



Original article

Bioethics as a paradigm of an ethics for a technological society

*La bioética como paradigma de una ética
para una sociedad tecnológica*

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Abstract

In its history bioethics has considerably widened its range, initially limited to the biomedical sciences and technologies. Its novelty with regard to traditional medical ethics was the occurrence of unprecedented situations implying unforeseen options and decisions for which no moral norms existed and which, in addition, were characterized by notable complexity. To qualify as a genuine discipline, bioethics had to rely upon a specific method, and this is the interdisciplinary method in which the contributions of different specialized disciplines are integrated in a synthesis capable of orienting an ethically right decision: a mental attitude of dialogue is indispensable for attaining this goal. These features of bioethics are paradigmatic for an ethics of a technological society that entails the moral acceptance of the artificial and the recognition of the global dimension of most human actions. This novelty requires the elaboration of the concept of a “shared moral responsibility” that oversteps the limits of traditional ethics and, in particular, the ethics in which individual intentions are the fundamental moral criteria. System theory can offer useful conceptual tools for the elaboration of such an ethics, in which, in particular, the phenomenon of globalization also imposes the complementation of different ethical conceptions. The recognition of diversities as a wealth rather than a difficulty is the intellectual attitude that must be promoted in view of this maturation.

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Resumen

A lo largo de su historia, la bioética ha ampliado su alcance de forma considerable, al inicio limitado a las ciencias y tecnologías biomédicas. Resulta novedosa con respecto a la ética médica tradicional debido a la presencia de situaciones inusitadas, que implican alternativas y decisiones nunca antes vistas, para las cuales no existen normas morales y que, además, están caracterizadas por una notable complejidad. A fin de calificar cómo una disciplina genuina, la bioética, tuvo que recurrir a un método específico, un método interdisciplinario en el cual, las contribuciones de diferentes disciplinas especializadas se integran en una síntesis capaz de brindar orientación hacia una decisión éticamente correcta y, en este sentido, una actitud mental de diálogo, resulta indispensable para alcanzar esta meta. Estas características de la bioética son paradigmáticas para la ética de una sociedad tecnológica, la cual entraña la aceptación moral de lo artificial y el reconocimiento de la dimensión global de la mayoría de las acciones humanas. Este rasgo novedoso requiere la elaboración del concepto de una “responsabilidad moral compartida” que sobrepase los límites de la ética tradicional y, en particular, la ética en donde las intenciones individuales constituyan el criterio moral fundamental. La teoría de los sistemas puede ofrecer herramientas conceptuales útiles para la elaboración de esta ética, en donde, en particular, el fenómeno de la globalización contribuye para complementar las diferentes concepciones éticas. El reconocimiento de las diversidades como un patrimonio más que como una dificultad es la actitud intelectual que debe fomentarse a fin de lograr la maduración de esta ética novedosa.

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Palabras clave: Ética de la tecnología; Ética de la complejidad; Aceptación moral de lo artificial; Enfoque sistémico en la ética; Ética globalizada

The concept of bioethics

Independently of the question of the historical priority in the creation of the term “bioethics” (Fritz Jahr in 1927, or van Rensselaer Potter in 1970),¹ it is certain that the institutional development of this discipline started in the USA at the beginning of the 1970s, thanks to the initiative of the Hastings Center and the Kennedy Institute, and then it rapidly expanded in other parts of the world. Therefore, we can say that bioethics is quite a young discipline, but at the same time we must recognize that its scope has considerably broadened and today includes several domains that only a couple of decades ago were considered by several bioethicists as marginal

¹ We shall take up this historical issue later.

and even alien to “genuine” bioethics, so a reflection on this historical development is certainly appropriate.

It is correct to say that bioethical questions were originally raised by situations occurring in the practice of medicine and biotechnology, and that the first institutions that were born with the explicit purpose of promoting bioethics, of organizing the investigation in this domain, of giving it the structure of an academic discipline, of promoting publications such as journals, textbooks, and encyclopedias laid stress on themes related to the biomedical sciences, and that the audience that they preferentially addressed was that of the medical professions or of the institutions concerned with health care. By saying this we specifically refer to the already-mentioned Hastings Center and Kennedy Institute at Georgetown University, both founded (as transformations of pre-existing institutions) in 1971. This thematic delimitation remained essentially stable in the Centers for bioethics that a few years later arose in Europe and other parts of the world, and it is not by chance that the majority of them were (and still are) organically related with hospitals, clinics, faculties, or schools of medicine.

