Let me start by telling you how pleased and deeply honoured I am to have been invited to give the first Tucker Lecture of the twenty first century or, if you prefer, the last lecture of the twentieth century.

I am pleased also to be back here in Louisiana and more particularly at the LSU Law Center. In my former life as a law professor, I had the distinct pleasure of teaching here for two semesters. This was the time (1969-1970) where the Louisiana revival of its civilian tradition was in full swing. The late Paul M. Hebert who was then the acting dean felt that the Louisiana State Law School (as it was then known) had been entrusted with the unique mission of promoting the teaching, as well as, the development of fundamental research in civil law. With dedicated experts such as the late Joseph Dainow, Robert Pascal, Saul Litvinoff, Thanassi Yiannopoulos, Lee Hargrave and Bill Crawford, to mention a few, the survival and expansion of the civil law tradition was well on its way.

I have been honoured because during that period, I had the distinct privilege of meeting personally Colonel Tucker. I remember that I was fascinated by his dedication to the Louisiana civil law tradition and the strength of his commitment to it. I can still vividly remember the day when this distinguished gentleman took me to his home for dinner and showed me his magnificent collection of old French “coutumiers.” I am very especially honoured tonight to deliver the prestigious lecture that bears his name.

The relationship between law in general, and more particularly civil law, science and bioethics, is both an open and an interesting question. Beyond the traditional interrelation between morality and law, the development of medical science has created a new perspective for us lawyers and for the science of law as such. My theme tonight is, of course, full of very controversial issues and I will try to talk more in general and abstract terms, rather than to dwell on precise, yet extremely debatable, issues such as abortion, euthanasia or embryo transplant and farming, to mention only these three. Anyone of these themes could indeed very well be the subject of several hours of analysis and reflection.

It is well known that medical and biological sciences have undergone tremendous, as well as, rapid changes over the last twenty years. The expansion of knowledge and technology has been overwhelming and accelerated. It is said that this expansion is no longer mathematical, but geometrical. It is also believed that particular areas of scientific knowledge have made more progress in the last 10 years than during the entire history of mankind. This is certainly true, for instance, of human genetics.

These changes have had two different kinds of impact. In a number of cases, they have resurrected issues and problems for law and morality that had already
been experienced before and to which society had attempted to respond, but problems that are set, nowadays, in an entirely new and different social, legal and ethical context. In other words, the progress of modern science and medicine in these cases did not necessarily raise entirely new issues, but rather reactivated old concerns although, this time, against a somewhat different cultural and societal background. Take, for instance, the difficult problems arising out of the care of terminally ill patients. In the history of mankind, passive and active euthanasia, as well as, assisted suicide have been the object of countless religious, philosophical, ethical, social, legal and political discussions, in a great number of societies and in a great variety of contexts. The Greek philosophers have abundantly discussed it and, to refer only to modern times, the euthanatic movement in Great Britain between World War I and World War II, the writings of Binding and Hoche in pre-Nazi Germany and, more recently, the position taken in regard to voluntary active euthanasia by well-known jurists and philosophers, such as Glanville Williams, are well-known. It is also interesting to note that for the first time in modern human history, a democratic country, The Netherlands, has allowed voluntary active euthanasia and legislated on the subject. But in our modern setting, the factual and analytical context of the issues raised by death and dying and the interruption of medical treatment are substantially different from the context of those issues only 50 years ago. New technologies such as the heart-lung support machines, have forced ethicists and lawyers to face the new reality of cerebral and brain death. The development of organ transplant and its increasingly higher rate of success with the help of Cyclosporin and other immunosuppressant drugs, has also shed a new light in that respect. The question of the moment at which persons can legally be pronounced dead and their organs taken away for transplant purposes has become crucial. Death is no longer identified with the absence of heart beat and spontaneous breathing, but with the total absence of cerebral activity. Moreover, the new technology has had, as a consequence, to foster the principle of autonomy of the person and the right to self determination and to refuse treatment.

The refinement of pain-killers and the expansion of terminal care procedures have also created for physicians the difficult question of how far they can go without provoking or hastening death, while trying to alleviate pain and thus potentially incurring criminal, as well as, civil liability.

