

Abstract

Historically, myths preceded rationality and they tended to play a role in the formation of practical attitudes in the popular mind, that is, they formed the behaviour and values which people adopt in relation to the issues which concern human beings. Given however, that myths are an imaginary formulation arising from the fears and hopes that inevitably affect the human view of an unknown future, we must analyse them and transform them into rational norms (both ethical and legal) for responsible behaviour. These general reflections, when applied to the debate on human cloning, allow to formulate a number of rules which, based on the principle of freedom which is so central to our plural societies, lead us away from absolute prohibitions and the total absence of regulation of this matter, which is, after all, likely to play a decisive role in the future of humanity. Chief among the rules proposed in this article is that of the previous determination of the «father» who is responsible for the clone, and secondly, the assessment of the wave of probable effects both on the clone himself and on his descendants.

1. *Myths in the collective imagination*

The myth of Prometheus, who stole fire from the home of the gods, is closely bound up with the deepest co-ordinates of our civilisation. Technological transformations have multiplied since ancient times, and nowadays this multiplication process is taking place at a faster pace than ever before. However, the possession of fire will forever lie at the heart of the increase in society's complexity. Not only did fire, in effect, contribute decisively to the separation of Man from other animals (cooked food versus raw food), but it also was the origin of the development of all other techniques. It lay behind changes and developments in eating habits, in battle (used for hardening the tips of arrows and spears) and it played a basic role in the making of tiles, pots and agricultural implements. In short, it was what enabled what we nowadays refer to as the *neolithic revolution*, to take place; that is, the widespread adoption

of agriculture and livestock practices and techniques. The output of these new technologies was such that before long the quantity of goods obtained was above and beyond immediate necessities. From this there came an accumulation of goods which led to, firstly, barter and then trade, with the great abstraction represented by the invention of money. This was a truly admirable abstraction, which along with the invention of units to measure it, created a value which was equal (lat. *aequi-valens*) to the value of the goods being bartered, given that the specific values in terms of practical use of different items were not equal or interchangeable (food and clothing, for example). And in this summarised review, we should not forget that, parallel to the techniques invented for the production of goods to satisfy immediate needs, other processes were soon to begin which, in addition to stimulating and increasing the most natural needs, also created others which were entirely artificial in nature (ornamental and artistic needs, for example). The myth of Prometheus, in short, not only reminds us that the invention of technologies made the human being more specialised, but at the same time it makes clear that humans were not a simple case of mere adaptation to prevailing conditions, since what the human did was actually transform these conditions and *transform himself*. But the myth also shows us that the possession of fire as a means of making other means is not something innate or inherent to Man. We learned to master fire as a result of daring, which in addition to strength and cleverness, challenged higher powers and robbed them of what they possessed by natural right. The terrible destructive power of fire, which on one hand, could erupt from the entrails of the earth (the volcano) and on the other, could fall from the sky (lightning), was mastered and domesticated to such an extent that once brought indoors, the house (*domus*) became a home (hearth). Thus, the human home became the equal of that of the gods. According to the myth then, we are and always have been since the beginnings of history, transgressors of the given *status quo*, that is, of the natural order.

Nowadays, we all know that the new communication technologies, on one hand, and technologies for operating on living organisms, on the other, are procedures which are nothing short of revolutionary, because they enable us to modify the most hidden and basic textures of the living unit we call a cell, and they open up before our eyes a future which is both certain and uncertain. Certain, because there will inevitably be an ever-increasing use of these new techniques we have just begun to apply and this, in turn, sooner or later will transform our collective way of life. Uncertain, because we are not at all sure of the scope of the specific forms that these transformations will take. Up to what point is the use of these techniques really in our hands? Can we accelerate the process or slow it down? Will we be able to control them? Avoid their dangers? Domesticate them as we did with fire?

In addition to these questions, we are also aware of the emergence of two extreme attitudes, one marked by fear and the other by hope. Fear, in this case, is more a form of anxiety in the face of vague and unknown dangers, and manifests itself through such questions as «where will it all end up?» or in protests or demands to limit the freedom of scientists and ban experiments which push too far ahead. Hope, on the other hand, is expressed through the desire, which we

consider natural, to obtain more and better quality food, to overcome more diseases and to extend human life. Shaken by these conflicting waves of hope and fear, expressed in literary terms by Goethe in the typically modern myths of Doctor Faust and Wilhelm Meister's Apprenticeship, our perplexity reaches new heights when we turn to consider the possibility of human cloning. On one hand, this area seems more exciting than others, in all likelihood because it encroaches into the area of sexuality and reproduction. We may even choose to see it as the culmination of a process involving the separation of sexual pleasure from the generation of new life, an important process that we have experienced with the widespread introduction of contraceptives. Not only have sexual habits changed, but also the make-up of the family unit in many cases has also been radically transformed. Whether we deem these changes to be for the best or not is another matter and, of course, there is a wide range of opinions on this subject. Industrial production of new individuals of the human species, which at the moment is a figment of the imagination, quite apart from the contingencies of the habitual bisexual procedure, could *possibly* be used to plan the number and quality of the population. However, leaving this imaginary scenario aside, we see that human cloning would certainly increase our knowledge of nature and in certain ways it would also increase our mastery of it. Human cloning is then, in itself, desirable and there is no shortage of scientists who, like the legendary Dr. Faust, would be prepared to sell their soul to the devil in order to explore such a fascinating terrain. However, just as we can view human cloning with optimism we can also view it as an uncontrollable catastrophe unleashed by the inept apprentice. This perspective then leads on to a vision of created monsters, either innocently bad and Frankenstein-like or multiplied by a stamping machine of identical genetic batches, which would be mechanically enslaved to an evil power devoid of moral scruples.

These myths, especially the alarmist ones, are highly present in the public mind nowadays, largely due to vulgarisation of the issue by horror films and endless chapters of science fiction works. We cannot ignore the presence of these myths in the collective imagination, they contribute to the formation of the public opinion which, allowing fear to conquer hope and myths to overcome rationality, demands prohibitive or highly restrictive regulations to limit the freedom of researchers. Therefore, it is inevitable that we ask ourselves, *what are we to do?* And it is from this simple question that the entire ethical discussion arises. I will then, by following the ramifications of the answers to this question, try to lead it from myth to rationality, just as philosophy has always sought to do.¹ Let us turn now to the question, and we shall see that solely by analysing it, it becomes clearer.

