

Science and ethics from a discursive perspective

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Abstract: This article seeks to contribute the understanding of the crisis of globalization from the relations among science, technology and morality point of view. The phenomenon of terrorism, also the one of the State, the world injustice, the desire of men to have total control over human life, as well as the deterministic reduction of all human freedom should be able to summon the moral resources of all human groups, in order to look for an ethical solution to the problems of a unilateral neo-liberal globalization. To do this, there is the possibility of dialogue in the search of a world ethos. The theory of communicative action, developed by Jürgen Habermas, can help to understand the relations between science and moral in a similar way to that proposed by Kant, but with other resources, those of politics and ethics. Science, Technology and Society, with the help of communication and dialogue, force us to reformulate the sense of university as the place of dialogue and more human discursive production in globalization times.

Key words: Science, technology and society, discursive ethics, human freedom, scientific naturalism, religions, post-secular society.

Resumen: El presente artículo busca ayudar a comprender la crisis de la globalización desde el punto de vista de las relaciones entre ciencia, tecnología y moral. El fenómeno del terrorismo, también el de Estado, la injusticia mundial, las pretensiones del hombre de disponer en todo sentido sobre la vida humana y la reducción determinista de todo sentido de libertad humana, deberían poder convocar los recursos morales de todos los pueblos para buscar una solución ética a los problemas de una globalización unilateralmente neoliberal. Para ello se ofrece, principalmente, la posibilidad del diálogo en búsqueda de un ethos mundial. La teoría del actuar comunicacional, desarrollada por Jürgen Habermas, puede ayudar a comprender hoy las relaciones entre ciencia y moral de manera semejante a como lo planteara Kant, pero con otros medios, los de la política y la ética. Este renovado planteamiento sobre Ciencia, Tecnología y Sociedad, con la ayuda de la comunicación obliga a replantear el sentido de universidad, como el lugar del diálogo y de la producción discursiva más humana en tiempos de globalización.

Palabras clave: Ciencia, tecnología y sociedad, ética discursiva, libertad humana, naturalismo cientifista, religiones, sociedad postsecular.

1. The dialogue between scientific naturalism and fundamentalist traditions

Today, several are the reasons that make us turn our heads toward a recurring matter as with the help of the most sophisticated knowledge men are endangering nature or the species itself. On October 16th, 2001, the German philosopher Jürgen Habermas was awarded with the Peace Award from the German Book Chamber, receiving it with a speech on the relations between faith and reason “Glauben und Wissen” (Habermas, 2001), in which, assuming Hegel’s conception of such relations, refers to the debate between science and religion concerning bioethics and its relation with the sense of life, as the event of the previous month; September 11th, 2001. Habermas compares the fundamentalism at play in the irreconcilable discussion between scientist who believe they are the owners of the human life, and the religions that totally reject the research that could deny their transcendental origin, with the fundamentalisms generated in the conflict of the New York terrorist attack and in the equally terrorist threat of the infinite justice and the war against the reign of evil.

The solution to this sort of square of fundamentalisms, scientific naturalism, religious dogmatism, cultural fanaticism and political terrorism can be found only by going back to the ethical sense of citizens who are the ones who must make decisions about their ways of life in an increasingly complex world and society. The civil society, communities and people, in between the fundamentalist extremes proposed by knowledge (science, technique and technology, as well as of the threats to life and war) and the believe (religions, cultures and meta-relates of maximums) only have their capability of deliberating privately and publicly, and their capability of being directed by feelings, motivations and reasons which they can trust in, in relation to their own sense of life.

The proposal is to establish the conditions of a dialogue that, parting from the tolerance of the extremes, makes it possible the understanding of their conceptions of good and life, their values of maximums, their sense of religion and politics. If it is accepted that we live in a post-secular society, it is possible that the modernity’s rationalism and its apparent better

conquest, modernization, acknowledge that in other non-occidental traditions, or also occidental ones, but less secularized, there are relevant values for the future of mankind; similarly to the religious cultures would have to be able to accept that also out from their boundaries there is a valid universe of sense for men, as the one that has deserved to be more explicitly lived in the modernity. This positively means that the intercultural understanding is looked for before anything else, that parting from a tolerance among Cosmo visions based on the believe or know, advances in the reciprocal translation of sciences, cultures and religions, searching their sense of belonging for the human condition in its recognition of finitude and contingency.