Another example of that first kind of impact is that of AIDS. AIDS is, of course, a recently diagnosed disease. It is, unfortunately, both epidemic and terminal. Yet, most if not all of the ethical and legal problems it raises are well-known and have already been previously examined in a different social context. It is interesting, in that respect, to read the literature of the first quarter of the 20th century, dealing with the transmission of syphilis and tuberculosis which were also, at that time, both epidemic and incurable. The right to secrecy and the duty of the physician to reveal to the consort of his patient the risk of contamination were abundantly discussed in that literature, and the maintaining of confidentiality was then the general rule. However, at least in Canada, in the case of AIDS, the duty of the physician to maintain the professional privilege of silence has now been replaced by a duty to disclose.
In both cases, euthanasia and AIDS, the context in which problems concerning treatment and terminal care are raised is substantially different, because the social and ethical values they confront are no longer the same.

By contrast, in other areas, late 20th century medicine and biology have created a different kind of impact by raising new challenges to which society as a whole, and thus ethics and law, will have to stand up without the benefit or the possibility of learning from past experience. Take for instance, the difficult issues raised by the expansion of new reproductive technologies, such as in vitro fertilization and embryo transplant, to say nothing of surrogate motherhood. These new methods of human reproduction have drastically challenged a number of legal rules that were thought permanent and immutable. On a general level first, the very legitimacy of these techniques in a society like ours has and must be seriously questioned. Law, under one form or another, has to address the issue of their legality. For instance, do we really want, as a society, to endorse commercialized surrogate motherhood and to regulate surrogate contracts in the Civil Code? Are we prepared, as a society, to accept commercialized surrogate motherhood and to regulate surrogate contracts in the Civil Code? Are we prepared, as a society, to accept that human embryos be kept frozen for indefinite periods of time, or be sold to research institutions, or given to infertile couples who have no genetic or biological links with the future child? Can we accept, as a society, that a woman be impregnated with the sperm of a husband that has been dead for 10 or 15 years, or that a man be allowed to leave sperm in a bank and become the father of his great grand-daughter? More simply, should it be legally possible to will, sell or give away gametes like any other object or commercial product?

On a more specific level, new reproductive technologies also challenge the traditional rules of filiation. In certain cases, a child could have three mothers: the genetic mother, that is, the woman who gave her ovum to be fertilized, the bearing mother, that is, the surrogate who bore the child during pregnancy and until birth, and finally the social mother, that is, the woman to whom the child is surrendered after birth, who has paid for the whole operation and who will raise the child as her own.

Who, to take another example, ought the law recognize as the real mother. In a recent California case where a woman gave an ovum which was then fertilized by an anonymous sperm donor and reimplanted in the uterus of her female lesbian companion who became pregnant and delivered the child, should the law recognize that the child may have two mothers? I am certain that anyone who had seriously argued, at the time of Blackstone, Jeremy Bentham or Montesquieu, that there could be such a thing as multiple motherhoods would have been found to be totally insane.

Another area which offers a new challenge and, without any doubt, needs a serious legal and ethical analysis is that of genetics. Our society will have, at one point or another, to face, as with reproductive technologies, two different categories of problems. General social and ethical ones, such as those touching upon the legality of inter-species breeding and of genetic engineering applied to the human person. In that respect, a burning issue will probably be how far, as a society, are we prepared to go without endorsing eugenic policies with all the pitfalls that they represent in terms of the biological evolution of the human race, potential
discrimination, and the symbolic danger of the materialization of the eternal dream of the "perfect human person". Others will be of a more practical nature. The law, for instance, already has to evaluate the admissibility in evidence, in both civil and criminal cases, of genetic imprints and DNA expertise.

As far as both, lawyers and bioethicists are concerned, two myths must first be dispelled. The first is that science is neutral in terms of moral values. Scientists will often be heard to argue that scientific research and discoveries are never good or bad in or by themselves, but always neutral because they deal strictly with facts, information, and the progress of knowledge. They conclude from it that law should not attempt to regulate science but rather let science be its own master. This, of course, is wrong. Science is not neutral because the impact of scientific discoveries on society as a whole is loaded with ethical and moral concerns. For instance, it is not because science can now freeze human embryos that this practice should be allowed, recognized or even encouraged. The social impacts of embryo freezing raise several important ethical questions, one of which is, of course, the classification of the human embryo and the identification of the protective civil rights that it might have.

The second myth is that scientific progress is necessarily equivalent to social progress. The syllogism in its simplest form is the following: Scientific advances and discoveries are extraordinary and devoted to the promotion of knowledge and human progress; progress of mankind being both a good and ethical goal in itself, scientific progress cannot but be good for society as a whole. This, again, is false. Scientific progress is not in itself a valid social and ethical goal, for it has to be assessed carefully against possible ethical and social negative impacts it may have on mankind. Moreover, even if it appears to be good and valid, society as a whole may not be ready, at one point in time, to accept the consequences of a particular biomedical progress. Quite clearly, it is not only impossible but politically undesirable for law to sign a blank check to medical science. Law must, in this respect, play its traditional role of assessing all the consequences of scientific discoveries and of regulating them in the best interest of the human community as a whole.

