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**SANCTITY OF LIFE;
EXPLORING ITS SIGNIFICANCE IN MODERN MEDICINE AND
BIOETHICS.**

Fabián Andrés Ballesteros Gallego.
Department of Experimental Medicine
Program Bioethics
McGill University, Montreal

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ABSTRACT

This thesis explores the concept of “Sanctity of Life” from the perspective of what “life,” in particular human life, means today. With the rapid advances in science and modern medical practice, the concept of life has undergone many changes, shaking the foundations of what before made us view life as sacred. Modern thought has brought new forms of understanding to the concept of life.

I question the goals of modern medicine and biotechnology, and criticize the reductionist view of life. And finally, I highlight a new ethical approach that could bridge science and moral convictions about the concept of life. This approach explores the argument of sanctity of life and its utility in approaching assisted medical techniques and genetic intervention. It is my opinion that this ethical principle has not lost importance and could be reshaped and adapted to a contemporary understanding of life in the light of our democratic and pluralistic society.

RÉSUMÉ

La présente thèse explore le concept de “La Sainteté de la Vie” sous la perspective de ce que la “vie”, en particulier la vie humaine, signifie aujourd’hui. Avec le rapide avancement dans les sciences et dans la pratique de la médecine moderne, le concept de la “vie” a subi beaucoup de changements, modifiant, ainsi faisant, les fondations à l’origine même du concept originel de la vie comme étant sacrée. Les idées modernes ont apporté de nouvelles façons de comprendre le concept de la vie.

Je questionnerai les buts de la médecine moderne et de la biotechnologie, et critiquerai la vision simpliste du concept de la vie. Finalement, je soulignerai une nouvelle approche éthique qui pourrait faire le pont entre la science et les convictions morales au sujet du concept de la vie. Cette approche explore l’argument de la sainteté de la vie et son utilité pour approcher les techniques médicales et interventions génétiques. Il est de mon opinion que ce principe éthique n’a pas perdu de son importance et pourrait être reformulé pour s’adapter à une façon contemporaine de voir la vie dans notre société démocratique et plurivalente.

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TABLE OF CONTENTS

I.	INTRODUCTION	P.1
II.	THE CONCEPT OF LIFE AND HUMAN LIFE	7
	A. Life From a Religious View: Catholicism	7
	B. Life From a Secular View	12
	1. The Notion of Order and Purpose in Life	13
	2. The Medicalization of the Concept of Human Life	15
	3. The Notion of Person and Personal Identity in Human Life	16
	4. A New Approach of Human Life from Dying	21
	C. Science, Modern Medicine and Human Life	25
	1. Modern Science	27
	2. Modern Medicine and the New Genetics	29
	3. New Techniques in Assisted Human Reproduction	36
III.	THE CONCEPT OF SANCTITY OF LIFE TODAY	41
	A. The Sources	42
	B. The Analysis of the Concept	45
IV.	THE SANCTITY OF LIFE DOCTRINE	49
	A. Sanctity of Life as Ethical Principle	50
	B. Sanctity of Life as our “stewardship” and the Uncertainty Principle	56
	C. Sanctity of Life and an Ethics of Responsibility	58
	D. Sanctity of Life in a Search for Consensus	61
V.	CONCLUSION: Sanctity of Life, Bioethics and Ethics for Life	65
VI.	REFERENCES	69

SANCTITY OF LIFE; EXPLORING ITS SIGNIFICANCE IN MODERN MEDICINE AND BIOETHICS.

I. INTRODUCTION

This thesis explores the concept of “Sanctity of Life” from the perspective of what “life,” in particular human life, means today. With the rapid advances in science and modern medical practice, the concept of life has undergone many changes, shaking the foundations of what before made us view life as sacred. Today, even though science may seem to be very far from religion and medical practice works within a model of strict scientific materialism, there is a need for a philosophy of life that includes human values and the spiritual needs of mankind. The interdisciplinary field of Bioethics appears as a fresh and modern approach to meet this need. And from this ground a construction of an “ethics for life,” may be correlated with the concept of “Sanctity of Life,” helping us arrive at a conception of a fundamental philosophy of what it means to be human.

The desire to understand that makes us human and what makes us alive has been intimately connected with our own history. Throughout all human history different cultures have tried to understand the mystery of life. These human groupings have usually sought the answer by understanding their surroundings, how the natural world works, how it responds and changes, and how these changes are caused (Nutton,

1995). However, the question of life turns back to human beings so they reflect on their own lives, in order to understand life itself.

For the Greeks, the source of the traditional Western medicine, the mode of explaining life in general and in particular human life, as well as what it is to be human was philosophical. In other words, “man” was conceived of as inextricably embedded in the natural world, and consequently life was an essential quality shared by all living things, something that could not be controlled or modified. Life was inviolably “sacred”. Health and disease were understood to be manifestations of being alive and a result of the balance of motions, the four elements of the world and the four humours of the body. The body itself was a natural body-mind unity (Nutton, 1995, p.31-35). This philosophy caused the Greeks to be very respectful towards the human body and the mystery of life itself.