This reciprocal translation will help that each one of the cosmo visions acknowledges its own limits. “The scientific faith is a science that one day not only complements but also replaces the personal self-understanding by an objective self-description, but bad philosophy (Habermas, 2001:20). In fact, for normal citizens, even if they are interested in science, this will not save them from the responsibility of the decisions they make in their lives, taking into account what the science and the technology can teach them, naturally.

Once more it is the translation, the hermeneutic understanding, the one that allows us to read foundational texts as the biblical narration of the creation in a discursive ethics key. Inspired by the expression of “let us make man in our image” from the biblical narration, Habermas concludes his “Believe and know” with a question suggested by said narration: “The man who determines other man in their way of being natural, according to his own caprice, would have not also destroyed with this equal liberties given among equals by birth, in order to guarantee his difference? (Habermas, 2001: 30). The answer makes it compulsory to have in mind that who pretends being able to break the equality of liberties in the name of science, economy or politics, he himself is excluded from the moral community that fundamentals the well ordered society and the social State of demographic right.

At a second moment let us consider how nowadays a renewed dialogue between the reason and the faith in a post-secular attitude, as that sustained

by the at that time cardinal Joseph Ratzinger and Jürgen Habermas on January 19th, 2004 at the Catholic Academy of Bavaria (Habermas and Ratzinger, 204)¹ is valid against the fundamentalism of knowing and believing. The stimulating thing about the two texts is that they lead us to foster the moral tolerance and the intercultural dialogue, exactly in the root of the conflicts, there where the two fundamental attitudes of the human existence often irreconcilably clash: believe and know.

Debate's subject: "Pre-political moral fundaments of a free modern State". The Cardinal acknowledged the relevance of the multiculturalism phenomenon which would have to give answer to by means of a sincere dialogue between reason and religion, also understood inter-culturally. It is about a worthy step forward in the Vatican's tradition that should be criterion in regions where religion is still a synonym for intolerance in very important aspects of the life in society and of the advancement of science and technique.

Ratzinger begins alluding Hans Küng project about a world ethos, closely related to the intercultural encounter where moral certainties that until now were considered as immovable seem to be threatened. In a globalized world, where men seem to be achieving the modern project of being "master and owner of nature", it seems that not even nature herself can provide the moral support that traditionally religion or philosophy promised.

The global situation of science and religion power that reaches the limits of terror has worryingly displaced the question for the right and the ethos. The atomic bomb and the destruction threats in the name of the religious traditions that argue they are defending themselves from incredulity, locate the moral problem in the limits of reason and religion. Ratzinger asks: "Is religion the one that saves and not the archaic ideology that keeps false universalisms and leads to intolerance?" But also an exalted rationalism that demands "infinite justice", and a scientific naturalism that can already produce men in the retort, that are not willing to protect the world or to take what makes possible a dignifying life for all the inhabitants, seem to

¹ I textually cite, translating from the German text found at the web site indicated in the bibliography

reach the limits of the reasonable. It is as if religion needed the inspection of the reason of State, at the same time that the modern reason would also need a corrective.

The theologian glimpses a solution in the intercultural dialogue between religion and reason: “Now, the inter-culturality seems to me an inevitable dimension for the discussion about the fundamental questions of the human existence, discussion that does not have its limits in the interior of the purely Christian or the mere tradition of the occidental rationality”. It is as to the tensions of the occidental cultural tensions between Christianity and rationality are added those from the Islamism, Buddhism and India tensions with its internal tensions between the know and the believe. “The indigenous cultures from Africa and Latin America, once more animated by certain Christian theologies, complete the picture. All continue appearing not only as questions of the occidental rationalism, but also as questions of the Universalist pretension of the Christian tradition”.