Medical and scientific progress, even when extremely valuable in terms of the promotion or gathering of scientific knowledge and data, are thus not necessarily "good" or "valid" in terms of ethical and social standards and norms. The benefits they may bring to scientific knowledge are not necessarily compatible with social goals, and social advancement cannot be measured only in terms of promotion of scientific advances. These advances, like many other initiatives, must remain compatible with larger societal goals. Take, for instance, embryo sexing which is getting more and more popular in North America, and facilitates, for future parents the choice of the sex of the child to be born. Imagine for one moment that there exists a full proof technique, applicable in circumstances other than the present ones, that is, in IVF cases, that would allow, with a high degree of consistent predictability, to choose the sex of the future baby. Given the fact that, quite unfortunately, in several countries around the world, such as India and China, the birth of a male is strongly preferred and even encouraged, given also the fact that
statistics show that North American couples, if given the choice, would tend to prefer, for a first child, also a male, one can easily imagine that, in a matter of one or two generations, the delicate ratio and balance that nature had achieved between male and female in the world could be totally upset with potential disastrous consequences. Law may thus have to prohibit embryo sexing, not only for ethical but also for social reasons, except in extraordinary circumstances, such as the need for protection against a number of hereditary diseases transmissible only to a given sex, as hemophilia, for instance.

Society and law cannot without some form of critical ethical appraisal, purely and simply endorse the unlimited satisfaction of human fantasies and desires by medicine and science. As a matter of fact, through our legal system, we all have the fundamental responsibility of channeling scientific and medical developments through the larger goal of optimal collective, societal development. Law is and should always remain directly concerned with the effects and consequences, on society as a whole, of the practical applications of scientific discoveries.

Taking thus for granted that law cannot stand still and simply leave scientific progress unfettered and unregulated, the question then really becomes twofold. First, what can the law reasonably expect to accomplish through its regulatory process. Second, through what legal instruments should it operate.

Scientists are, of course, deeply afraid of the intervention of the law and strongly believe that any form of regulation will have the effect of sterilizing progress. This concern must be recognized as legitimate and any form of legal intervention must be carefully planned and measured in terms of realistic goals.

We thus come now to the crux, the pith and substance, of the matter: What should the law do? What can it do and how? There are, quite frankly, no easy or short answers to those two questions. Since at least the beginning of the 20th century, that very issue has, indeed, been addressed by lawyers, philosophers and ethicists. What I will attempt very modestly to do, in these few remaining minutes, is to give you what I personally believe should be the general goal of the law in regard to biomedical and technological progress.

First, the law has to strike a happy balance and a difficult course between too much or too little intervention. On the one hand, the State, in a democratic society, cannot, as we have seen, rely on scientists alone for self-regulation and self-discipline, again, because law has to preserve and promote the social order as a whole in a permanent and evolutive way. On the other hand, it certainly ought not to overlegislate, or even worse, overjudicialize the decision making processes of science and medicine. I do not think, for instance, that it is for judges to routinely decide, as a matter of course, who should live and who should die when the scarcity of medical resources makes it impossible to give equal treatment to all patients, or in situations where the question is whether treatment should be administered, withheld, or withdrawn. A large number of medical and scientific decisions are not, in my opinion, best achieved through law and through the adversarial judicial system, but rather through negotiation and compromise with the help of rules of bioethics. Our legal system is based and predicated upon a binary scheme: Acts are allowed or prohibited; a person is guilty or not guilty; the plaintiff wins or
loses. Medical decisions do not partake of the same black and white and somewhat manichean type of logics. The growing importance of clinical ethics committees reflects that fact. It is only when and if a conflict arises between those who have to make the decision for instance, between the patient, the physician, and the family, and this conflict cannot be resolved, that the impartial arbitration of a court of justice should be called upon as a last resort measure.

In my opinion, once law has set the broad general limits of what ought to be permissible and legal and what should not be, clinical cases must defer, to a large extent, to a decisional process that follows the rules of bioethics. These rules, as you know, are not universal, in fact they will vary sometimes from one hospital to the other and lack, of course, the State’s sanction. They are, as one French author has put it, “du droit flou.” They are, however, of indisputable usefulness. My first point then is that the intervention of the law should be carefully measured and restricted.

