Global Bioethics in the Post-Coronavirus Era: A Discussion with Roberto Andorno

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**Abstract**

A discussion with Roberto Andorno about global bioethics and biolaw, the Coronavirus pandemic, and its impact on human dignity and rights. Can we foresee the emerging new profile of global bioethics and biolaw in the post-Coronavirus era? How significant are they going to be in the future, after the enormous pressure that the Coronavirus pandemic has exercised on key political, legal, and ethical values? Must the voice of bioethicists -compared to the ‘hard’ scientific data- be louder in the future concerning decisions about emergency social and medical measures? Is there a hope that public empowerment will support robust, global public engagement and meaningful deliberation? How much does Roberto Andorno’s view on human dignity reveal a supposed commitment to moral realism? The massive deaths of elderly people living in hospices of Sweden, Spain, and Italy, based on an implicit ‘fair innings’ view, has recently posed certain questions on the moral unacceptability of such practices. The same questions arise in the case of the legalization of euthanasia grounded on the implicit acceptance of the view that life is not worth living under certain circumstances. Is it possible that the human rights bodies worldwide will acquire executive power, and how could this become possible? How influential the ‘precautionary principle’ can become regarding clinical and research ethics in the future? How urgent is the importance of the introduction of bioethical education in the curricula of ‘hard’ empirical studies? Roberto Andorno discusses with us all these controversial and under heated public debate issues, giving sometimes provocative answers.

**Keywords:** global bioethics; biolaw; coronavirus pandemic; human dignity; moral realism; public engagement; precautionary principle; bioethical education
George Boutlas: During the COVID-19 pandemic we witnessed the growing impact of public health related issues on public life. But even before that, the growing political impact of bioethics during the last decade has revealed the emerging new profile of global bioethics.¹ In your view, how significant will bioethics and bio-law be for social life in the future?

Roberto Andorno: I would say that the COVID-19 pandemic made bioethics more relevant than ever. Many bioethical questions that were until recently only known by experts began to be discussed by the general public: Who should get a ventilator or a vaccine if we do not have enough for everyone? How can we protect the most vulnerable people from discrimination when we face difficult triage decisions? How to balance the measures aimed at controlling the pandemic with considerations of privacy? Has the government the power to make a vaccine mandatory for all, or at least for some categories of individuals? More in general, what is the right balance between public health interests and individual rights? Given the global nature of the COVID-19 pandemic, these difficult ethical questions have also acquired global relevance. As result of this exceptional situation, bioethics and biolaw have received a new and strong impulse that will increase in the next decades. Besides all the public health issues related to the pandemic, I am convinced that the ethical and legal challenges posed by emerging technological developments (Artificial Intelligence, Big Data, neuroscience, gene editing, etc.) are likely to increase in the future. This will make bioethics and biolaw even more significant for social life than they are today.

George Boutlas: The COVID-19 pandemic has put under enormous pressure key political, legal, and ethical values of ours. Sometimes it may seem difficult even to imagine which the day-after will be, and how any possible new normality will look like. For one thing, fundamental moral principles – such as autonomy, self-governance, and privacy – have been ferociously challenged due to the prevalence of totally diverse policies. In your view, should human dignity be still relevant in emergency situations during which common goods – such as public health – are at stake? And if yes, why, and to what extend? In a word, will human dignity emerge out of the crisis stronger or weaker?

Roberto Andorno: The values and the deriving rights that you mention (autonomy and privacy) have acquired paramount importance in modern legal systems. However, it is important to point out that those rights are not absolute, but relative. International human rights law declares very explicitly

that those rights can be limited in the interest of public health, insofar as such restrictions are necessary and proportionate to the purpose of protecting public health (see for instance Art. 14, § 3, of the International Covenant on Civil and Political Rights of 1966). Of course, the difficult question is to determine if limiting those rights can be justified in a particular situation. This is a matter of prudential judgment of each government and can vary from country to country. The severity of the disease in one particular country may justify certain restrictive measures that would be disproportionate in another country. But the principle of respect for human dignity operates differently than privacy and autonomy. Dignity has an unconditional, non-negotiable value and cannot be balanced with other interests or subject to proportionality assessments. The notion of dignity refers to the intrinsic worthiness of human beings, who should always be treated as ends in themselves and never merely as means to something else, according to the famous Kantian imperative. The reason is simple: dignity is not just one right among others but the foundation and ultimate source of all rights. Being the cornerstone of the entire human rights system, dignity can never be disregarded or violated. This is clear, for instance, in the provisions that unconditionally prohibit practices such as torture and inhuman or degrading treatments, which constitute a direct attack on human dignity. Unfortunately, during the COVID-19 pandemic some countries adopted certain measures that, in my opinion, involved a violation of human dignity. One example is the decision made in Spain and Italy to completely isolate elderly individuals living in hospices, many of whom died alone and without any contact with their relatives during the final moments of their lives. That was disproportionate and unjustified.