1. See Aristotle, *Metaphysics* I, 2; 982 b, 18.

II. Preliminary concepts in ethics²

1. *Ethics and freedom in human language*

Let us repeat the question exactly as before: *What are we to do?* we say. The question, we observe, (1) hinges on the action or *praxis*, not on the being or the way of being of things. It concerns (2) the matter of human *doing*, perhaps individual, but (3) above all *collective* since the verb is plural, and finally, (4) as a specifically ethical element, the collective action has been couched as obligatory or imperative, *are to do*.

Without wishing to delay too long on this matter, which is preliminary but necessary if we are to set out the scope of ethics, we could say that the essential problem posed is one of imperative human action, *you must, we must, I have to*. These are some of the expressions in our human language, which since they are *practically* inevitable³, open up the field of ethics for us and establish its perimeters. Let us now add two further features to the four we have so far: (5) ethics is concerned with the most commonly employed *linguistic uses* and (6) it presupposes or postulates *freedom*.

Let us examine these points. What the fifth point means is that the ethical dimension is indissolubly bound up with human speech. Let us think, for example, of the automatic spontaneity with which we say *it's not right, that's unfair, he's a pig, or I'm afraid I can't do that*, even though you can physically do it. These cases and other similar ones allow us to see the *practical* impossibility of even considering the idea of eliminating the ethical dimension from human language.

Through this, we similarly affirm at the same time in the sixth place that we cannot eliminate from our language the *equally practical* supposition of individual freedom. I am not suggesting that the total absence of freedom, in the form of some absolute variety of necessitarianism, determinism or fatalism, is not theoretically possible, or even more possible, within certain scientific contexts, than the existence of freedom. All I am saying is that, following Kant⁴, the

2. I retrieve the term (*Vorbegriffe*) that Kant employed in the most general part (IV) of the introduction to his *The Metaphysics of Morals* (1796) to which he added the subtitle *Philosophia practica universalis*, echoing the title that Wolff had given to the introduction to *Philosophia moralis seu Ethica*, although with a radically different content and meaning. There is a Spanish translation of *Metaphysik der Sitten* by Adela Cortina, Editorial Tecnos, Madrid, 1989.

3. Aristotle also pointed out that the problems of philosophy were to be found in everyday speech. *If someone does not speak*, I cannot address him to make him reflect. *He is like a plant* (not an animal!), states the text of *Metaphysics IV*.

4. This single point from Kantian moral doctrine illustrates his subtlety and depth. It means that human *moral* freedom, or the twofold possibility of either doing or not doing a given action which we perceive to be categorically obligatory, is not evident in itself nor can it be demonstrated on the basis of an evident principle. As a *practical* postulate, that is to say, within the order of human *praxis*, it is not even a theoretical postulate (such as was, for example, the parallel postulate in Euclidean geometry in its time) and it is certainly more than a simple psychological freedom of choice. Let us say then that it is not something apodictic or demonstrable, neither as an *a priori* thesis, nor on the basis of experience. We simply imply it when we judge certain actions with ethical predicates such as *just* or *obligatory*; when we consider

practical supposition or postulation of freedom is inevitable when we accept that ethical formulations (good-bad, along with praise or criticism words, and rewards and punishments which derive from them) are significant, that is, they are language and not just noise. In this sense, freedom is not just another human trait among equals, but rather we can consider it, as we shall say later, as a more specific and defining trait of the species, even more so than rationality itself, which was traditionally considered to be the ultimate defining feature of mankind⁵. Once we have become historically conscious of it, we see ourselves as so irrevocably linked to our freedom⁶ that an infringement of it is an *injury*. Let us retain therefore from this early section that *duty and freedom are concepts which are exclusive and defining of the specifically human field of ethics*.

2. *Three classes of duty*

Even if today's linguistic usage increasingly treats such terms as ethical and moral as synonyms, as did philosophy prior to Hegel, seeing them both as referring to the entire field of obligatory actions, it will nevertheless be helpful to distinguish three different classes of duty, as follows: ethical duty in the strict sense, legal duty, and moral duty. The first can also be called social duty. In fact it was the first one to be considered by philosophy when reflection on duties and obligations began, since it existed in society before philosophy itself. And let us note that ethical and social duty refers directly to *exterior* actions, whether by prohibiting them (such as for example, incest), or obliging them (for example, honour your father and mother). Any human group that is more than a horde, has stable collective customs, the body of which together constitutes the *ethos* which lends the group coherence, inwardly, and a different face, outwardly in the eyes of other groups. If we question the members of the group about the origin of this class of duties, the response will most often be that they are «our customs», inherited from forebears

them *praiseworthy* or *deserving of reprehension*, we make ourselves *responsible* for them or demand that somebody else accept *responsibility* for them, and so on. In other words: every time we consider a concrete individual action that we experience as susceptible to a moral judgement, we are at the same time claiming this freedom as ours and as identical to ourselves. For my own part, I subscribe to this position of Kant's. Further, like Kant and many others, I am convinced that all of us co-place the postulate of freedom with our more or less responsible action, both whether we pay attention to it or not. See *The Critique of Practical Reason*. If however someone sustains that we are free as a thesis rather than a practical postulate, I will not say anything against him here, because Kant's reasoning (and mine) is aimed especially at those who do not see freedom as evident or demonstrable, from a strictly scientific point of view.

5. Kant's antecedent in claiming moral freedom as the essence of the human being was Rousseau. This link places Kant in an Enlightenment which would not apply the hardest rationalism, strictly intellectual, to moral questions, which are directly bound up with the issue of the meaning of human existence. In *The Social Contract*, part I, chapter IV, Rousseau wrote «To renounce freedom is to renounce the quality of Man, the rights of humanity and even all duties. There can be no possible compensation for he who renounces all. Such renouncement is incompatible with the nature of Man, and wresting freedom from will implies wresting all morality from actions.»

6. Hegel, in his *Encyclopaedia*, S 482, notes that «once individuals and peoples have glimpsed the existing abstract concept of freedom in its mental representation, this representation obtains invincible power, precisely because it is the very essence of the (human) spirit.»

or instituted by the heroic founders of the group, who are considered wise precisely for having initiated these customs, whether because of their own intelligence, or through their privileged access to divinity. Legitimation of the *ethos* then evokes history, religion or certain forms of utilitarian rationality when it attributes the group's prosperity or excellence to their *ethos*. And very frequently, foundation myths combine all three types of legitimation. Generally, any member of the group who does not respect the custom or who is negligent in its observation, is punished in some way, at the very least by a bad look from the others or some form of silent reproof. In more serious cases, punishment can even consist of corporal punishment, expulsion from the group, or even elimination, that is expulsion beyond the farthest limits by death. In any case however, the *ethos* or social custom certainly existed previous to the advent of writing, and it therefore also predates the law.