Second, law is a form of tyranny in the sense that it does restrict individual freedoms. Democratic and pluriethical societies like ours require that law should only, in most cases, set large and flexible general norms, leaving the largest possible margin for individual initiative and freedom. Legislative activities should, thus, all things considered, be minimal but should nevertheless exist, because they will determine the type of society in which our children will have to live in the future.

Third, law should not hesitate to regulate and prohibit what I would call unacceptable exploitations or caricatural results of science. Take for instance the rules concerning organ transplant. In Canada, there are sadly, few donors of kidneys or other organs, and a large number of patients die every year because surgeons are unable to recruit suitable donors. There is little doubt that a completely free market economic model for organ donations would probably go a long way to relieve that shortage and thus achieve a perfectly valid and ethical result, such as the survival of a larger number of patients. Yet, I do not believe that we are ready, at least in Canada, to accept that poor or underprivileged people be allowed to sell their kidneys simply to pay their debts or to feed their families. The same holds true for surrogacy which, by the way, is prohibited under Article 542 of the Quebec Civil Code. Surrogacy, at least for financial compensation, tends, in my opinion, to be but another form of exploitation of women not in their sexual but in their reproductive capacity.

Fourth, law has to make sure that, in the administration and supervision of our medical system, reasonableness, fairness and equality for all persons, in terms of access and priorities are observed and achieved. Priorities in that respect cannot simply be based on economic or scientific goals. It would be sad, indeed, to live in a country where the quality of medical treatment would depend on whether one is rich or poor, a man or a woman, caucasian or not, or on criteria that are determined by science alone. In that respect, one cannot but be concerned and worried by the new emerging philosophy that has appeared recently in England and which consists of determining the availability of medical treatment for certain categories of patients not by medical standards but rather by reference to their life style. A smoker, a drinker, a person who has never exercised in his life would
under that practice be denied medical treatment even if it could be proven to be medically useful.

Fifth, law should not, in scientific matters, necessarily try to anticipate the problems and react to them before they actually materialize. In certain cases, however, the degree of predictability is high, and it is then better to foresee than to remedy. This, I believe, is still the exception, however, and not the general rule, and requires on the part of the legislator a good sense of perception and of predictability of social effects.

To sum up, law must, first, decide what is humanly acceptable and, in that respect, arbitrate the ever present conflict between collective and individual rights and concerns. Second, it must generally set limits to science and finally, through both its legislative and judicial processes, act as a last resort control mechanism for individual conflicts and the repression of unacceptable ethical behavior.

Yet people, and mostly the informed public, often blame the legislator for its silence and failure to act. The public demand for immediate legal activism is most of the time voiced in terms of criminal law intervention. A good number of citizens wrongly believe that the main, if not the only role of the law, is to prohibit and punish certain forms of behavior. The control of medicine and science is thus clearly perceived and set by them in a repressive perspective and left to criminal law. It is often wrongly assumed that the enactment of a piece of criminal legislation will, by magic, make the problems it addresses disappear. We lawyers know that this assumption is both unrealistic and dangerous. Unrealistic, on the one hand, because to be really efficient, in terms of social control, legislation must be carefully prepared and timed, and not imposed on the people without prior public discussion and ventilation. Hastily drafted legislation, adopted in response to a particular crisis situation or sudden political pressure usually makes bad law. Dangerous, on the other hand, because legislation is in itself, most of the time, helpless to solve problems that are of a social nature and, in that respect, legislation that is ineffective or ineffectual brings law and the legal system as a whole into disrepute, because it carries with it the image of inefficiency and the risk of built-in civil disobedience. The public, by the way, often ignores the role that the judiciary must play in adapting known sets of legal principles to new factual situations and thus, generally, underestimates the impact of judge made law.

If one takes for granted that, in a limited number of cases, criminal law will have to play an important role, is there also a place for the intervention of other branches of the law? Two other branches that should not be underestimated are administrative law and civil law.

Administrative law because through the regulatory process of licensing clinics, research institutions and hospitals, a great deal can be done to insure a quality control of scientific activities and a supervisory power n of what type of research is done. In the U.S., as well as in Canada, government funding is, by and large, subject to strict administrative regulations. The private sector, however, which is over expanding, especially in the area of genetics, should also be subject to that type of legal control.

Civil law, on the other hand, also has a crucial role to play, and this role should
not be underestimated for the following reasons. The first one relates to methodology; the second to the legislative technique itself.