This was a matter of “fact” but, by saying this, we do not intend to trivialize the significance of this situation in the institution of the meaning of bioethics. Indeed, a traditional practice has been that of “defining” a certain science by considering what those people who cultivate it actually do. Nevertheless it is legitimate to ask the question whether there was also a “reason of principle” for this characterization. Without maintaining that this was a reason of principle in a strict sense, we can say that such a privileged reference of bioethics to the biomedical sciences was linked with the intention of bioethics to present itself as a *science*, as a rigorous domain of investigation in which the comparison of arguments is the basic methodology and which, as a consequence, looks for its scientific credentials by concentrating its interest on what is done or said within recognized *scientific* fields. Therefore, since “bio” makes a reference to “life”, it spontaneously follows that the subject matter with which bioethics is concerned is the ethical issues surfacing in the sciences and technologies of life such as they are scientifically understood, that is, in the biological and medical sciences.

Summing up the above considerations we can say that it is very reasonable that bioethics could be synthetically defined as the study of the ethical problems surfacing in the biomedical sciences and their applications, and this amounted to considering it something like an updated expansion of medical ethics. But then a spontaneous question arises: since these kinds of problems have been part of the

traditional medical ethics, what novelty characterizes bioethics to such an extent as to deserve the creation of a new term to denote a new discipline?

Why do we create a new term?

If “bioethics” is wanted to be the name of a genuine new discipline (and even of a new science), and not simply a new fashionable expression for denoting the same as before, it is necessary to clearly indicate in what its novelty consists; this would be especially clear if it were possible to point out some *differences* with regard to traditional medical ethics. Some authors² have indicated this discrimination by affirming that it is a real difference “of principles”: whereas traditional medical ethics admits as the fundamental ethical principle that of the *sacredness of life*, bioethics, on the contrary, is founded on the principle of the *quality of life*. We can object that this distinction might serve to discriminate between different *ethical theories* (be they traditional or present) but not as a criterion for distinguishing traditional from present medical ethics, for two simple reasons. First, *both* perspectives are present and active in today’s bioethics; second, because also in traditional medical ethics (which certainly gave primacy to the principle of the sacredness of life), the value of the quality of life was not disregarded; indeed, it affirmed that unbearable pain in a terminal patient *must* be tempered by using appropriate drugs even though this would have, as an *unwanted consequence*, the shortening of patients lives (which is morally different from intentionally giving them death to “stop them from suffering”). As current bioethical debates clearly show, these two principles, far from being antagonistic, are complementary, and one of the most serious challenges of bioethical thought is that of proposing solutions that make them compatible (a goal that the advancements of medicine and medical technologies make ever more accessible).

Let us note, finally, that the conflicts between these two principles that mark the present bioethical debate concern medical practices almost in their totality, that is, they remain within the horizon of medical ethics. Therefore, one does not see how, by taking them into consideration, we could overstep the horizon of medical ethics to enter the “new” domain of bioethics.

Should we then conclude that there is no novelty? No, there is a novelty, and this is constituted by the fact that the development of new technologies and relat-

² For example, the Italian bioethicist Maurizio Mori.

ed applications has produced a great many unprecedented and unforeseeable situations for which no specific moral norms or guidelines existed in traditional medical ethics. This novelty, however, must not be understood as the appearance of amazing and astonishing technological apparatuses and sophisticated practices that allow us to attain previously unpredictable results. The *morally relevant* sense is that these unpredictable results have put people in the situation of taking *decisions* and making *choices* among different possible *courses of action* (that did not exist earlier), and this automatically falls under a specific moral judgment that is necessarily unprecedented simply because the new situation did not exist before.

For instance, a few decades ago medicine still tried to cure the sterility of a couple (understood as the impossibility of generating children within the couple itself) by treating possible disorders of the man and/or the woman and, if such treatments were unsuccessful, medicine declared itself impotent and the only possible solution available to the couple to obtain a child was the legal instrument of adoption. Today, a sterile couple can obtain a child despite the fact of remaining medically sterile, by simply submitting themselves to a variety of biomedical treatments and, therefore, the couple can *decide* whether to resort or not to resort to them; and, in case they decide to avail themselves of them, to *choose* the one rather than the other depending on the concrete structure of each of the treatments. Everybody knows that this is one of the fundamental chapters of bioethics, that regarding “medically assisted reproduction”, and it is clear that it is not possible to propose moral norms or guidelines in this domain without a detailed knowledge of the actual situations that are totally “unprecedented” with regard to the formerly known and ethically regulated “natural” reproduction.

One might believe that these “new” situations can and even must be treated by *applying* the fundamental principles and norms of traditional ethics to them and that no “new ethics” is needed to cope with them. In a certain sense this is true, but at the condition of being aware that ethics itself does not reduce to an immutable and static set of principles, methods, and prescriptions formulated within a certain doctrine, but that, on the contrary, ethics itself must be dynamic, capable of articulating and deepening itself according to the change in the cultural contexts in which it is situated. In other words, the correct formulation of the moral judgment on the unprecedented situations produced by biomedical technologies obviously entails an effort of analysis and critical evaluation that certainly reflects the adhesion of the discussants to the one or the other of more or less traditional ethical doctrines, but is far from consisting of a simple “deduction” from these

doctrines to find the ethically correct norm for the new situation.³ All this does not mean that bioethics is at variance with traditional medical ethics (and the fact that many bioethicists belong to departments of medical ethics or have such a chair in universities is perfectly physiological). This simply means that this new discipline represents (in a significant part) a special sector of medical ethics more or less like algebraic geometry is a special branch of geometry using algebraic concepts and methods.