These considerations lead Ratzinger to conclude in the “non-universality of the two large Western cultures, the Christian faith and the secularized rationalism”. The fact is that, for us the westerners, our rationality is a warranty of truth; same does not happen with other cultures, for whom there are limits such rationality does not have access to. It would be necessary to look for an inter-cultural complementarity that is not only that of the Christianity and secularized rationality. It would be arrogance peculiar of the West to consider the other cultures as “quantité négligeable”, arrogance that we are already paying a high price for. It is important for the two large components of the Western culture to listen, to assume the other cultures “in the attempt of a polyphonic correlation”, where “the values and norms acknowledged as somehow essential for every man can gain new inspiration. Only by doing so what maintains the world together will be able to gain a new transforming force”. Up to here the important considerations of former professor Ratzinger.

Jürgen Habermas thinks he can overcome this position, going back to a world of life where different meta-relates, also the illustrated tradition of the modernity, scientific-technical rationality, compete for giving sense to the different types of life. His argumentation makes it possible to understand

the relations among science, moral and politics in different cultural contexts, to design their meaning in a post-secular society

The question that directs the argumentation is “if the free secularized state, lives from normative presuppositions that the state itself cannot guarantee”. This is, if the ethics of minimal that fundaments the *de jure* State requires values from maximum morals from the different cultures. In other words, if, as Hilary Putnam (2002) suggests in one of her last books, we are faced against the “collapse of the dichotomy between (sciences of, Guillermo Hoyos Vasquez) facts and values”.

The political liberalism from a cognitive approach is understood as a non-religious and post-metaphysical justification of the democratic *de jure* State normativity. For this it is enough to assume a sense of communicational reason that does not falter before the contextualism, but that does not entrust in the decisionism of the juridical positivism. This allows understanding the democratic process as a devise to create legitimate right. If it is acknowledged that the constitution of the liberal State is self-sufficient in regards to its legitimization, it is still necessary to see if this also applies to the motivations a well ordered society requires to be coherent with the agreed norms. Against a frequent misunderstanding Habermas reaffirms that by “constitutional patriotism” must be understood the fact that the citizens make their own the principles of the charter, not only in its abstract form, but also in its concrete historical context: “among the members of a political community only solidarity emerges, whether this is abstract and mediated by the right, if the principles of justice find their place in the thick tissue go the cultural valorative orientations”.

To begin with, it is not noticeable that the *de jure* State by itself is in danger due to the lack of its own cognitive or motivational criteria. However, an exacerbated modernization, in part for certain uncontrolled development of the science and technology, could put at risk the solidarity of the democratic State, with no options to demand it legally. The conversion of the citizens from the consumption society into “isolates monads” —in terms of Habermas himself—, due to their self-interest, that only make use of their subjective rights as weapons against the others, undermines the very sense of *de jure* State. The neoliberalism attains this new model of savage

society at a global scale. At the same time it seems that the religions' survival and the resource to cultural traditions phenomena are surviving. This has led to a radical critic of the reason, not only in its manifestation as an instrumental rationality, which at the same time makes the philosophy to reflect on its metaphysical origins close to theology.

In the limits between the know and the believe, modern reason has traveled the experiences of the moral self-consciousness, the historical finitude and the social solidarity, resources that do not substitute certain scientific naturalism and those cannot be renounced to in times of radical crisis. Philosophy reminds us traditions (Christian and non-Christian), whose fundamental values are expressed as responsibility, autonomy and justification, history and memory, innovation and return, emancipation and plenitude, exteriorization and incorporation, individuality and community.

A democratic State that looks for the encouragement of the connivance does not only nourish from the contents and motivations from different cultural traditions, but it has to encourage, mainly by means of the education, the dialogue among different omni-comprehensive conceptions. It is necessary to know how to translate these maximums in order to enrich of contents a democratic *de jure* State, whose legitimacy resources are now threatened by a reductionist vision of globalization, mortgaged by the neoliberal economy. In the world of the life and in the history of the peoples, not a few times, in the form of popular religiousness (theology of liberation), are libertarian ideals and justice demands conserved, that not only renew motivationally and cognitively the contractual forms of modernity, but also preserve the moral responsibility, the dignity of the person and the universal solidarity (humanly feeling), without which the normativity of the modern State threatens with fading.