Secondly, legal duty is a consequence of written law. It arises from the legal authority of the legislator and, since it is written, it is more stable, exact and rigorous than unwritten duties. Though like unwritten duties, legal duty refers to *external* actions, but it presupposes a community which is more politically organised in that it identifies and respects a legislative power with the capacity to enforce the law by means of the coercive power which is intrinsic to political power.

The third class of duty is moral duty, which should not be confused with ethics since in human actions we must distinguish between the exterior and internal dimension. Morality in the strong or strict sense, occupies in effect a strictly personal and private dimension in individuals (conscience) and does not concern only external actions but also embraces intentions and aims as well as the voluntary acceptance of desires which are in breach of the law or accepted customs (coveting your neighbour's wife, coveting your neighbour's goods, etc.)⁷. Moral duty then is imposed, at least immediately, by conscience on itself, in such a way that very often we refer to it simply as duty, or an obligation of conscience. If we ask about the origin of this duty, more often than not the answer will be in terms of the «voice of your conscience», of an internal *Daemon*, of human reason or common sense, or indeed of divine inspiration or «natural law» engraved by God in our spirit. Whatever the case, what is clear is that the authority that dictates this duty is internal, it comes from within. We may say that it arises from the internalisation of the previously existing ethical, social and legal duties, due to the education process, but what is certain is that moral duty, in this restricted sense, would not seem to be something occurring in extremely uneducated individuals. It tends to go hand in hand with a certain «refinement of spirit». And finally, we observe that moral conscience also has its penal dimension. Whoever acts against his own conscience, receives a punishment, which we called regret, a «bad conscience» or «nagging guilt». Moral duty, in synthetic terms, is both *individual* and *private*, in contrast to ethical and legal duty, both of which are public and collective.

7. Despite what we read or hear in the media, the absolution faculties of each individual conscience are considerable. Every day we hear various members of the «shameless famous» claim «my conscience is clear». The pangs of conscience, it would seem, are not as indefatigable as we would have thought.

In any case, we must add that despite the evident difference between them, we can also observe a certain complementary relationship among the three types of duty and a sort of circular link. Collective custom often becomes law when we want the rule to be more precise and rigorous, socially solid and binding. And both of these, as a result of subjective internalisation, can become moral duty. On the other hand, we can also observe a circular relationship flowing in the opposite direction. A conscience with strong moral convictions will try to convince other consciences and will seek to convert its own private obligations into habits or customs of collective behaviour. And when the «good custom» is seen to be too weak or under threat from «bad customs», then it will come as no surprise that its defenders will seek to have it enshrined as a rule in law with all the compulsion, sometimes penal, that this implies. This circular movement among the three classes of duty permits us to talk of three dimensions or species of a single concept which is duty.

3. *General ethics is empty*

From what I have said thus far, we can deduce that *leaving aside actions which are seen as indifferent, there is a moral or ethical dimension wherever there is a binary division of human actions which, by dividing them into good and bad, adds the imperative that the good actions should be carried out and the bad ones avoided.*⁸ The specific actions to be included in this blank moral table we have just formulated can however be very different in nature, and indeed they are, according to the different cultures and epochs in which they are found⁹. Morality or general ethics is therefore formal, since while it may be totally fitting for the only animal endowed with *logos* to have a sense of duty, nevertheless what this duty should exactly be remains to be seen.

It is now possible however, to begin the task of determining what this duty should be by outlining the criteria we can draw on to fill in the blank spaces of our moral table with specific rules. There are in fact only three criteria: pleasure, utility and dignity, all three of which are seen

8. The Scholastics, accurately, summarised morality as follows: *Bonum faciendum, malum vitandum*. This primary and clear-cut division between good and evil also exercised the imagination of the myth-makers who worked it into cosmogony. Zarathustra (aprox. 400 B.C.), in Avesta, the sacred book of the ancient Persians, is the emblematic figure of such reflection which sees in the good/evil dichotomy the initial driving force of human history and the origin of the universe. In the Renaissance, Zarathustra was considered by Ficino to be one of the «prophets» of humanity; we also find him later as *Sarastro* in Mozart's *The Magic Flute* and Nietzsche made him the protagonist of his widely read *Thus Spake Zarathustra*. With regard to the biblical story of the discovery of good and evil and the consequent expulsion from the Garden of Eden, Kant and Hegel among others (Kant in his *Presumed Beginnings of Human History* (1786) and Hegel in *addendum 3 to 24* of his *Encyclopaedia*) dealt with the philosophy of these «our myths».

9. That this is a human trait is beyond doubt. *A posteriori*, we observe that all human groups with a minimum of organisation and stability have some class of obligation, at very least the duty we have referred to as ethical in the restricted or social sense. *A priori*, despite the difficulty posed by the non-demonstrable nature of freedom, at least morality is congruent with elevation to a field of conscience held in common with other humans, in which we place any real, possible or imaginary object proposed by another or by ourselves.

as values which can demand, and do demand, an act of volition or will. A source of pleasure is any object which, by stimulating our desire promises us pleasure if we possess the object. Here, we refer almost exclusively to pleasure of the senses.¹⁰ A useful or utilitarian value is any good or item which serves us as a means to obtain another. In this category we tend to include items of economic value and money itself, which we normally see as a means, although their simple possession without making any use of them can also be the source of a certain pleasure. The final value, the value of dignity, is more difficult to define. Very often it has been described as being connected to honesty, the most in keeping with the higher dignity of humans, that which most marks us, more than the pleasure or utilitarian values, etc. It has also been said that it is virtue, especially justice, and so on. However, we can see that all these ways of describing this value are tautological or little short of it. The moral system which attaches pre-eminence to pleasure is termed hedonism¹¹; that which most values usefulness, we call utilitarianism. However, for those who proclaim the superiority of the quality of honesty, we are hard put to find any word at all, perhaps because we feel this area is that of morals *par excellence*, this is a moral system of veritable morality, we may say. And now, to finish our examination of the preliminary concepts of ethics, let us bear in mind that declaring happiness to be the end of moral actions (eudemonism) contributes very little to our task of determining what these actions are, since the concept of happiness is just as abstract and empty as that of the values we have mentioned above. Is it temporary or eternal happiness? Transient or permanent happiness? The hedonist will see his happiness as lying in pleasure, the avaricious will see it in money, while another will see it in the stable possession of all goods and assets... which of course is impossible. Therefore, from the abstract concept of happiness we cannot draw anything to help us determine the nature of morally good or bad actions. Indeed, at the risk of cynicism, we might even be inclined to think that morally bad actions are undoubtedly those that cause most happiness.