Another aspect that explains the “novelty” of bioethics must be considered: it consists of the *complex* nature of the unprecedented situation of which we are speaking. By this we refer in particular to the fact that the action of every individual involved in the situation is deeply interrelated with and conditioned by the presence of other individuals, and that this is a perspective relatively alien to traditional ethics, which is eminently an ethics of the individual action. To go deeper into this point it is advisable to discuss first how this complexity has an impact on the very nature of bioethics as a science.

The epistemological pattern of bioethics

Many scholars hesitate in calling bioethics a “science”, and prefer to speak of a “domain of problems” or a “composite discipline” not only because the original borders of its domain of objects have significantly broadened, but also because to give a discipline the qualification of a science, certain explicit methodological requirements must be indicated that ensure it the quality of objectivity and rigor. In other words, the fact of investigating the ethical issues emerging in certain recognized “scientific” domains (such as medicine and biotechnology) is not sufficient to qualify as scientific bioethics, unless its *epistemological statute* is clarified, which entails the indication of a specific *method*. Obviously, this cannot be identified with the experimental method (characteristic only of certain natural sciences), nor with the logical-deductive method (typical of mathematics), nor with the historical or hermeneutic method (prevailing in many human sciences). Yet bioethics (besides the general condition of adopting rational analysis and logical rigor in its arguments, and respecting the criteria of reliable information as far as its factual state-

³ This is visible in the fact that bioethical discussions have stimulated the revival of traditional debates on issues that are not related, as such, with recent technological advancements such as, for instance, abortion and euthanasia. In such debates opposite ethical doctrines and “principles” come easily to a clash that belongs to a general *ethical* confrontation rather than to a specifically *bioethical* one (although they are often conventionally brought under the bioethical label).

ments are concerned) specifically adopts the *interdisciplinary method*, which is characteristic of all inquiries concerning *complex* realities. Indeed, the situations that feed the most serious bioethical debates are precisely such due to their complexity that consists of the multiplicity of the aspects of any given situation, whose correct understanding and evaluation requires (for any single aspect) the competent intervention of a *specific* discipline, based on its specific methods. We can express this fact in a colloquial way by saying that the study of a complex reality by means of such distinct disciplinary approaches amounts to investigating it from several “points of view”.

If things are as we have just described them, it seems that the task of bioethics should consist of a rigorous *analysis* of the different factors of a situation, in a kind of “meta-theoretical” overview. One could not see, however, how it is possible to pass from this analysis to a *synthesis*, for precisely in this synthesis lies the specific contribution of bioethics. The solution to this difficulty is offered, as we have affirmed, by the adoption of the interdisciplinary method that is not specific to bioethics, but that has imposed itself in various disciplines that have to do with complexity. Indeed, the growing demand for bioethics that is patent in present societies has put an end to the traditional mistrust between forms of knowledge based on different epistemological patterns and has inaugurated a new time of interdisciplinary cooperation, not only between natural sciences and human sciences, but also between scientific and speculative forms of knowledge, such as philosophy and, in particular, ethics. Of course – as we have stressed – this has been the consequence of the complexity of the objects studied, but at the same time it has entailed a change of intellectual attitude, indispensable to attain that level of *intersubjectivity* without which no knowledge deserving to be called scientific (though in a broad sense) can be acquired. This change of attitude, which we could qualify as the adoption of a “dialogic” category from the intellectual side, is what constitutes the deep root of the interdisciplinary method, and also justifies the search for a *synthesis* after having duly *analyzed* the different partial perspectives on our problem offered by all the specific sciences and having taken their contributions seriously.

Applying these general considerations to the specific case of bioethics, we say that all the different points of view from which our particular issue has been considered (e.g., medical, social, economic, psychological, legal, etc.) must be “integrated” in a final *synthetic judgment*, which depends on a serious dialogue among these disciplinary competences, in the estimation of the “weight” that must be attributed to the individual factors in the situation considered, and finally should produce the

proposal of a *norm*, or at least a guideline, for the adoption of the ethically correct *choice*. The application of this methodology in bioethics is still rather uncommon, owing to the difficulty of overcoming the one-sidedness of the single scientific viewpoint and attaining the intellectual openness necessary for this work.