This radical position in respect to the dialogue leads us to another scenario of the contemporary discussion in the philosophy of science: the relation between "Freedom and determinism" (Pauen, 2005). The latter is the title of the conference by J. Habermas when he recently received the Kyoto Award (Habermas, 2005: 155-186). Here, the argumentation is centered in clarifying the sense of the ethics between two extremes: scientific naturalism and fundamentalist religion.

The most important thing is to settle the terms of the current argument between naturalism and religion. "It is not in doubt that all the operations of the human spirit are totally dependent on organic substrates. The controversy focuses more in the sense of the spirit naturalization. An adequate naturalist comprehension of the cultural evolution has to be capable of giving reason of the inter-subjective constitution of the spirit as well as the normative character of its operations directed by norms" (Habermas, 2005: 7). It is not, then, about demanding from naturalism the acknowledgement of an independent spirit of the body's natural operations, specially the brain. But it is expected to be able to explain the complementariness of science and ethics when acknowledging the inter-subjectivity the human beings are immerse in and the sense of normativity this implies. Both aspects of the same problematic can be approached in terms of a theory of the communicational behavior.

In the opposite extreme, the scientific efforts for the naturalization of men and a gradual social engineering, there is the unexpected revitalization and politicization, not always reasonable, of believing communities and religious traditions. A post secular society has to be able to identify the limits of the modern rationalism and of its post-metaphysical conception, secular or non-religiously musical of the world, of men and history. With this, laic positions in the understanding of the modern State or agnostic conceptions of the religious matter have not been questioned. What has to be set clear is that:

The fact that any possibility of political formation has to be done within the framework of a universe without alternatives from the development of science point of view, the technique and the economy, in the sense these have been formed in Occident, is not being questionable. The controversial matter is the correct interpretation of the sequels of a marked secularization by a sort of cultural and social rationality from Occident, to which religions attribute more and more the cause of the values world crisis (Habermas, 2005: 7-8).

From these three scenarios of the dialogue between the know and the believe we can now better understand the sense of the problem we approach to when we ask for the ethics in the contemporary research. This cannot be

proposed in the margin of the science, the technique and technology; a sufficient answer cannot be expected from the science itself. In a post-secular society and in a world-one, it makes sense to talk about a *world ethos*, in the way Hans Küng and in the way Jürgen Habermas, as well as Peter Singer, develop in recent works. This is equivalent to affirming that the western rationalism, their way of life, their secular condition before the religions and cultural traditions, it cannot be affirmed as being absolute, or paradigmatic; an intercultural dialogue is imposed in a world-one and in a history from the cosmopolitan point of view, already predicted by Kant, that looks for the world ethos to a perpetual peace. This allows us analyzing the sense we must now give to the subject of ethics in cultural contexts to show how multiculturalism rather than being an obstacle for the understanding of moral, can be a resource for its realization in a “single world-one”, where globalization is present as a moral challenge. We will show the need of this diagonal attitude in the current situation, to later consider how only a change of paradigm in the philosophy allows us developing communicatively an ethical conception that is enriched from the cultural contexts where it necessarily emerges.

2. A philosophical reflection in times of globalization

In order to analyze the relations between research and ethics in the current discussion, I want to start from the most recent book by Peter Singer: *One single world. Globalization ethics* (Singer, 2004), where he proposes changing the sign of the economist discourses of a neoliberal globalization, to substitute them for an ethical understanding of the international in cosmopolitan key and for a moral stake in the search of global solutions, the only possible now, to the environmental, economic and political-juridical problems in a world-one; problems that have been object of researches and of which the science, technique and technology have been dealing with for some time now.

To deepen in the sense of this relation between science and ethics I go back to Kant's moral and political philosophy, as well as Singer does. The development of the scientific knowledge in the modernity, in both the nature's sciences as well as in the social ones, does not prevent us from the

empirical experience and the conceptual analysis of the world-one's phenomena, to think of ideas of the metaphysics that could give sense to the human behavior as a whole. Such is the case of the idea of world of cosmogony, as a gradually cognitive totality by the science in its mathematization of the laws referred to the spatial-temporal phenomena project. It is also the case of the practical reason that gives sense to our actions in the history when motivating us to reckon ourselves as free, in respect to the moral responsibility we have to share in our social duty in the very same historical world-one.