III. Specific moral principles

1. *Two conceptions of freedom*

Turning once again to the general concept of duty, and with the aim of moving forward as quickly as possible to the concrete area which concerns us here, we must first reflect a little on the nature of freedom. It is clear that in addition to being an obligatory precondition for the existence of any ethical concept, in relation to specific or concrete duties freedom can be interpreted in two main ways: the ancient conception of freedom and the modern one. In effect, in our civilisation and from the pre-Kantian perspective, the general conception of human freedom

10. Also the aesthetic pleasure experienced from the contemplation of beauty or that caused by communication with other people, especially friends. Less often, this pleasure is related to intellectual pleasures.

11. In Greek, *hedoné* means pleasure.

was that it was subject to an order which was pre-established by nature, a divinity or some other force. In all cases however, human freedom did not create this order, rather it found it already in force and had to accept it. Given this situation, freedom itself was ordered and, more or less automatically, those who obeyed the rules would receive their just reward in the long term, whether in this world or in another. For those who did not obey the rules, there was punishment.

Kant however, shaped and affected himself by the growing demands for freedom both in the modern political *praxis* and in the theoretical reflections of the time, especially the writings of Locke and Rousseau, and even more so by the deep upheavals brought about by the French Revolution, had, in turn, a revolutionary effect on traditional thought¹² through his claims that freedom is not only a prerequisite for morality, but that it is also its guiding principle. The Revolution achieved such resonance in the collective conscience, which generally welcomed it even though in a moral sense it rejected its excesses of violence, that it became accepted that the proclamation of equal freedom for all struck one of the deepest chords in the human heart. This new freedom did not have to adapt to any pre-established order, instead it created its own order on its own terms. Given the conditions which I will now set out, it was freedom itself that was the main principle, that is the origin and the end, of human morality, and at the same time it was what made it legitimate. However, this did not mean that everyone was free to act as they wished according to their whims and fancies, but it did mean the human will, autonomous and rational as it was, gave itself the law, and was in fact the legislator. Freedom became then sovereign rather than subject, since even if we wish to continue talking in terms of being subject to a sense of duty, we must accept that it is we ourselves who impose this sense of duty.

Kant's argument is simple, and to my understanding, outstandingly solid, despite the fact that it is difficult to accept due to cultural prejudice. Kant's understanding is that nothing can be considered to be morally good in the true and genuine sense, though it can be considered to be done in goodwill, which means an act is done in accordance with something else which is not the duty itself, apart from benefits or damages that such action could bring us in this life or in another.¹³ And human will is determined by duty if, and only if, its subjective principle (for example, «I will fulfil my promise) can be transformed into a universal law (everyone must fulfil their promises»). This law, arising from *reason itself*, means that this moral can be termed autonomous¹⁴ as opposed to all the other morals that will have to be termed heteronomous since

12. «The French carried out the revolution, the Germans thought it up» is an oft-repeated phrase.

13. «It is not possible anywhere in the world, nor in general out of the world, to think of anything that can be thought of as good without restriction, apart from the sole exception of *goodwill*. Intelligence, sharpness of wit, judgement and all the other talents of the spirit, whatever their name, or courage, decision, perseverance in one's purposes, as qualities of *temperament* are without doubt good and desirable from a number of points of view. However, they can also become extremely evil and harmful, if the will which is to make use of these natural gifts is not good (...). The same thing happens with the *gifts of fortune* (...). Kant. *The Foundations of the Metaphysics of Morals*, (Catalan translation by Pere Lluís Font, Editorial Laia, Barcelona, 1984, p.67).

14. In Greek, *nomos* means law.

they recognise a law imposed from outside. These morals are those applied to the under-age, those as yet incapable of running their own lives, while once the autonomous moral has been understood we can never cease to consider it the only real moral worthy of adults.

2. *The road to specific duties: democracy*

Now then, since freedom is the only innate right conferred on us individually by human dignity, we cannot demand our freedom if at the same time we do not respect that of others, because they are our equals precisely in terms of this freedom. Put differently: freedom is both individual and universal, it is as much mine as it is yours. And this fits in perfectly with what we were saying just a moment ago about the fact that our personal subjective norms for behaviour must be capable of being made universal if they are to be valid as moral tenets. So we have then the first and truly fundamental duty to be inscribed in our till now blank moral table: *Respect the freedom of all or consider others as an end, never as a means*. This duty is surely bound up with honesty, and is superior since it cannot be reduced to any other duty linked to utilitarian or pleasure-seeking outlooks.

However, since all this is still extremely formal in nature and, on the other hand, since the smallest pinch of realism is enough for one to realise that we can never exclude the malice of a few (and perhaps, why not? our own malice), we see that the same moral duty which obliges us to respect the freedom of all others also obliges us to enter a system of civil order, within which it is the laws that will determine the concrete obligations that will be enforced by means of some relative measure of coercion. Having said this however, we must add with equal conviction that no system of civil order can be a moral system in itself, if it is not founded as an exercise of our collective sovereignty, that is, if it does not have a constitution, whether written or otherwise, that is democratic in nature. And then in consequence, legal duty will also oblige the conscience, despite the fact that this order accepts of its own accord a purely external type of obedience for motives that are not at all moral. The legal duty is therefore, recycled, *positis ponendis*, and becomes a moral duty. To this we must now add another more practical factor which also obliges us to enter the sphere of civil and legal order, that is, the inevitable pluralism of our modern societies which forces us to live in harmony with people of widely differing moral convictions. The only way to avoid conflicts stemming from mutual intolerance is by accepting the democratic procedures which legislate for all but which respect the freedom of minorities.