As we well know, the civilian methodology is predicated upon a logical deductive model. It first attempts to identify basic general principles that will serve as fundamental guides to any form of legislative intervention. The merits of applying that method in the biomedical and bioethical context are clear, in the sense that the identification of general and abstract principles always requires a preliminary in depth analysis of the ethical concerns that must be accommodated and translated into law. For instance, Article 26 of the Louisiana Civil Code concerning the patrimonial rights of the unborn child is clearly based on the principle that the human personality, for certain purposes, starts at the very moment of conception. This is supplemented by Sections 121-124 of Title IX of the Louisiana Revised Statutes concerning the embryo. One can clearly identify there the desire of the law to preserve the dignity of the human embryo as a general principle. For instance, Article 11 of the Quebec Civil Code, which states that no one can be made to undergo any form of medical treatment without explicit consent, is based on the principle of self-determination, itself a logical consequence of the principle of autonomy. Article 25 of the same Code codifies the principle of gratuitousness of the alienation by an individual of a part or of a product of his body. This, as you know, is also recognized by all of European legislations on the subject and is clearly predicated on the principle that the human body cannot be given the legal qualification of an economic object.

The civilian deductive approach, I believe, guarantees before any legislation is enacted a clearer identification of fundamental principles and has the distinct advantage of lessening considerably the risk of contradictory solutions which is always present where the identification of those basic principles is left only to the accumulation or sedimentation of judicial precedents.

The second reason why I believe that some forms of regulation of science can be best achieved through civil law relates to the type of legislation itself. As we all know, civil law jurisdictions tend to legislate in broad general terms and avoid undue details or specificity. In matters of bioethics, this strategy is of crucial importance for the following basic reasons. First, too detailed a piece of legislation runs the risk of becoming rapidly obsolete and more particularly so in biomedical matters where things evolve very rapidly. Second, legislating in broad general terms allows for a more flexible normativity and a better adaptation of the law to the constant evolution of society.

Third, and I must admit that this may sound as a paradox, I believe that the civilian type of legislation does in fact give an increased creative role to the judiciary. François Gény made that point in his criticism of the “exegetic” school in France, although not in the context of a comparison between the civilian and common law approach to legislative drafting.

The civilian type of legislation is drafted in general and abstract terms. It leaves to courts the task of applying a given system of normativity to particular factual situations but always by reference to and in harmony with predefined broad principles. The absence of detailed norms and specific definitions of terminology,
that are often found in a typical statutory type of legislation, avoids putting the judge in an interpretative straight jacket and thus prevents a restrictive black letter interpretation of the law.

I will conclude and leave you with two remarks that reflect on my part a deep growing concern.

First, there is a recent tendency, perhaps more vocal in North America, to legitimize the commercialization of the human body. In classical civilian analysis, the dichotomy between things (objects) and individuals or persons (subjects) is well recognized. A number of very important consequences is derived from this distinction: a human person cannot be treated as a thing nor can his body or even parts of his body be so treated.

The principle of gratuitousness of gifts or donations of human body parts, which are "hors commerce" as the French would say, is well settled in Europe, but subject to intense debate here in North America. Why, it is argued, should a person not be free to sell a kidney to the highest bidder? Why should a laboratory be prevented from taking a patent on a human gene? The economic market forces and the pressure on politicians in that respect are both vocal and important. Yet, I believe that we have to resist them strongly. Should we do not do so, the commercialization of the human body will inevitably, in my opinion, blur the fundamental distinction between persons and things and lead to serious ethical abuses and finally to the degradation and desacralization of the human person.

My second concern is to see biomedical sciences being used as a simple instrument for the satisfaction of ever expanding human desires and fantasies. This danger is already present in two particular areas. The first is that of new techniques of human procreation. The tendency there is to brand as ethical and thus permissible any method that will lead to the birth of a child for an infertile couple. The satisfaction of this perfectly legitimate human desire by any procedure or by any means cannot simply be legally and ethically endorsed. If there is a right to have a family, there is no right to a child, for the rights of the child have to be considered. The second, which will, in the years to come, take considerable expansion is that of genetics. The demand will certainly increase for the "manufacturing" of the perfect child with a strong genetic pool who will satisfy all the emotional fantasies of the parents. This would lead not only to positive but also negative eugenics, and potentially to the freezing of the evolution of mankind and of the human race.

It is the moral responsibility of all of us to resist the imposition of solutions to ethical problems raised by science through strict economic criteria on the one hand and, on the other, to send to our respective legislators a clear message that law should not simply and purely endorse the satisfaction of human desires without first putting them in perspective.