From this, the scientific research can advance with its own logic without being restricted at all by moral principles of any kind. Moral has not reason to intervene, and it has not way to do so, in the quest for scientific knowledge. But at the same time the science must not, as sometimes it intends to, go further than we can know based on experience, to determine with its laws the criteria of the free human action. Even if the correction and legitimacy of the human behavior can be thought in analogy to the legality of the nature itself, its foundation is not in the causality law, but in respect to that law that leads us to ask for the moral point of view. The interference of the moral in the scientific knowledge processes is moralism, as the intervention of the science in the freedom sphere is known as scientific positivism.

This is the sense the critic of phenomenology has regarding the direction taken by the development of the science in the modernity. The modernization processes get into crisis as the science, technique and technology assume by themselves in their wonderful dynamics in the direction of the human progress. It is the consequence, as Edmund Husserl said short before World War II, of a reductionist development of the methodology and of a holistic conception of science: "positivism, to say something, beheads philosophy" (Husserl, 1962: 7).

As it is well known, the solution to the sciences crisis is looked for in name of an illustration that inspired the sense of emancipation own of modernity. The philosophical reflection tries to reconstruct a sense of subjectivity in a world of life, where it makes sense, besides asking for what we can know, to think what we must do in our relations with nature and other humans, and expect to be able to accomplish ourselves when

behaving according to our desires and capabilities.

This would be possible and would make sense if it was not because the same idea and the illustration project were taken by an unilateral sense of the science and the technology, which has meant the colonization of the world of the life by the technique and that has as a result exactly the opposite of emancipation for the current man. This dialectic of the illustration (Horkheimer and Adorno, 1969), as diagnosed by the critical theory of society almost at the same time and in the same situation that phenomenology pointed the sciences' crises in the West, explains the sense of a possible end of history in the one-dimensional society. The first paragraph of *Knowledge and interest* by Jürgen Habermas in 1968, at the time of the rebellion against the system and for the emancipation also finishes with this verdict: "Because the positivism is that: denying the reflection" (Habermas, 1968: 9). Therefore, the philosophical reflection has to look for a reconciliation of the guiding interests of the scientific knowledge, in both the nature as well as in the society, with the emancipation interest own of the moral, not as pure interest in the opposition to empirical-pathologic interests, but with an incorporated intentionality in every human activity, both theoretical and practical.

The debate of the phenomenology and the fathers of the critical theory of the society with the positive beliefs is not, therefore, an advance of the unfortunate confrontation between the analytical philosophy and the called continental philosophy, as many try to interpret it. It is something more fundamental, inscribed in the tradition of the Kantian dispute about the relations between causality and freedom, between science and moral, precisely in search of the completeness between scientific-technical rationality and practical reason. To be inscribed in this tradition is not to defend certain rancid subjectivity against the advance of the sciences—as some try to evade criticism—, criticism that is thought to be more irresponsible the less the science has advanced; it is not about a tired apology of "soul" that would liked to be eternalized in a righteous way of professing the philosophy as ethics either; rather, it is a reinterpretation of the relations between theory and praxis, based on a development of the communicative behavior theory, for which any objectivity of know is not possible "without

inter-subjectivity” of the understanding (Habermas, 2005: 177). For that it is necessary to overcome the fundamentalist critic to the called positivism of the sciences. This overcome is possible due to a change of the philosophical reflection paradigm, prisoner of a subjectivity in dialogue with itself, turning toward a communicative acting where the different interests, the different cultures, the knowledges and the discourses that demand being able to give the citizen a sense of person in a society in a cosmopolitan key interact.