George Boutlas: During the COVID-19 pandemic the voice of bioethicists has not been as strong as that of, let’s say, immunologists; in most cases the measures that were implemented were based upon ‘hard’ scientific data, and statistical evidence. Should the discussion be more focused on the ethical aspects of the issue? Could this be a reason that these measures were ineffective in most cases on the one hand, and didn’t have wide public acceptance on the other?

Roberto Andorno: It is true that insufficient efforts have been made to promote awareness of the common interests that are at stake in this exceptional context. The different measures imposed by authorities to prevent the dissemination of the virus (lockdown, the use of face masks, social distancing, tests, vaccines, etc.) would have been better accepted if the population had understood that this is a matter of solidarity that transcends the satisfaction of individual wishes. This is particularly important if we consider that we, in the West, live in extremely individualistic societies; we are not very much used to think in terms of the social interest and solidarity. Precisely the pandemic
has reminded us in a brutal way that we all are vulnerable and exposed to sickness and death. The pandemic was a wake-up call about our common membership to the same family (the human family), and about the strong interdependence between all of us.

**George Boutlas:** During the pandemic people entrusted serious decisions about their political and personal freedom, dignity, and future to governmental policies. In the Geneva Statement on “Heritable Human Genome Editing: The Need for Course Correction” you argued in favor of fostering public empowerment that “will support robust, global public engagement and meaningful deliberation” concerning heritable human genome editing. Do you believe public entanglement and fostering appropriate institutions would make us better prepared to cope successfully with major biomedical crises in the future?

**Roberto Andorno:** Today we are more conscious than in the past of the need of a public involvement in promoting the common good of society, including public health issues. At present, one of the areas where public empowerment is more urgently needed is the discussion on whether human germline gene editing – the creation of genetically modified children – should be allowed or not. The Geneva Statement, which I contributed to develop with a group of scholars, aims to draw attention to the need of real public involvement in this discussion. So far, only a few academies of scientists have proposed policies in this area, based on the assumption that human germline alterations do not pose any intrinsic ethical issues and that the only question to be discussed is how to minimize the possible side-effects of the technique on the health of the children conceived by this procedure. The Geneva Statement claims that this position is based on a very narrow view of the issues at stake in this area, both for us and for future generations. Among those issues of concern I can mention, for instance, the commodification of future children and the risk of opening the door to a new and radical form of eugenics. The Statement calls for a truly open and transparent public debate, so that decisions in this crucial area are not left in the hands of scientists, who do not have the democratic representativeness to decide alone on behalf of the whole of humankind.

**George Boutlas:** The unavoidable involvement of political institutions with bioethical issues brings in mind Giorgio Agamben’s discussion on biopolitics (with a negative connotation) in the sense that the state violently interferes with the “bare life” of citizens; Agamben relates the concept of biopolitics with the Nazi regime and the eugenics and racial laws during this period. In my

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view, though, one could easily see that there is a difference between Agamben’s account of biopolitics and contemporary bio-law. In many writings of yours, you seem to be concerned about the advances in the field of genetics. Is it that you fear the emergence of biopolitics, in the sense Agamben means it, that is, the uncontrolled expansion of genetic manipulation and unprincipled experimentation?

Roberto Andorno: I do not share the pessimistic view of Agamben about the involvement of the State in the regulation of biomedical issues. On the contrary, I think the lawmaker has a crucial, positive role to play in this area to promote respect for human dignity and human rights. Of course, the possibilities of a misuse of the emerging technological powers over human beings (for instance, in the field of genetic engineering, as I have just mentioned) is a matter of concern. But the task of biolaw, as least if we conceive it as an extension of human rights law, is precisely to prevent the worst misuses of biotechnological powers, not to facilitate them. The role of biolaw is not to subject people and their bodies to the interests of the State, but on the contrary to promote human freedom and dignity.