It falls outside the scope of this contribution to make a presentation (even a cursory one) of the interdisciplinary method (also with the view of distinguishing it from multidisciplinarity and transdisciplinarity). Nevertheless, we cannot omit mentioning another aspect of bioethics that has a certain similarity with interdisciplinarity, without coinciding with it. It is the fact that in bioethics it is normal and obvious not only to consider what – regarding a given issue – different disciplinary perspectives say, but also the different solutions that are often proposed by different *ethical theories*. In this case the dialogic attitude is much more difficult to adopt since the individual subjects who participate in the dialogue are *existentially committed* in favor of a determined ethical doctrine (which is usually a substantial part of their global conception of life, from which it is hardly possible to make abstractions in the discussion). Therefore, the precise conceptual analysis, the rigorous examination of the arguments, and the indication of “intuitively” unacceptable consequences or of logical inconsistencies still remain possible, but they lack the discriminatory force that they usually enjoy in the sciences strictly understood. Nevertheless, the *complexity* with which bioethics has to cope has much to do with the *plurality* of the ethical convictions present in our societies, a plurality that is destined to grow with the expansion of globalization and with the greater and greater number of multicultural traits that our societies are acquiring.

This, too, is an *unprecedented* situation, concerning not only medical ethics, but traditional general ethics as well. Until the nineteenth century we could say that, within every great cultural area, a broad ground of commonly accepted moral norms existed, and that the different ethics consisted of proposing the “foundations” or intellectual justifications of such norms, starting from different general principles. Today, this is no longer the case: within any society there are behaviors that are considered morally licit by some groups and illicit by others, and it is clear that only different and antagonistic ethical theories can “justify” these opposite points of view. What we have to recognize regarding society in general holds for bioethics too, in which there are many open and debated questions of this kind, so that it is not arbitrary to say that precisely the liveliness and the topical character of these bioethical debates have produced a genuine “rebirth” of ethics as such. This is a point, however, deserving additional deeper attention, that we will outline in the final section of this paper.

Ethics in a technological world

The aspects of novelty examined thus far are certainly important, yet there is another one that is not especially stressed in the literature but that is more relevant. It consists of the fact that – if we consider things with accuracy – we realize that the bioethical problems originate from the application of *technological* processes, particularly advanced in the domain of *life* and, in this sense, they challenge the very common view according to which technological progress is *in itself* positive, so that one could formulate the maxim “what is technologically *possible* to do, *must* also be done”. In bioethics, on the contrary, many situations are debated in which certain things “*can be done* (technologically), but *must not* be done” for moral reasons. Since these are not isolated cases, but constitute almost the totality of the specifically bioethical issues, we may say that bioethics offers itself as an emblematic case of an epistemological reflection that tries to identify a possible point of encounter between techno-scientific progress and the evolution of the moral conscience. We speak of an evolution to point out that it is not a “revolution” of ethics, but a necessary maturation implied by the transition from a human conduct situated in a “natural” environment to a conduct situated in a technological environment. Therefore, we can revisit the characterization of bioethics that we proposed at the beginning and say that bioethics is a critical dialogue among disciplines with different epistemological patterns, aiming at elaborating norms for steering the individual and collective actions as solutions of conflicts arising from the application of technology to life.

As we have said, this is a precision that one attains by considering a little less superficially in what consist the specific bioethical debates. Yet this also corresponds to the concerns that were *at the historical origins* of bioethics, origins that do not coincide with the story that we also repeated at the beginning, when we said that bioethics started in the USA at the beginning of the 1970s with the founding of the Hastings Center and the Kennedy Institute. This record is correct if we put ourselves in the *institutional* point of view but not in the *conceptual* point of view that is obviously relevant to the understanding of the *meaning* of the term “bioethics”.

According to what one reads in almost every book, this term appeared for the first time in 1970 in a paper by the North-American biochemist and oncologist van Rensselaer Potter;⁴ and after that time, it found diffusion in the USA and later in

⁴ This was in a 1970 article and was taken up by him in the book *Bioethics, Bridge to the Future* (see Potter 1971).

Europe and other countries. Historical accuracy, however, has led us to recognize that this term was used in 1927 by the German Lutheran theologian Fritz Jahr in his article *Bio-Ethik. Eine Umschau über die ethischen Beziehungen des Menschen zu Tier und Pflanze* (Bio-ethics, an analysis of the ethical relations of man with animals and plants).⁵ That article had been preceded the year before by another paper in which the term “bioethics” does not occur but whose title is very significant (*The life sciences and ethics*) because it indicates the conceptual space of the new perspective. Those ideas were then developed in other writings of the same author (where he even speaks – with a Kantian flavor – of a “bioethical imperative”) that are very pioneering. His concept of bioethics expresses a much broader consideration of the relationships between humans and non-human forms of life and, as a consequence, advocates an ethics of respect for the animals used in experimental research, the necessity of a moral evaluation of the intentions of a research project, and various aspects of the dissemination of scientific knowledge among the general public, to make people participant in the scientific enterprise. Jahr’s ideas, however, were expressed at a very unfavorable cultural and political moment in Nazi Germany and remained therefore not influential. Yet his arguments showing that a new science and technology require new ethical and philosophical reflections must be considered as pioneering intuitions of what not only bioethics has to be, but in general an ethics at the level of our time. One must also note that the same Potter (who probably did not know of the existence of Jahr’s writings) conceived bioethics in this broad sense concerning the relationship between human action and the preservation of a biological environment suitable for the survival of humankind and the wellbeing of future generations.

