeopardize the freedom of science, which is a very significant part of the freedom of thinking. Therefore, such judgment must not be allowed for.
1.2. In addition, moral judgments could introduce interferences in the evaluation of scientific facts and theories and, in such a way, constitute serious dangers for the attainment of scientific objectivity. Therefore, in order to protect this capital requirement of scientific knowledge, such judgments must not be admitted.

Less strongly:

2.1. Even admitting that a moral evaluation of science as a whole could make sense, it is clear that science, having as its specific end the search for truth, is good in itself. Therefore, any additional ethical questioning is not needed.

2.2. Science is at the service of man, and this is again a morally positive connotation that makes any ethical questioning of it superfluous.

2.3. Admittedly, morally wrong uses of science are possible, but they are made by “other” agents and are not entailed by science (and technology) itself.

We can note that in points 1.1-1.2 science is considered essentially from a cognitive point of view, while in points 2.1-2.3 it is implicitly recognized that science has to do with praxis.

POSITION B

Coming now to the arguments of those who advocate the legitimacy of an ethical evaluation of science and technology, we can resume them under the following headings:

3.1. Science (and even more technology) is concretely praxis-oriented and, as a consequence, makes no exception to the fact that ethical considerations are pertinent and legitimate when human actions are considered.

3.2. In addition, moral judgments are mandatory because of the social impacts of science and technology, that may be beneficial or harmful to humans.

It is clear that these points lay stress on the practical aspects of science, much more than on its cognitive aspects.

We shall now outline a few comments on the above statements. Common to all of them is the idea that moral judgments aim at establishing, in the last analysis, what is permitted and what is not permitted, that is, they entail certain limitations of our freedom. This is undeniable and explains the concerns expressed in point 1.1 for it seems that, if we admit moral evaluation of science, we are led to accept that science freedom could be limited in the name of certain moral norms or principles. This limitation, however, is understood in this case as concerning the cognitive aspect of science and, as such, is interpreted as a limitation of the freedom of thinking and research. This interpretation is not fully arbitrary, since historical evidence shows that people have not been considered fully free to think, believe or investigate within a great deal of cultures: ideas, propositions and theories were condemned and prohibited for several reasons (mainly religious, ideological and political) and, inevitably, concrete persons or institutions were credited with the authority (and the power) of exerting this control and imposing these limitations. Therefore, freedom of thinking (including freedom of communicating and defending one’s thoughts and ideas) is rightly considered as a fundamental conquest of Modernity, a conquest that, as usual, is never secured once for all, but must be constantly defended. Admitting moral judgments on science is therefore perceived as a subtle risk of reintroducing those prohibitions of scientific ideas and theories that, in the past, were mainly dictated by religious or ideological tenets, but could now reappear under the pretext of ethical concerns (in particular, there is the suspicion that certain “external” powers could take up the role of...