George Boutlas: How realistic is the proposal of global public involvement, considering the dramatic rise in socioeconomic inequality, the existing status quo in decision-making and its overlapping with the interests of powerful minorities (political, financial, or even scientific)?

Roberto Andorno: Before answering your question, I would like to point out that, as science becomes increasingly global, the responses to the ethical challenges posed by science should also be global. Aware of this, some international organizations (UNESCO in particular) have worked hard over the past few decades to develop some global bioethical standards. Certainly, due to the cultural diversity between countries, a global consensus on these sensitive issues is only possible at the level of certain minimal, general principles. As a matter of fact, international biolegal instruments are sufficiently flexible to be compatible with respect for cultural diversity. Having said that, how realistic is the possibility of a global public involvement in this area? Undeniably, this is a tremendous challenge. If it is already difficult to promote a public involvement in bioethical issues at the local level, how could it be easy to do the same at the global level? However, some attempts have been made in this area. In the 2000s I was a member of UNESCO International Bioethics Committee, and had the


opportunity to be directly involved in the elaboration of the *Universal Declaration on Bioethics and Human Rights*, that was finally adopted in 2005. I remember that the first draft declaration was submitted to a global consultation with non-governmental organizations, academic institutions, and different associations from around the world. The responses from all these instances were taken into account in the decision about the principles to be included in the Declaration.

**George Boutlas:** When it comes to bio-law, is legislation in need of robust philosophical justification, or public consensus alone would suffice for establishing biopolitical norms? John Stuart Mill has famously argued that socially dominant views on what is good impose certain rules on fully developed human beings ‘in the maturity of their faculties,’ intervening so to the choices they make about their bodies. Is there any way that the ‘tyranny of the majority’ could be avoided?

**Roberto Andorno:** Your question concerns not only the development of biolegal norms but the lawmaking process in general, and ultimately the democratic system itself. The question is: how can we ensure that the laws adopted by the Parliament (i.e., by the majority of its members, which ideally represents the dominant views in a particular society) are the best ones to promote the common good? We know well by experience that this is not always the case. Obviously, majorities can make mistakes. Some laws can be more harmful than helpful. But democracy itself offers some mechanisms that may reduce the harm resulting from the lawmaker’s mistakes. A robust and independent judicial system is one of them. Another corrective mechanism is the inclusion of some fundamental principles into the Constitution (such as respect for human dignity and basic human rights).

**George Boutlas:** In your “Four Paradoxes of Human Dignity” you recognize the partial grounding of human dignity on practical demands, but you insist on the need of some theoretical grounding at the same time, arguing that contractualist explanations of dignity and rights are “superficial, if not wrong.” Does this mean that you are committed to moral realism? And if so, is your version of moral realism somehow connected to Kant’s *Factum der Vernunft* as the consciousness of moral law?

**Roberto Andorno:** Yes, I am committed to moral realism, if you understand by this expression the position holding that we, as rational beings, have in principle the capacity to distinguish between right and wrong. This position is also called “moral cognitivism.” Of course, our moral knowledge is

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7 Ibid., 8.
affected by a higher degree of uncertainty than the knowledge we may have for instance in physics or mathematics. Human actions cannot always be straightforwardly labelled as “right” or “wrong.” Very often, the answers to ethical questions are not black or white but may depend on the particular circumstances of the case, the agent’s intention, and other factors. In other words, ethics is not an exact science; it is the result of an approximate form of reasoning. As Aristotle points out, in ethics we must be happy if we are able to provide “a broad outline of the truth.”

But, in spite of its inherent limitations, moral knowledge is indeed a form of knowledge. From this perspective, contractualism is not only a simplistic, but also a flawed position as it involves claiming that morality (and law) are merely the result of a social construct, no matter what the content of the consensus could be. My opinion is that certain practices or behaviors (let’s say, for example, torture, slavery or murder) are wrong not just because we, or the majority of us, have agreed on declaring them illegal, but it is the other way round: we have agreed on declaring them illegal because we know they are wrong. In other words, we do not “invent” ethical principles from nothing. As a matter of fact, contractualism is a counterintuitive position, since it contradicts our everyday life intuitions and behavior. Certainly, it is easy to be contractualist because you do not need to provide any substantive considerations about right and wrong; you can comfortably remain at the level of a purely formal logical structure à la Kelsen. But in case you want to come to some substantive propositions, you have to resort to some artificial notions, such as the famous Rawlsian “veil of ignorance.” Concerning the philosophy that inspires me, although I admire Kant, I consider myself closer to Aristotle. I prefer the Aristotelian bottom-up, realistic, modest approach to ethics than the Kantian top-down, and excessively formalistic ethical theory.