The reference to Jahr is also important because - by indicating the roots of bioethics in an endeavor for finding a contact point between ethics and technological progress – it invites us to consider as fundamental texts in this same direction two (seldom mentioned) papers by the catholic theologian Karl Rahner,⁶ who treats with philosophical depth the theme of the “genetic manipulations” (that is, of the first results of genetic engineering), and very clearly poses the problem of the ethical control that human beings have to exert on the products of that technology that they themselves have created, with potential impacts on their own identity and nature. Rahner does not use the term “bioethics”, but it is certainly signif-

⁵ See Jahr (1927).

⁶ These two papers are *Experiment Mensch* (Man as an object of experiments) and *Zum Problem der genetischen Manipulation* (The problem of genetic manipulation). The first is the text of a lecture held in different countries between 1965 and 1967, and the second is a contribution published in a collective volume in 1968. Both can be found in Rahner (2001), at pages 437-456, and 498-524 respectively.

icant that, around the time at which bioethics was about to obtain its cultural recognition in the USA, its conceptual horizon already included the domain of biotechnologies and, as a consequence, clearly pointed out the generality of the problems surfacing as requirements of an ethics proportioned to a world imbued with technology.

The moral acceptance of the artificial

Understood in this way, bioethics offered itself as an answer to the fear of the technological progress that had begun to spread around the 1960s and had produced in several authors and certain political movements an attitude of repulsion against techno-science, replacing the optimistic “scientist” attitude prevailing in the first half of the same century. The bioethical program can be seen as the awareness that the technological world is not simply the world *in which* we live, but *of which* we live. Therefore, the real problem is that of accepting it and finding in it the ways for the realization of mankind; in this sense humans feel their solidarity with the rest of nature, which is also threatened by the uncontrolled development of technology. Medicine and biotechnologies are the first domains in which this awareness occurs, but they open up a *new* horizon.

A horizon, in particular, in which the opposition between the natural and the artificial according to which conformity with nature constitutes the fundamental criterion for judging the ethical legitimacy of human actions loses ethical significance. This is an old principle formulated by the ancient Stoics and later accepted by Christian ethics. According to this view, nature is the work of God and expresses His supreme wisdom; therefore, man’s action is good only if it conforms to nature. It is possible to accept this view without condemning the artificial, but by simply pointing out that the capability of creating the artificial world of artifacts and social institutions is precisely the expression of *human nature* as specifically distinct from the nature of other living beings. Therefore, the mistrust of the artificial is not entailed by the respect for nature, and must be approached through a deep and critical analysis of what human nature really is. This is a problem that obviously cannot be solved by considering only the biological dimension of human life and, therefore, immediately calls into the discussion several other disciplinary competences belonging to the “humanistic” field taken in a broad sense and, in particular, to philosophical reflection. All this seems at first very clear, but one must recognize that strict conformity with the natural still inspires several attitudes in present bioethics.

The “holistic” dimension of ethics

The explicit acceptance of the artificial is a feature that can easily be seen as a salient difference between bioethics and traditional ethics. Another difference, not less profound but less easy to clarify, must still be noted. It consists of the fact that traditional ethics was chiefly concerned with the actions of the *individual*, while bioethics typically concerns *collective* actions. This is a transition that occurred slowly and of which we shall only mention a few steps.

In pre-modern societies the effects of the actions of a person fell within a spatio-temporal range of limited amplitude, so that they could be considered as directly caused by said actions and to coincide with the foreseen and intended goals of the action. Therefore, no discrepancy existed, normally, between the intention and the outcome of an individual's action, whose moral evaluation could be based on the moral quality (good or bad) of the produced effect. Only in those cases in which the specifically obtained effect was clearly different from the intended and foreseen one, could the moral judgment on the action be modified. With modernity the structure of social life begins to become more and more complex and the majority of an individual's actions constitute only a segment of a very complex network whose final outcome does not *depend* on the intentions of the individual who has realized the small segment, and which very often was not foreseeable for him/her. In any case, the individual is not capable of *controlling* the final result of his/her action. As a consequence, the specifically moral significance of the action ends up by concentrating only on the *intention*, which is necessarily *individual and subjective*. There are also deeper reasons that we can summarize in the privilege that modern thinking has attributed to the subject, but their analysis would lead us too far afield. It will be sufficient to note that in the ethics most typical of modernity, that of Kant, the whole weight of morality concentrates on the intention of the individual's free will, as he declares in the first statement of his *Foundations of the Metaphysics of Morals*: “there is nothing absolutely good in the world and perhaps out of it except the good will”. It follows from this that *moral* responsibility is only individual, since it reduces to the circumstance that the individual had or did not have the intention of doing the action for which he/she is being considered responsible. (the discourse concerning economic or legal responsibility is totally different). This conception can be expressed in a compact way by the maxim “do your duty, come what may” (that is, without taking into consideration the consequences). This contraposition between an “ethics of conscience” and an “ethics of the consequences” is expressed today as a difference between a “deontological” and a “consequentialist” ethics and had been prefigured in the famous Weberian distinction between *Gesinnungsethik* (ethics of