I have spent some time on these more general ethical considerations because I feel they are indispensable if we are to deal appropriately with issues of bioethics, especially human cloning, since it is this last issue which, more than any other, affects the fundamental value of human dignity. I have gone to some lengths to reason that since this dignity arises from freedom, we must accept democracy as a decision-making procedure, because the decisions taken by each individual moral conscience in principle will only affect this conscience. If we wish this decision to affect or bind others, we must first of all persuade them and, should this effort of persuasion be sufficiently effective, the individual decision will take on a social dimension and may aspire to

becoming enshrined as law. And this law will, in turn, demand *per se* that those who have never encountered it before take it on board and convert it into an obligation of conscience, but now out of respect for the dignity of those who have accepted it. There is always however, the individual possibility of conscientious objection so as to avoid conflict between the conscience and an external act when the law *positively* imposes an action, never when it simply permits it. It is entirely clear, that simple permission in law never infringes anyone's freedom¹⁵.

3. *Fallacies in ethical argument*

Now is perhaps the time to reject a number of clearly false but nonetheless frequent claims, and we shall do it from the basis of the principles we have outlined. The first fallacy is one we refer to as the *naturalist fallacy*. This consists of an illogical step from *being to having to be*. In other words, this false argument attempts to deduce the existence of an obligation from the way of being that is granted by nature. This fallacy was effectively denounced by Hume from the logical point of view, and some years later Kant drove the point further home, since it is crystal clear that moral naturalism is incompatible with moral autonomy. In pre-human nature and in so far as individuals are concerned, the law that applies is the «law» of the strongest, which of course is not at all an ethical law; the big fish simply eats the small fish, by nature.¹⁶ As a maxim we could say that living nature tends to work towards its own preservation and the propagation of the species; however, it clearly sacrifices the individual in the interests of the species. Nor does it seem that nature is particularly concerned to unconditionally preserve species exactly as they are at a given moment. No sane person nowadays would accept that the species are fixed and unchanging in nature. Be that as it may, if we return to the point that duty and freedom are concepts which solely apply to human conduct and that the transformation of nature cannot be dubbed immoral, we will be alert to the thousand forms taken by the naturalist fallacy and we will not be fooled by it, since deep down it is incompatible with coherent ethical thought. In other words and expressed radically: naturalist ethics is intrinsically contradictory. Either naturalist or ethical, but not both.

We can also observe that considering nature in finalistic terms does not contribute in any way to conferring validity on the naturalist fallacy. Indeed, the fact that there is clearly a certain functional adaptation in biological phenomena (eyes are *for* seeing, sex is *for* reproduction) or that organisms have a tendency to develop in a certain direction (the fertilised oocyte tends to become an embryo) does not mean *in itself* that a duty is involved. As I pointed out at the outset, technology has always been a procedure which transforms nature and which confers on matter, whether living or not, objectives or ends to the benefit of human beings, which tend, at least at

15. From the only «innate right» to freedom, Kant derives a use, negative perhaps but of great value nonetheless, which condemns any right to private property no matter how legal its ownership, if it impedes the freedom of another.

16. In this respect, I would recommend chapter XVI of Spinoza's *A Theologico-Political Treatise* (1670). There is a Spanish translation edited by Alianza Editorial, Madrid, 1986. While the text may appear outdated today it clearly states, alongside Hobbes and before Rousseau, that the fields of morality, politics and the law are above nature and are specifically human.

first, to be seen as non-natural. To couch it in philosophical or academic terms, we could say that bioethics can only be bio in material terms. Whatever values it may find and legitimise will never be *deduced* from biology.

In second place, there is the theological fallacy which, in some ways, is a continuation of the previous case. It reinforces moral naturalism through the belief that God is the creator of nature. However, even if this were true and we knew it to be true in all certainty, in itself it would not mean that God does not permit us to modify his creation. In any case however, the theological argumentation differs from the naturalist version in that it does not set out to seek the source of specific moral duties in nature, but rather in God, who they consider not so much a creator as a law-maker, which of course is quite different. Now then, given that we do not know God directly, but we do know moral duties, then we must hold that religion is logically lagging behind morality. It has come to play a role as the guarantor of morality; however, the theologian considers religious faith as the source of ethical values and extends his conception rather too readily to cover non-believers when he claims that *his* belief derives from human reason both as far as the existence of God is concerned and also the «naturalness» of material moral law¹⁷. I shall return to this issue at a later stage since it explains the continued existence in our society of the ancient conception of freedom which believes it is obligatory to respect a given order, previous to itself, more than to respect itself and the order which produces it.

The two fallacies we have just looked at are the classic ones, but there are some others which are worth examining. Let us turn to the argument, frequently heard today, which I take the liberty of terming «angelic» reasoning, without any wish to offend anyone. The moral considerations of this argument stem from a moral criticism of economic interests, of «multinationals» and capitalism. It is particularly fervent in its drive against private funding of new technologies, given that private interests are not the interests of the human race in general, etc. This reasoning very often ends up predicting future catastrophes.

The fallacy here, I believe, lies in the general nature of the argument. Unlike the other fallacies we have seen, it does not reflect on duties from the basis of other fields (nature, religion) rather it situates itself squarely in the terrain of morality. It errs however, since basing itself on the idea of human dignity as a supreme value, it denounces private and economic interests as if they were immoral. Each case must be studied individually to see whether it is subordinated to a greater good or welfare, but we cannot reject lesser aims in the name of the greater, for they may even be necessary. My question is in fact, what kind of human dignity would we have in the

17. One particularly perverse form of the religious fallacy is that which claims: «If God does not exist, then everything is good and everything is permitted.» Our first response to this outrage which reflects a clear inability to understand the concept of autonomous morality, is that we hope God preserves such faith because should the speaker lose it there is nothing to prevent him becoming a dangerous criminal. Many writers, such as for example Grotius (1583-1645), the founder of international law, considered that the «natural» law (which they see as inherent to human *reason*, not to pre-rational nature) was presented to the conscience as obligatory *etsi Deus non daretur*, «even if there was no God».

total absence of prosperity, which is very often the result of calculated and utilitarian interests? All I can say is that those who condemn out of hand all private funding of technological research, and consider public funding in some way more innocent *a priori* are guilty of «angelicism». For public funding too leads to the entanglement of the scientific researcher who must also repay the debt in some, albeit different, way.

Finally, we come to the specialist's fallacy which we can also refer to as the «smart-Alec's» or «know-all's fallacy», and it makes little difference whether we are dealing with a specialist in biology or a specialist in ethics. This fallacy, like the theological variety, shares the added attraction of the stamp of authority which specialists are so ready to confer on themselves. The attitude adopted is one which seems to imply «you be quiet, I'm the one who knows about this». However, this style is no use in ethics. The specialist knows most about what he is specialised in, but not in the case of duties, because any well-informed person endowed with free reason knows all about duties¹⁸. The specialist must give his account and should be listened to, for ethical decisions cannot be taken in ignorance of the subject area under consideration. However, the business of accepting and pointing out duties is up to all of us. The technical expert's report is not necessarily binding.