George Boutlas: During the pandemic we were faced with something in a way resembling the Holocaust: in several European countries people in nursing homes were denied any treatment other than morphine injections, as well as access to hospitals and intensive care units. Cases as such especially in Sweden, Spain and Italy were brought to justice by the relatives of the deceased, who stigmatized the death of the elderly people as genocide, as a morphine-based euthanasia program aiming to relieve the overstressed


health-care system from the burden these elderly citizens would add up; the lives of aged people were considered to be expendable. Can the ‘fair innings’ view be valid during this pandemic, as well as in other emergency situations when the resources are limited; or is it morally unacceptable in any case?

Roberto Andorno: As I mentioned before, during exceptional situations, like the COVID-19 pandemic, certain rights (for instance, the freedom of movement) can be restricted in the interest of public health. However, there are limits to these restrictions. Ultimately, respect for human dignity marks a red line that should never be crossed, not even in exceptional situations like this one. The notion of dignity emphasizes that every individual has an intrinsic and irreducible value, which does not depend on the age or health condition or any other particular feature of that person. Even in the difficult triage decisions that had to be made in some countries to determine who should have access to the ventilator, the argument used was not that the oldest people have “less value” than the youngest ones, but that the treatment would be more effective for some patients than for others, and this, independently of their age. Therefore, the notion of “futility” of the treatment was at the core of the triage decision, and not the notion that the lives of the oldest patients is not valuable.

George Boutlas: Those who oppose the legalization of euthanasia usually argue on the basis of slippery slope arguments. Evidence from recent research show that there is growing demand for euthanasia, and that the list of reasons provided by people gets broader and broader, including ‘being tired of living.’

What is your opinion concerning the legalization of euthanasia, and the possibility that it would become the thin edge of the wedge for devaluing human life? Would the legalization of euthanasia be the implicit acceptance of the view that life is not worth living under certain circumstances?

Roberto Andorno: The experience with the legalization of euthanasia in Belgium and the Netherlands shows well that the slippery slope is a real phenomenon and not just an argument for theoretical debates. As you might know, the practice of euthanasia in those countries was initially restricted to adult competent individuals. Later on, it was extended to people with dementia and even minors. Cases of euthanasia practiced without the individual consent (the so-called “involuntary euthanasia”) are also regularly reported, without any serious legal consequence for the authors of those homicides. But my main objection to euthanasia is not just based on the slippery slope that follows the legalization of this practice. The more fundamental reason is that we should not kill people; or, more concretely, that doctors should

not take the lives of their patients. The imperative that patients should not be intentionally killed, even when they “freely” consent to it, is one of the foundational principles of medical ethics since Hippocrates. According to the French writer Michel Houellebecq, a society that legalizes euthanasia loses its self-respect, as it denies thereby the intrinsic value of some of its members’ lives. Generally, the introduction of euthanasia in a particular country is justified appealing to “autonomy.” However, I think that the real (although implicit and maybe unconscious) reason for legalizing euthanasia is not autonomy, but the consideration that certain lives are not “worth living.” Indeed, if autonomy were the real justification for this practice, why requiring a particular condition (serious suffering, terminal disease, etc.)? Why not extending the access to euthanasia to everyone, including perfectly healthy individuals? I think this step is not taken because proponents of euthanasia and assisted suicide (implicitly) divide individuals into two categories, depending on whether their lives are regarded as “worth living” or not.

George Boutlas: Those who oppose euthanasia often argue that palliative care would be a possible answer to euthanasia’s tide, while at the same time care for the conditions of living of the third age is a right. The fact that the population is aging rapidly in most developed countries is probably a good reason to prioritize palliative care; otherwise, according to many, ageism would unavoidably be accepted, and human dignity would be compromised. Do you agree that palliative and societal care for the elderly could be the answer to the growing demand for euthanasia?