conscience) and *Verantwortungsethik* (ethics of responsibility).⁷ In the Weberian perspective the ethics of responsibility (which is seen as the typical ethics of the political actor) consists of the commitment to pay personally for the possible negative consequences of one's actions, and this is why it was already a "consequentialist" ethics, since it did not entail a responsibility "towards someone". For this reason it has some similarities with utilitarian ethics, which is also consequentialist since it does not consider as morally relevant the intention of actions, but their results.

Independently of the fact of focusing on the intention rather than on the consequences of an action, these ethical perspectives were always concerned with individual actions: and, for this reason, they do not appear really adequate to cope with a world like the present one dominated by a great variety of *collective actions* of great complexity whose end effects are of great dimensions and scope, and that, in many cases, clearly appear as *bad*. All the significant realizations of technology are of this kind and, considering the pervasiveness of this technological world, it is inevitable to recognize that the majority of the activities that concern and affect our present world are precisely collective actions of the kind envisaged here. In addition, one cannot see how it is possible to attribute an intention to a group of individuals and even more to a complex network of individuals who cooperate in the realization of any great technological enterprise (note that we are speaking of an intention in a proper sense, and not just of a *project*, that is something anonymous in itself). Shall we conclude, therefore, that lacking an intention, it also lacks the ground for an ethical judgment and nobody is morally responsible because nobody in particular has wanted the realization of the "bad" result? We are obviously not ready to accept this conclusion, and to get out of this difficulty we need to elaborate an ethics in which individual intention plays a limited role (without, however, being totally disregarded). An ethics in which the different agents enter into consideration not as "free deciders" but as bearers of certain values, of certain competences, and of certain needs, all participants in the global context and mutually interrelated in a web of differently efficacious interactions. This means that we have to consider complex unities that operate "as a whole", and all this can be expressed within a *holistic perspective*: a "whole" that results from the efficient cooperation of various parts that are, on the one hand, autonomous and, on the other hand, not independent. This point of view seems conceptually odd, but modern *general systems theory* offers the conceptual framework as well as several technical instruments for developing this holistic perspective, inside which, in particular, it is possible to elaborate the

⁷ See the beginning of Weber (1919).

concept of a *shared responsibility*. Here the individual responsibility does not disappear but receives a weight proportional to the importance that the individual has in the functioning of the system and in the procedures of decision making. This kind of discourse is still at an initial stage and has much to be developed.

What we have just outlined could be framed, in a certain sense, within the interdisciplinary model of which we have already spoken. Yet there is something more. In our present world (as we have noted regarding bioethics) there is a plurality of different ethics that, in particular, are represented by the different actors of the complex activities of social life. The greatest and fatal mistake would be that of taking this fact as a pretext for maintaining an *ethical relativism*, which would amount to accepting that in the domain of ethics “everything goes”. This would mean discarding the legitimacy of proposing ethical rules for the development of a technological society. On the contrary, the presence of different ethical postures is evidence that the ethical instance is not eliminable and manifests itself through the different ethical doctrines, each one of which emphasizes and absolutizes an important ethical value or principle. Therefore, the problem is that of bringing these different ethics to a dialogue, since each of them offers a valuable contribution to the maturation of a more comprehensive global ethical conscience. At the same time we could become aware that many of these ethics manifest their belonging to cultural traditions that are brought to a confluence by today’s globalization. As a consequence, the dialogical attitude that has appeared necessary to realize a certain level of shared bioethics must be broadened to the search for a shared ethics for the present and the future society which, in any case, will have to confront itself *globally* with the tremendous challenges that the development of techno-science imposes on all of us. And this would be a novelty stimulated by the development of bioethics.

Beyond tolerance

The perspective to which we have just hinted seems to refer to a very remote future, but it actually concerns our present situation, owing to the concurrent effects of two distinct factors. One is the already-analyzed circumstance that the great majority of our actions are inscribed in collective activities; the second one is the accelerating process of globalization that makes every day more realistic the image of our world as a “global village” that was advanced by Marshall McLuhan a few decades ago.⁸

⁸ See McLuhan (1962).