In fact, it is with the ancient Greeks that medical ethics formally starts, and a certain “bioethics” tends to appear, beginning with the *Hippocratic Oath*:

“I will neither give a deadly drug to anybody if asked for it, nor will I make a suggestion to this effect. Similarly, I will not give to a woman an abortive remedy. In purity and holiness I will guard my life and my art” (Temkin and Temkin, 1967, p.6).

This section of the Hippocratic oath expresses clearly certain ethical views concerning the Greek philosophy of life. That the *pharmakon*, the drug, always had to be offered for the benefit of the patient and for the protection of life, was a fundamental principle

of the medical practice. In addition, the clear opposition to abortion in the oath shows the strong connection between this procedure and the respect for life that continues to be one part of an unresolved ethical dilemma today.

Later, with the increase of knowledge in morphology and physiology, in particular when William Harvey published his book *Exercitatio Anatomica De Motu Cordis et Sanguinis* on circulation in 1628, the holistic Greek view faced new problems that its philosophy could not resolve. This established the beginning of physiology and consequently of “Experimental Medicine”, that is, our modern medicine (Wallis, n.d.). Harvey’s discovery, which neither was the first nor exclusive discovery in terms of physiology, was significant because it not only changed the means of obtaining medical knowledge but also the conception of life and of human being.

Today, our modern understanding of life is more biological than philosophical, as it was among the Greeks. Life is usually explained as a biologically complex interchange of physical and chemical processes that occur in an organism (Silver, 1998). This definition allows little room for any other explanation and in my view it is very simplistic. This thesis is an attempt to defend a non-reductionist conception of human life. Recently, a growing interest among the general public, politicians, scientists, and clinicians in considering other aspects of life, particularly spiritual needs and quality of life, calls for attention to a different, more satisfying, and more complete concept of life.

This more holistic way of thinking has challenged and changed existing concepts related to human life and health, namely the concept of health itself, and so the health system, the goals of medicine, and new perceptions and methods such as alternative or complementary therapies, including palliative care. These reconsiderations are the result of the revolutionary development of medicine and in particular today, human genetics. We are at such a point today that we can say, as Edmund W. Sinnott writes, what has brought “so much confusion to [our] thinking now is the vast increase of scientific knowledge which has made nature much more difficult to understand and pulled down so many ancient pillars of belief” (1950, p.2). More recently, Helga Kuhse has succinctly stated a similar view: “new practices in biomedicine are challenging old thoughts: ‘New medicine calls all in doubt’”¹ (1987).

Since the human body-mind unity was separated in theory by the philosopher Descartes in the 17th century, helped by Harvey’s discovery², the sciences of the body, medicine in particular, have been developing rapidly and independently of the disciplines of the mind. The study of nature in general continuing into the beginning of the 21st century and the hard sciences of physics, mathematics, astronomy, and natural sciences, chemistry and biology, are developing further. Consequently the study of human nature, our ideas about humanity, society, morality, ethics and what

¹ This is an exact parallel to John Donnell’s comment on the new science in the early XVII century, especially that of Copernicus and Galileo. From his poem “The First Anniversary” lines 205 to 208:
And new philosophy calls all in doubt,
The element of fire is quite put out,
The sun is lost, and th’earth, and no man’s wit
Can well direct him where to look for it.
John Donne, “An anatomy of the world”. Cambridge: Roxburghe Club, 1951.

² The circulation of the blood was a perfect example of mechanical philosophy, a mechanistic view of the body understanding the heart as a pump.

life and humanity really mean, lag far behind modern science. However, certain philosophers and scientists, some of whom are mentioned below, have tried to integrate these two areas into one that could explain what ‘life’ and ‘human’ together really mean. Nevertheless this challenge today remains a major problem. As Sinnott puts it, there is a “wide disagreement which still exists in their fundamental philosophies... [and particularly concerning] the true nature of a human being” (1950, p.1).

This true nature of a human being and of life itself have been the key questions for the emergence and development of Bioethics. According to the American oncologist, Van Rensselaer Potter, who proposed the formation of this new discipline, the goal of Bioethics is to engage biological knowledge and human values in a common manner in order to use this knowledge for social good (1971). The concept of Bioethics actually is linked with the concept of life that explains the chosen prefix *Bio*- and underlies the proposal of rethinking a “Life Ethics” in our modern times. A Life Ethics that can rescue the inviolable value of human life from the scientific, reductionist threat to it.

In studying the concept of life, we face many problems; one of which is the problem of imprinting our particular point of view on the definition that we try to establish. With this problem in mind, it is the intention of this thesis to review in general the concept of life today in light of the complexity of the human being and the current knowledge in genetics and assisted reproduction techniques (ARTs). I will start with

some religious approaches, specifically a Roman Catholic model, and secular viewpoints that offer us a definition of what life is. Then I describe a number of scientific facts concerning human life today and assisted human reproduction. Finally I present the principle of Sanctity of Life in light of this discussion as one of the bioethical approaches in the protection of and respect for human life.