Roberto Andorno: Yes, I agree that our societies should make more serious efforts in promoting palliative care of high quality. Most countries are still taking their first steps in this area. Palliative care is called to play a crucial role in improving the quality of life of terminally ill patients and in relieving their suffering when there is no prospect of cure. It is interesting to note that, according to some studies, pain is not the primary reason why some terminally ill patients may request euthanasia or assisted suicide, but depression. Personal psychological factors, the loss of body functions, poor family cohesion, and perceiving oneself as a burden to others are often the reasons why some terminally ill patients may become depressed and express a desire

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to accelerate their death. Not surprisingly, once depression is adequately treated, many patients feel better, improve their quality of life, and relinquish their desire to hasten death.\textsuperscript{17} In my opinion, natural death following appropriate palliative care can be labelled as a “death with dignity.” But this term is not appropriate for the intentional death resulting from euthanasia or assisted suicide.

\textbf{George Boutlas}: Although most bio-law committees explicitly refer to vulnerable groups as susceptible to exploitation in research, they do not seem to focus enough on euthanasia and age discrimination, even though during the last years both issues fuel heated debates. Is this because of the need to avoid imposing detailed legal provisions on societies with different socio-cultural and religious backgrounds? And if so, how far should respect for diversity be allowed to reach on such central issues of biomedical ethics without compromising the principle of respect for human dignity?

\textbf{Roberto Andorno}: It is true that, if we compare the requirements for participation in biomedical research and those for euthanasia in the few countries allowing this latter practice, there is a striking disparity of criteria. We are very strict before allowing people to participate in medical research, especially those who are more vulnerable because of their impaired mental capacity, their very young or old age, etc. In contrast, little is required to be euthanized, in spite of the fact that the result of euthanasia is obviously irreversible... This is indeed paradoxical.

\textbf{George Boutlas}: It is a well-known fact that the experiments on people that were executed by the Nazis were against the legal frame that regulated research in Germany at the time. In 2020 Jill Fisher in her book \textit{Adverse Events: Race, Inequality, and the Testing of New Pharmaceuticals}\textsuperscript{18} revealed several Phase I trial sites in the US, places that she described as prison-like, that are nevertheless part of the American economy. It seems that no international body has the power, even today, to prevent wide-scale discrimination and the exploitation of vulnerable groups in research. This gives raise to serious questions about the efficacy of human rights bodies worldwide. Do you think that in the future these bodies should also acquire executive power? And how could this become possible?

\textbf{Roberto Andorno}: In reality, after the discovery of the atrocities committed by Nazi physicians in concentration camps, very detailed guidelines on biomedical research involving human subjects were developed by international organizations, such as the World Health Organization and the World Medical

\textsuperscript{17} Guy, and Stern.

The requirement of free consent for participation in medical research is explicitly included in one of the pillars of international human rights law: the *International Covenant on Civil and Political Rights* of 1966 (Article 7). Several other instruments aim to protect vulnerable people from exploitation in medical and non-medical areas. Specific international bodies, like the UN Human Rights Council (former: Commission on Human Rights) have been created to monitor and evaluate conditions of human rights in countries around the world and to identify major areas of concern. But it is true that the mechanisms to enforce international human rights norms are still deficient. There is still a long way to go in this area. Let us not forget that the international human rights system is relatively recent, as it dates back to the aftermath of the 2nd World War.

**George Boutlas:** All the 14 principles that you refer to as constituting the foundational core of international biomedical law in your *Principles of International Biolaw*, especially the overarching principle of human dignity and the primacy of the human individual over science and society, seem to be of deontological origin in general, and Kantian in particular. How would you respond to this ‘accusation’?

**Roberto Andorno:** As I said earlier, although I do not consider myself a Kantian I do not think that Kantian deontological ethics, in spite of its excessive formalism, is necessarily a bad thing... (smile). Kant made a very valuable contribution to modern ethics and especially to the modern emphasis on the principle of respect for human dignity. His articulation of dignity as a requirement of non-instrumentalization is very helpful to identify when dignity is at risk. Regarding the 14 principles that I propose in my book, I have simply drawn them from the existing intergovernmental biolegal instruments, notably the three UNESCO declarations on bioethics and the European Biomedicine Convention (Oviedo Convention). So, my list of biolegal principles does not have any serious philosophical ambitions. It is just the result of a systematic analysis of the current international biolegal instruments.

**George Boutlas:** It is a fact that utilitarian ethics enjoy an elevated status with regard to bioethical debates concerning genetic manipulation, euthanasia, infanticide, and other. Several developed countries have recently legislated...

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on euthanasia and infanticide on the basis of the utilitarian view that downplays human dignity. Do you think that utilitarian ethics and the focus on cost-benefit calculations are inconsistent with the idea of an internationally binding biolaw, grounded on principles such as dignity?