We have already considered the first factor from a single point of view, that of the necessity of elaborating a concept of “shared responsibility” for collective actions, that is insufficiently approximated by the notion of moral responsibility of traditional ethics, which regards individual’s actions. In presenting this problem we tacitly presuppose that all the individuals cooperating in the collective action share common morals, so that all of them agree on what is dutiful, permitted, and prohibited, not only regarding the end-result of the collective action, but also regarding the particular “segment” of the collective action of which any single actor is in charge. This presupposition, however, could be taken for granted, perhaps, in societies that we might call “traditional”, in which morals were substantially homogeneous, but this is no longer the case in modern societies, in which the variety of morals is widespread. It would be too hasty and superficial to charge this phenomenon on the “relativism” that allegedly affects our age. The deepest reason is another: morals are a complex texture in which factors of different nature intervene, but whose most effective ground is customs (it is not accidental that “morals” and “ethics” etymologically derive, respectively, from the Latin *mores* and Greek *ethos*, words denoting customs). Now, customs are something that requires a continuity and accumulation in time, something that becomes “habitual” and general: therefore, no wonder that the new, unprecedented, and surprising situations produced by the advancements of technology are not “covered” by customs and, as a consequence, are not directly covered by the current morals either. This is something we already pointed out when we discussed the “novelty” of bioethics, but we can now see a fundamental reason for it.

Since humans are rational beings, they spontaneously ask for some reason for which their freedom of action ought to be limited by obligations or prohibitions, and these reasons, in modern cultures, are given by those philosophical reflections that constitute the various ethical doctrines or theories. When a system of moral norms is generally accepted within a certain society, different ethical doctrines can appear as a kind of intellectual exercise. Today, however, morals are no longer an obvious thing, and large groups of people differ in the acceptance of even basic moral norms. Therefore, the presence of different morals almost inevitably entails the presence of different ethical theories capable of justifying them, and these theories very easily appear conflicting. Such a situation already concerns actions and conducts belonging to what we could call “ordinary life”, but it becomes more acute when it comes to new unprecedented possibilities of action created by technology, for which no specific moral norms exist but must rather be created and introduced. In such a way we can better understand the significance of the confrontation among rival ethical theories discussed in a previous section of this paper.

To make the present situation more complicated the phenomenon of globalization has recently arrived. The meaning of this concept is usually restricted to the domain of economics, with a special accent on the rapid diffusion of more and more efficient communication and information technologies. From this point of view globalization reflects the basic views of McLuhan, who indicated the causes determining the mental structure of persons and cultures in the development of communication technologies. Having attained today an exceptional level of speed and breadth, these technologies have also produced great commonality of fashions, stereotypes, and models of life, that have largely eliminated the effects of spatial and temporal limitations and rendered our planet “smaller” and culturally similar to a village, in which communication is easy and cultural features are homogeneous. This view contains several correct points, but it is also oversimplified and underestimates the great weight that traditions and customs have in the shaping a person’s and a culture’s mental structure. Today’s globalization adds to the fundamental element of the quick and broad exchange and dissemination of information the no less important element of the much easier mobility of *persons*. This phenomenon presents more superficial (but still significant) forms like tourism, holidays in foreign countries, and low-cost travel, near other still limited but more important forms like the fact of individuals or families finding a stable job and residence in a foreign country, up to the more impressive phenomenon of thousands of people who, for different reasons, leave their homeland and “migrate” to other regions of the world, carrying with them usually nothing more than their customs, religious faith, and general worldviews. These are often at variance with the culture of the country where they could find a settlement, and when their community becomes rather big, well-known conflicts of different natures may arise. This, however, is a phenomenon that cannot be stopped, and it is reasonable to consider this as a historical trend that will, in the long run, produce an increasing mixture of populations and cultures all over the world. We obviously cannot consider here what kind of geopolitical and social problems will follow this phenomenon, but we can consider what it would mean simply from the point of view of our theme, that is, regarding the need of proposing an ethical approach for our global society in the presence of technological development.

The great difficulty of this task clearly appears if we reflect, on the one hand, on the fact that intrinsic to any morals is the conviction that their precepts have *universal* purport, that is, that they do not correspond to a subjective appreciation but are binding for every individual because they say what anyone *ought to do* in certain well determined circumstances, independently of the fact that this be agreeable to that individual or not. On the other hand, however, it is not easy, in the case of any

particular moral norm, to demonstrate *why* it has universal purport (the history of philosophy is full of such endeavors, no one of which was fully satisfactory). Nevertheless, humans have always admitted the existence of moral obligations with universal purport and, at the same time, have found a concrete criterion for establishing this universality by making reference to the customs of their community: the sense of “belonging” to a certain community translated itself into the interior disposition to live in agreement with its moral norms that were intended to hold for *all* members of the community and, therefore, were also believed to hold for all humans.

From what we have discussed above it appears that in a globalized society such as the one we are already beginning to have today, which will be more and more so in the future, humankind cannot rely upon a common ethical doctrine for “founding” a universally accepted system of moral norms, or on a common ground of customs to which make reference. On the contrary, the plurality of discrepant ethical doctrines and of discrepant cultural traditions is the historical situation of the present and the future world.