And what about the philosopher? we ask ourselves. Hasn't he been talking for long enough now, too long perhaps? Does he not consider himself to be a professional in ethics? Well, the answer is no. The philosopher is like everyone else, for all his Professorship of Ethics. His qualifications do not grant him the stamp of authority, any more than the other specialists. Philosophy itself has always rejected the criterion of authority. Despite the fact that it includes a section devoted to duties, philosophy *by itself* cannot enforce any form of obligation. The role of philosophy is limited to describing and analysing the various categories of duty which inform human actions, the duty itself however, never originates in philosophy. Philosophy weighs it up and casts light on its consistencies and inconsistencies, it calls the duty up before the court of reason, but it is this reason, common to all humans, that decides whether to accept or reject it. A philosopher is not a lay priest. He exhorts us to think for ourselves and then scurries off rather than teach us a simple moral lesson.

4. *The freedom principle versus the material morality principle*

Let us return now to what we said earlier with regard to the two conceptions of human freedom; one, which sees it as morally obliged to accept a pre-established order, and a second, which we have examined at considerable length and which sees human freedom as the source of morality and the typically human way of ordering things. In the light of what we have said, we can see that both conceptions are quite different from one another in terms of logic, in that

18. The expression is characteristic of Kant.. and accurate. He himself wrote that «it is not necessary to have any science or philosophy to know what to do to be good and honourable, even to be wise and virtuous». *The Foundations of the Metaphysics of Morals*. Catalan translation by Pere Lluís Font, Editorial Laia, Barcelona, 1984, p. 67.

one is extremely formal since in theory it only orders us to respect its essential principle, while the second presents a set code, with a series of material norms which are essentially those set out in the Ten Commandments of the Old Testament.¹⁹ While the first conception is clearly modern— it was after all banned from our schools in the not-so-distant past, as heretical —the second is still valid today as the only conception in the minds of many, and certainly in the official opinions of the Roman Catholic Church. It inspires the drive for restoration among those groups who feel nostalgia for a conception which was prevalent in the Middle Ages. And everyone will concede that we must be as clear as possible on this because the confrontation between the two conceptions affects all our debates on bioethics. Neither of the two is resigned to a role as a mere moral outlook; rather, in addition to wishing to influence public customs, they also aspire to become law, they wish to configure the legal code. And it is precisely the obligation which would result from this that causes the problems, for the obligation would involve coercive action of some sort, including some type of force or material punishment, whereas simple recommendations and, needless to say, our subjective conscience, are another matter.

Let us be more precise: when the ancient conception expresses the opinion that the legislative powers should transfer the moral precepts of their code to the laws of the land, what they are doing is trying to moralise customs. As Francisco de Vitoria, a worthy writer in other fields, said, the King's obligation is to legislate in such a way that the subjects become «good» or «virtuous». We however, prefer to believe that the matter of our morality or virtue has not yet been entrusted to the state.²⁰

And as far as the material precepts set out in the Ten Commandments are concerned, we see that the more abstractly they are formulated, the more easily agreed to they are, in that the «exceptions» are forgotten. Who would fail to tell a lie, when the ailing grandfather with cancer asks about his chances of surviving? What moralist would deny the right of a person who has nothing to eat the food which, legally or morally, belongs to another? Who will deny the right to procreation to a couple shipwrecked on a desert island, even if they are related to each other and thus infringe the taboo on incest which is so widespread throughout human societies? Who will

19. *Exodus*, 20, 1-21; *Deuteronomy*, 5, 1-22. It is worth pointing out that in the original, this code seems more like a property law than an internal moral code. It says nothing about fornication; it prohibits adultery because it infringes the husband's property. Coveting one's neighbour's wife is not the same as internally desiring her and is placed on the same level as the kind of coveting which wishes to take possession of the neighbour's servant and serving woman, his ox and ass, and anything else that is rightly his.

20. Francisco de Vitoria, *Sobre la ley*. Editorial Tecnos, Madrid, 1995, pp. 21-25. The treatise was written for the lessons given in 1533-34, on the threshold of the modern epoch to which he contributed with his lessons on the Indians and the right of war. With regard to our concern here, he sets out examples of laws which contribute to moralise customs, such as the prohibition on blasphemy and sodomy. Nowadays however, our view is that these prohibitions cannot be said to make blasphemers or sodomites «good» or «virtuous», strictly speaking. Perhaps, out of fear of punishment they will not sin in public... but we do not believe that the law will change their desires or intentions and, therefore, their real morality.

not accept exceptions to the commandment «Thou shall not kill», at very least in legitimate self-defence, and even more cases given that there are many who support the death penalty? We see then that abstract formulations are extremely formal and indeterminate, and we also see that the main body of such formulations can also be seen as legitimate from the perspective of a precept that we should respect the freedom of individuals, making compliance compatible through a rule which can be universal.

We see then that the freedom principle is logically favourable *in principle* to deregulation as opposed to non-regulation. This principle also believes that it is not necessary to have more laws than strictly necessary, since the basic principle is after all freedom. Those who demand regulation, therefore, have to come up with the proof. They are the ones who must prove the need for the precept on the basis of a real conflict, not merely a possible conflict. The supporter of the material moral code tends *per se* to legislate everything, to prohibit and order. On the other hand, it seems to me as if in the long run they wished to cover the entire range of actions possible, without leaving any legal loophole. Germany, wrote Chesterton ironically, is the ideal country: everything that is not obligatory, is prohibited. Anyone who feels he is an adult however, is capable of taking his own decisions, including the moral ones and expects the law to intervene in the process as little as possible.

One single step along the road of interpreting these two opposed conceptions of freedom, permits us to say that the person who sees freedom as primordial tends to look to the future with more hope than fear. Having had a positive experience in the terrain of human creativity, he opts to accept a new development despite not knowing *in concreto* what it is. On the other hand, the person who sees freedom as secondary, allows fear to get the upper hand of hope. He opts for the preservation of the order he already knows for he feels terror in the face of the unknown. He distrusts human creativity. He wants to ensure that the previous order goes on, since in it he sees his identity. He sees it as natural, because for him it is the habitual order in which he was brought up.