**Roberto Andorno:** My view is that utilitarian ethics is at odds with the efforts to promote human dignity and human rights, not only in the biomedical field, but in all areas of social life. As you know, utilitarianism holds that the ‘right’ moral action is that which produces greatest possible balance of good consequences. Only the external consequences of an action count, and not the intrinsic goodness of the action itself, or the intention of the subject. In other words, there are no intrinsically good or wrong moral actions. For the same reason, there are no unconditional moral principles, such as human dignity; everything is ultimately ‘negotiable’; the end can justify any means. It is not hard to see that utilitarianism is very problematic if we are committed to take human rights seriously.

**George Boutlas:** Onora O’Neill claims that the ‘consumer view’ of autonomy as a mere choice turns patients into consumers of health-products in a health-market.\(^{21}\) In this (utterly utilitarian) context, actions like dwarf throwing or consensual sadism could be acceptable, as they do no harm anybody.\(^{22}\) Can the notion of human dignity, construed both as a legal and a moral constraint, and based upon principled autonomy, limit the claims of such unconstraint views on individual autonomy?

**Roberto Andorno:** The relationship between ‘dignity’ and ‘autonomy’ is very intricate. Autonomy (or self-determination) is certainly one of the highest expressions of human dignity. However, dignity and autonomy are not synonymous. Dignity is a much broader, higher and foundational notion than autonomy. This is clear from the mere fact that even people who are not morally autonomous (newborn babies, people with severe mental disabilities, etc.) are regarded as having dignity, in the sense that their lives are considered as intrinsically valuable. It is also important to point out that the notion that individual autonomy can be restricted to ensure respect for human dignity is nothing new and certainly not specific to bioethics. On the contrary, the limitations to self-harming decisions are quite common in law. The well-established notion of *ordre public* rules (i.e., rules that concern a public interest and therefore their application cannot be excluded by private agreement) illustrates this very well. Just to give two common examples: labor laws do not allow workers to waive their basic rights.

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or to accept inhuman working conditions; contract laws do not recognize the validity of contracts containing terms that are unfairly burdensome to one party and unfairly beneficial to the other.

**George Boutlas:** In your writings you suggest the ‘precautionary principle’ as a broad guide for policy makers, a principle in the “rules of indeterminate content.”\(^{23}\) It is obvious that those characteristics leave it loose in the hands of policy makers, who are usually more eager to satisfy the market than to respect vague, non-binding directives by international bodies. The precautionary principle, however, has already earned a privileged position in environmental ethics. In your view, could it become equally influential with regard to clinical and research ethics in the future?\(^ {24}\)

**Roberto Andorno:** Modern societies are full of uncertainties about the potential negative impact of new technological tools and activities relating to both public health and the environment. The precautionary principle (PP) aims to give an answer to this situation. Basically, the PP is a call to caution in this context of uncertainty. This principle becomes relevant when there are suspicions, based on available scientific data, that certain products or activities may be potentially dangerous but when, at the same time, there is no conclusive evidence of the risk yet. Strangely, while the PP is formally recognized in uncounted international instruments and domestic laws on environmental protection, it still enjoys little explicit legal recognition in the domain of public health. Of course, in spite of this, precautionary measures are in practice implemented for public health purposes. However, the lack of formal recognition is paradoxical, as the promotion of public health is no less relevant than the protection of the environment.

**George Boutlas:** The top-down establishment of moral principles (such as the precautionary principle) by any international body for the time being seems impossible; could education aiming at political prudence be an effective bottom-up approach?\(^ {25}\) Would it make a difference, in your view, if ethics in general, and bioethics in particular, were introduced as core modules in the curricula of ‘hard’ empirical studies?\(^ {26}\)

**Roberto Andorno:** I would not say that the establishment of general ethical principles by international bodies is “impossible.” In fact, that is what it is

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actually done, for instance, by UNESCO and other international bodies by means of declarations, statements, guidelines, etc. Both strategies are not opposed but complementary. But it is true that a bottom-up educational effort is more effective in disseminating ethical principles than a top-down approach consisting in the adoption of legal instruments. Educational efforts have already been made in this area. Over the past two decades, the teaching of bioethics has become a normal component of medical education in most European countries. In contrast, the inclusion of research integrity in the curricula of hard sciences studies is more recent.

References