Tolerance seems the most fruitful way of attaining the ideal goal of something like a common moral ground for facing the great challenges of technological progress. Yet this is clearly a necessary condition but it is far from being a sufficient one, because tolerance (understood in its non-trivial sense) does not consist of the *respect for ideas* as such, but in the *respect for human beings* that specifically entails the respect for their ideas. Therefore, this respect for the other people is the genuine foundation of tolerance, and it may be seen as a good approximation to that notion of human dignity that is so elusive and difficult to capture in an explicit definition, as has sometimes been noted. Within the framework of this sympathetic relation a dialogue can naturally arise, when the two partners do not limit themselves to ascertaining that they disagree on certain ideas, but try to understand *why* they disagree, coming in such a way to a certain mutual “understanding”.

This is probably the maximum level that can be attained by tolerance. It is certainly of great importance and significance, but it is still insufficient for the following reason: it essentially consists of an accurate recognition and description of the existing differences, but lets them stay as they are; it lacks the creative force for “overcoming” the differences without suppressing them, that is, the force for finding something new that could propose solutions for certain fundamental problems that the different positions were unable to solve. How can something of this kind happen? By changing our way of considering *diversities*. In our traditional way of

thinking diversities have been considered as opposites, as realities that are reciprocally “at variance”. What characterizes this view is the idea that diversities are a sign of deficiency, of imperfection, the evidence that many errors still circulate. The new way of thinking that we really need is that of considering diversities as *wealth*, because each of them contains something valuable and is at the same time only *partial*, so that none contains the whole of what is valuable.

This discourse becomes particularly significant in our globalized society, in which diversities are not simply some competing ethical doctrines, philosophical schools, or political ideologies whose discrepancies might be treated within a logical and conceptual analysis, but are diversities represented by global traditions and cultures that have come to a confluence and can no longer remain in isolation. That such a coexistence of diversities can be fruitful has been demonstrated by those civilizations and cultures that, in the highest periods of their history, have nourished themselves with the diversities they encompassed, attaining fruits of splendor, success and power.

More than the memory of past historical examples, however, what is needed is a new spiritual attitude, that is, the internal conviction that the “others” have many things that I do not have, which are intrinsically valuable and could hence also be of value for me (or for us). This mental attitude is not easy to acquire, since it presupposes an awareness of our own limits (cultural, historical, institutional, and political). Almost every culture has cultivated the illusion of being in some way the center of history and of the world. Today, on the contrary, we must abandon the project of finding a new “center”, being aware that human finiteness does not allow either an individual or a single community or culture to encompass the totality of what is good, beautiful, and valuable for humans; whereas, all of them have something to offer and something to receive. Thanks to this new awareness the people in the globalization era would be able to find the roots of their own identity and, at the same time, to be open and enrich themselves by what they can receive from participating in the contributions of traditions different from their own.

All this is very important from an ethical point of view because it avoids the deterioration of the moral conscience since it keeps the sense of *duty* alive, though recognizing that non-superficial differences may exist in the ways humans concretely identify certain duties according to their culturally influenced moral convictions. The respect for other people’s convictions does not entail at all giving up our own convictions, but must be accompanied by a critical, serene comparison, and might gradually open the way towards a progressive convergence: first, on certain funda-

mental values, and then on specific norms capable of translating those fundamental values into practice. Today, a certain convergence already exists (at least formally) regarding the respect of several human rights, independently of the theoretical positions that people can accept regarding their “foundations”. We must operate from the view that commonly-accepted moral values become more and more deeply understood and “internalized” in such a way as to transform themselves into rules of individual and collective behavior, and they acquire the status of a moral frame of reference for all humankind that should also be followed by adequate legal regulations.

All this cannot be attained overnight, nor can we believe that it will occur “spontaneously”. A deep cultural change is at stake that requires an engaging work of education, especially regarding the young generations, starting with school education in which pupils should become accustomed to knowing, understanding, and appreciating what is “different”. This, however, is only a necessary “framework condition”: the backbone of such maturation cannot be anything different from the development of a sense of solidarity and openness, whose promotion cannot be delegated only to schools.

References

- Jahr, F. (1927). Bio-Ethik. Eine Umschau über die ethischen Beziehungen des Menschen zu Tier und Pflanze, in Kosmos. *Handweiser für Naturfreunde*, 24, 2-4.
- McLuhan, M. (1962). *The Gutenberg Galaxy: the Making of Typographic Man*, Toronto: University of Toronto Press.
- Potter, R. (1971). *Bioethics: Bridge to the Future*. New Jersey: Prentice Hall.
- Rahner, K. (2001). *Verantwortung der Theologie: im Dialog mit Naturwissenschaften und Gesellschaftstheorie*, Freiburg i.Br., Herder.
- Weber, M. (1919). *Politikals Beruf*. Reprint: Berlin: Duncker & Humblot; 1964.