This perspective of the relations between science, technology and society allows is acknowledging the collapse of the dichotomy between science of facts and values, to understand every time closer relation between the sciences and the estimating competence of the scientist themselves and also of the users of the new technologies and their products. Then the change of paradigm of the philosophy of the reflection to the theory of the communicative action can mean a new justification of the relations between science and ethics, in the fundamentals of the called society of knowledge, as well in the application of the science of the moral in the different contexts of the human behavior, as for example, in the bioethics or in the neurosciences, including the environmental dimension, in the business ethics, as a reflection of the political economy and on fearless projects such as the “global justice” and the communications.

It is about, acknowledging once more the autonomy of the science and the technology, considering them in a pragmatic way, regarding the instrumental rationality as a strategy of the practical reason to help understanding the development as freedom (Sen, 2000). This obliges us to understand the science and the technology in their ethical and political context in times of globalization, which at the same time motivates a reflection on them from the moral point of view, of the human nature as well as from the relations among people and among States, in order to propose an ethics of the human species and an ethics of the globalization in an universalist moral key.

I am referring to two efforts, paradigmatic in a way in the fields of the bioethics and the political economy, to develop the relation between science and ethics, not pretending with this to discuss their successes, to know: *The*

future of the human nature by J. Habermas (2001b) and the *Ethics for Globalization* by P. Singer, who we mentioned before. Both of them, from two different understandings of moral, one closer to Kant, the other more utilitarian, point to the same direction: today, a moral, necessary and universal point of view makes sense, not based on *a priori* of the abstract reason, but justified as an objective criterion for its reach; this is, for the capacity of being understood as a regulatory, historic and heuristic idea, and of being assumed as a task that can compromise everybody in a cosmopolitan way and as an answer to the moral sensibility and the demands from the citizens of the world. In this universalist perspective it can be valid to even talk about a populist reason (Laclau, 2005) in a close relation with the moral sensitivity of the citizens, if with this the phenomena such as the populism of the epistemological conviction and ethical discrimination, as if it was not too serious, almost irrational to understand the social and in a less noble way, almost manipulative of making politics.

This new way of thinking in science, technology and society, already present in proposals on justice as equity, of the no differentiation and discrimination between human rights and economic and social rights, and specially the very modern of global justice against world poverty, would have to be able to direct constructively the articulation of the relations between scientific knowledge and ethics in the different discourses of the social and natural sciences and specially in their applications in this world-one. The science would contribute with its cognitive strengths and ethics with its motivational strengths in a dialogue between intellectuals and citizens, nourished from the democratic participation and that at the same time strengthens it. “It is not the philosopher —affirms J. Habermas— [nor the scientist, I add], it is the citizen who has the last word” (Habermas and Rawls, 1998: 172).

3. Universality, science and moral

I would like to conclude this philosophical reflection suggesting how the idea of universality without Jacques Derrida’s condition (1987, 2003), where the unpredictable can be an event, corresponds to what has been so far proposed.

The university's reason of being must not be conditioned only to research financed by the private sector or by the State, and even less to the service of the military industry, it also should not be conditioned by the mere formation of professionals. In this it has to be that the provable, science, technique and technology is developed and consolidated in the context of the doable, of the new humanities, inspired by the moral, political and rights philosophy. But even in this practical sense of the doability of the moral commitment of its professors, professed of the knowledge, is confused and revolutionized by the aperture of the university to the exterior, to its context, to the public, in this "as if..." of the event, that transcends the provable knowledge and the doable faith profession in the hope of the coming democracy (Derrida, 2002).

This definitively means the real possibility of overcoming the dichotomy between science and moral. Before the abyss between theoretical and practical reason, Kant proposed as a solution the principle of nature's suitability and its laws for the aims of the man. This is, there is not a contradiction between nature and freedom as long as we dare to think that being free we can use nature as if the science, technique and technology would be its substantive contribution for a human sense of development as freedom. It is also the suitability that lies behind the practical reason postulate the one that brings the idea of the ultimate good, transcendent and inherent to human history, when we think that the utopia has sense and it is worth the normative hope of bet to the moral in the intra-human historical horizon, where each person should be able to behave as if from this it would depend that sense of connivance of the cosmopolitan citizenship that leads us eternally to peace. This is what directs the advancement of science and technology in a context of formation for a democratic citizenship and the trust in the citizen culture.

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