IV. Application to human cloning

Finally, we have reached the point we set out for, and I must say that I hope that what I have said so far has been of use, since I feel sure it has allowed us to glimpse some of the possible applications of ethics to human cloning. In any case, human cloning is one of the most delicate life-affecting technologies and we must be most careful with it, since only in this case are we dealing with a process the culmination of which, if it occurred, would be a third person, a free being as yet non-existent, but on whom we decide. We cannot ignore this dimension. For this reason, it seems to me, this is the bioethical issue which most raises tensions and fears and it has therefore brought us together here in this multidisciplinary exercise, always so desirable but so rarely achieved.

1. *On the subject of our discussion and the outright condemnation of human cloning*

Turning to the subject at the centre of the behaviour we are setting out to qualify: it helps greatly to clarify the concepts if we bear in mind that the actions in question affect not so much a finished object as a process or, as it were, an object which is process-like in two directions. One of these processes is the result of the cloning action which opens up and initiates a process which will develop autonomously, and the second is that the object, if you like, the «artificial» object, continues in turn the general process of nature. Turning first to this second process: our sense of scandal and fear can be reduced by simply observing that the action of cloning represents a certain continuity with the general process followed by nature in that it *imitates* it. While it cannot be said to simply support nature however, neither can it be said to contradict it absolutely. This consideration has a neutralising effect on many of the most outspoken arguments which call for an unconditional ethical ban on hypothetical or actual human cloning, a ban which demands radical judicial prohibition of any experiment whatsoever on cloned cells, with the exception, at most, of those deriving from division of an egg obtained through bisexual *in vitro* fertilisation (artificial twins). Now let us return to the process begun with the act of cloning, we must now point out that this process itself is made up of a number of different stages. The process is gradual and not evenly continuous either. From the initial segmentation of the egg until the birth of a mammal, we distinguish, for example, embryo and foetus. Despite the fact that the exact moment in which one stage ends and the other begins cannot be pinpointed with total precision, the stages are real and this implies a twofold necessity, if we are to bring a minimum of rationality to the regulation of the process. The first of these is that we must define *by convention* the exact point which separates the two stages (not in a merely arbitrary way of course, but rather based on observation of the stages) and we must find the most practical manner of establishing this. The second main need is to establish an ethical differentiation for each of the different cloning procedures, in accordance with the stage in which it takes place. Destruction of an embryo is not the same as destruction of a foetus.

We can see then that the gradual nature of the process is of great importance for the regulation that must be applied to it. As in the case of the regulation of voluntary abortion, accurate distinction between the various stages of the process of cloning will permit us to arrive at graded levels of ethical consideration of the action that may take place in the process. To «sanctify» the entire process, both in the case of the abortion debate and that of human cloning, is to abuse an argument which in itself of course is entirely true - that the entire genetic process preceding the birth of a human being is undoubtedly pre-human in character. This pre-human character makes the process worthy of special legal protection. We term the unborn human life *nasciturus*. We should note however, that in grammatical terms *nasciturus* is a future participle which, since it does not exist in our present-day European languages, we translate by means of paraphrase as *that which will be born*. Until it is born, it is not what it will be, in other words, it is not a separate individual until born. The *nasciturus* does not demand therefore to be treated as a *natus*. From this point of view it is perfectly rational to distinguish between the

embryo and the foetus, as the UNESCO's Universal Declaration does, and it is logical that destruction of one is not the same as destruction of the other in ethical terms.

If what we describe as a future X is not yet X, then we see that the metaphysical entanglement which serves as the basis for the condemnation of all voluntary pregnancy termination as murder/homicide, is essentially the same as that which underlies radical calls for the outlawing of all forms of human cloning. As it is a mere petition of principle in the logical sense of the expression, to presume that there is a rational person or individual involved from the very moment of fertilisation of the oocyte is equally gratuitous as to suppose that a cloned cell in the process of embryo segmentation is a person. In both cases, the attribution of this entirely human character to the being which is in the process of developing into a person is founded on the belief that a human is human because of some soul-thing, whether this be *the incomplete substance* of Scholasticism or the Cartesian *thing which thinks*, completely separate from the body. God, according to this metaphysical reasoning, creates the soul from nothing in each case and places it in the first cell of that which will be *positis ponendis* a human being. Obviously, this line of argumentation is that of what we have termed the theological fallacy in that it justifies a rather shaky metaphysical reasoning by an appeal to religious authority.

Nor does the general claim that cloning involves risk and dangers serve as the basis for its global condemnation. Risk is part of life, and indeed it forms part of the uncertainty which is inherent to the process of natural procreation. In any case, as we shall see shortly, what is needed is a listing of the concrete risks which cloning involves and an equally *in concreto* assessment of them.

And finally, there is one last global condemnation, which does not however, merit much attention. This view is one which repeats in horror that an individual produced by cloning would be identical to the individual from which he has originated, as if it were possible to have two of the same. This foolish view neglects the fact that *this* individual is unique, with or without cloning, and that the other will always be another, with or without cloning. Individuals individualise themselves, Leibniz observed accurately. And if both of them have an equal endowment (not identical, strictly speaking) then both will at the outset be very equal, but since life makes all the difference, in Nietzsche's again entirely accurate phrase, they will become different as they go through life.

2. *The dimensions of the problem*

Now, with a view to helping research bodies, and they themselves foresee problems and the need for advice and guidance, it would be helpful to set out some of the different dimensions which must be borne in mind when dealing with this issue and also in whatever final decisions are taken.

2.1 The affected parties

We must draw a clear distinction in each case between who has the problem and who must decide on it. Both parties only coincide absolutely when it is a matter of adopting a moral decision in the strict sense, that is, a decision of conscience. However, when the question concerns a criterion for collective action, whether obligatory or simply recommended, it is always necessary

to distinguish between the party who will have to put the criterion into practice (for example, the individual researcher) and the party who has to decide on the nature of this criterion (the project director, for example, or at the extreme limit, the relevant legislative power). And the one who has to take this decision, in turn, will be distinct from the experts who provide technical advice. It would seem that, bearing in mind the gravity and delicacy of the problem in hand, we should agree that at the very least it would be highly recommendable, if not totally obligatory, to demand that the person who has to take the decision should have access to advice, which he is obliged to listen to, although the terms of the expert's report would not of course be binding. Furthermore, the decision should be taken by a body as opposed to an individual, in democratic representation of those who will be affected by whatever decision is taken.

With regard to the question of who actually carries out the operation, I think it is important to be clear on the characteristics of the ideal party. Can it be carried out by anyone? Should we set some other prerequisites in addition to academic qualifications? If this is so, who will establish these requirements? Would it be necessary to establish a preliminary register? These are only questions, and not a suggestion that everything should be regulated. However, they are questions that will have to be answered.

In any case, what will, in my opinion, be absolutely necessary is a specific decision as to who will be responsible to society on the issue of disposal of any purely experimental embryos produced or the care of any cloned being that reached the stage of being born. It is not absolutely necessary that the person responsible (or the progenitor in moral/legal terms) should also be the donor of the genetic material, but who he or she is must be clearly established, since if there is a *nasciturus* someone will have to be designated as responsible for its protection and, with regard to the possible continuation of the process up to birth, it must be borne in mind that when a human leaves the mother's womb in which it has matured, it must be received into another womb, the womb of the family, which will care for him until he reaches adulthood and as such becomes fully integrated into society.²¹

2.2 The decision

A decision will never be operative and will end up as merely rhetorical or moralising text, in the worst sense of the word, unless it clearly sets out what is obligatory, what is prohibited and what is recommendable. It must be said that a *sine die* moratorium, which does not set out a time scale or conditions for its lifting, is equivalent to a blanket prohibition. And let us remember, that with regard to all prohibitions but especially such absolute ones, we must be very cautious. Regarding the scope and range of the decision, the parties that will have to comply with it and

21. If *human* procreation, that is, responsible procreation by a *human* demands commitment to the *nasciturus* as an individual, even though it does not yet exist, if it demands he be received humanly, nourished and educated until reaching the age of adulthood, then this demand should also apply to cloning. Some writers even talk of a *quasi-contract* with the cloned offspring.

the level of compulsion involved, it is clear that under no circumstances should it go beyond the powers of the decision-making body. All of these issues will have to be set out with great clarity and precision. When the decision contains strong obligations and makes provision for penalties, there will also have to be provisions for determining how infringement will be proven. Let us remember here the advice given by the little prince to the governor: if you don't want to be ridiculous then don't make rules that you know the subjects will not obey - or, we should add, that you cannot enforce. In this context it would be useful to point out that any regulation, no matter how energetic, will be inoperative, and increasingly so as time goes on, if at the extreme limit there is not a international authority with power to legislate and enforce its law on a world-wide basis. In the absence of this body, anyone who wishes to infringe whatever bans that may be introduced only has to set up a laboratory outside the jurisdiction of the law in question.

2.3 The probability of effects and their influence on decision making

As we have already mentioned, exhaustive provision for the effects of cloning will always be impossible. We are forced to operate in uncertainty. However, a responsible decision has to make some provision for possible effects, at very least for the most probable effects arising from a given action²². From this another twofold rule can be drawn. First, in case of high levels of uncertainty, extreme caution must be taken, and prior to decisions as to whether a certain action be taken or not a preliminary experiment must be carried out on animals as informative for humans as possible, so as to avoid malformation or grave predisposition to illnesses, although we must bear in mind that the results of such experiments cannot always be extrapolated to humans, given the greater complexity involved. However, and this is the second rule, the higher the risk of undesirable results, the more caution must be taken. Distance in time makes the effects of any action all the more unpredictable and at the extreme, totally unforeseeable. On the other hand, it is also necessary to draw a distinction between whether the possible risks will affect cells which could give rise to new individuals (germinal cells) or whether they will only affect the cells which will only be reproduced in that individual (somatic cells).

With regard to the dangers involved in cloning, in addition to risks deriving from action taken on the individual cells, we must take account of the dangers or risks arising from cellular interaction, given that we are highly complex organisms and not just a mere aggregate of cells. Consider the neurological or behavioural effects. If the latter were different to what is normally referred to as standard behaviour, how would this affect the clone and his acceptance by other human beings and indeed his acceptance of himself? Without ever reaching the monster stereotype of science fiction, would not possible behavioural differences condemn him to a life

22. At this stage of the debate it might be worth recalling, at least *ad hominem*, the moral probabilism of the baroque Jesuits, veritable antecedent of modern conceptions of freedom and which caused the Order so many headaches, to the extent that it was one of the causes of its dissolution. According to that doctrine, a prohibition must be certain, though for a permission to be granted it is enough with a sufficiently solid probability.

of inferior quality than that of other humans in the society into which he had been born?

Vital to this question is not only our specific ignorance of the effects of cloning but also all our tremendous ignorance, which will perhaps be overcome someday in the future, of how genetic and environmental factors come together to influence the development of mental capacities and the specific personality of human beings. At present we have relatively in-depth knowledge of, for example, the various forms of autism that occur, this grave defect which is undetectable until quite an advanced stage of the child's development, and which then appears suddenly. However, we have no idea of what causes this.

2.4 Multiple series cloning or parallel cloning

Up to now we have been assuming that a single individual might be cloned. Now we shall turn to the possibility of cloning further individuals from others who are themselves clones. This serial continuation of the cloning process presents, it seems to me, specific problems which are similar to or certainly closely related to those which justify the prohibition of incest. A «closed» line of beings arising from the repeated cloning of clones without outside gene input or exogamy, would in all likelihood degenerate, just like a closed food cycle the defects of which are increased if there is no «ventilation», that is, no presence of exogenous elements which would dilute any harmful factors. This argument would seem to justify the idea that a clone should not be the base for another cloning operation.

Parallel cloning would seem to be much less risky. It would be employed so as to increase the likelihood of the success of individual cloning, but I also think that this possibility highlights the necessity of first carrying out much more extensive experimentation on the most informative animals for humans and also increasing our knowledge of human neurology and behaviour.

From all that we have seen, it must be concluded that at present the most sensible, indeed the only responsible, approach, is to maintain a moratorium on the continuation of the process beyond the experimental phase of work on embryos.

A final consideration: I have gone to lengths to unravel and probe an issue which is made up of many dimensions, for this is the only way to approach it rationally. Given however, that the popular conscience judges these matters and takes up a position in respect of them on the basis of the prevailing myths, in a global, sweeping way without taking account of differences, and that in accordance with the principle of freedom we are all free to participate in the decision-making process, it is obvious that all of us have a duty to inform public opinion on the current state of the issue, and to amend the false information often put in circulation for various vested interests.

And now, I can only say: let us advance with caution. Am I in favour of human cloning? Neither for nor against. I am in favour of freedom. And I also think, as indeed I am sure do most people here, that if cloning is possible it will happen, or has already happened, no matter what ethical judgement either I or others pass on it.