I recognize the challenge of this study. Nevertheless, by questioning some assumptions in the matter I have outlined, and by addressing and attempting to resolve some of the major issues regarding the sanctity of life, I hope to contribute to the debate on a topic of great importance. My thesis, then, constitutes an attempt to reflect on matters that concern our society

II. THE CONCEPT OF LIFE AND HUMAN LIFE

What is life? How can we talk about life even before we are conscious of it? Has life itself an intrinsic meaning? What makes life to be *human life* and worth living since its commencement? These are questions that mankind has dealt with for many centuries and which I will explore in this essay.

A. Life From a Religious View: Catholicism

As Katherine K. Young puts it, “Religion is the most pervasive of human phenomena and accordingly must capture some basic features of what it means to be human” (1999, p.1). This states the importance of taking into account a religious perspective in the definition of what life and being human are. Religion attempts to explain the deep paradox of human life limited by death, and in this purpose religion goes to the foundations of human existence. The notion of existence in most religions is constructed on the belief that all creation, including humanity, comes into existence from God (creation *ex nihilo*). Life, then, from most religious and theological points of view, is God’s gift; life does not belong to us but to God. Man receives his life from God and it returns to Him. Because ‘life’ comes from God, man does not control it. Life is the most exalted creation of God, and it is in this sense that life is ‘sacred’.

Whether or not one agrees with its doctrines, Roman Catholicism is one of the most consistent and prominent defenders of the sanctity of life. In fact, this has been the most influential religion in western history. I would like to go more deeply in the religious argument, grounded in the documents that support the actual position of the

Catholic Church concerning life issues. Since the 19th century the Roman Catholic Church has adopted officially the stance that human life and the sanctity of that life exist from conception. This is consistent with the biological point of view regarding the moment of formation of the zygote (the joining of a woman's egg and man's sperm). The current attitude of the Catholic Church is in the words of the Catholic theologian Iglesias:

To be human being is to be a person. There are no stages in our existence at which this identity does not hold... If we are to make sense of our existence now as human personal being we must admit that whatever capacities we have now have developed from what we were in the beginning (cited by Mason, 1998, p.109).

The Vatican position is, in Mason's words, "intransigent as, indeed, it must be once the philosophy of the sanctity of human life from time of conception is adopted: it is illogical to think of liberalizing abortion within the envelope of existing Roman Catholic faith" (1998, p.122).

There are mainly four doctrinal documents that explain and support this religious view. And these documents are those followed by Catholic believers and many laws in countries where this religion has had a very important impact. These documents are the encyclical "Humanae Vitae" of Pope Paul VI, the encyclical letter "Evangelium Vitae" of the current Pope John Paul II, the document "Donum Vitae" of the

Congregation for the Doctrine of the Faith, and the “Catechism Of The Catholic Church.”

The first, the encyclical “*Humanae Vitae*” was written in 1968. This document focuses on birth control and recognizes the great worth of procreation as an act bounded with human life that “involves more than the limited aspects specific to such disciplines as biology, psychology, demography or sociology” (Pope Paul VI, 1968, no. 7). *Humanae Vitae* also emphasizes responsible parenthood in the light of its varied legitimate and interrelated aspects such as men's and women's innate drives and emotions, and physical, economic, psychological and social conditions. This requires that “husband and wife keeping a right order of priorities, recognize their own duties toward God, themselves, their families and human society” (Ibid., no. 10) in order to decide whether or not to have a child. And Pope Paul VI states, “the direct interruption of the generative process already began and, above all, all direct abortion, even for therapeutic reasons, are to be absolutely excluded as lawful means of regulating the number of children” (Ibid., no. 14). Abortion, from the viewpoint of Catholicism violates the principle of Sanctity of Life because it is an interruption of the generative process.

The Congregation for the Doctrine of Faith in its document “*Donum Vitae*”, published in 1987, issues an instruction on respect for human life in its origin and on the dignity of procreation:

This Congregation is aware of the current debates concerning the beginning of human life, concerning the individuality of the human being and concerning the identity of the human person. The Congregation recalls the teachings found in the Declaration on Procured Abortion: From the time that the ovum is fertilized, a new life is begun which is neither that of the father nor of the mother; it is rather the life of a new human being with his own growth. It would never be made human if it were not human already (Congregation for the Doctrine of the Faith, 1987, p.13).

In the encyclical letter “*Evangelium Vitae*”, written in 1995, Pope John Paul II recalls “the *greatness* and the *inestimable value* of human life even in its temporal phase” (no. 2, emphasis from the original), are foundations of the Catholic doctrine. It underlines again “the sacred value of human life from its very beginning until its end, and ... the [divinely ordained] right of every human being to have this primary good respected to the highest degree” (Ibid., no. 2). Moreover the Pope condemns contraception and abortion stating that:

Such practices are rooted in a hedonistic mentality unwilling to accept responsibility in matters of sexuality, and they imply a self-centered concept of freedom, which regards procreation as an obstacle to personal fulfillment. Life, which could result from a sexual encounter, thus becomes an enemy to be avoided at all costs, and abortion becomes the only possible decisive response to failed contraception. (Ibid., no. 13)

Finally, the “Catechism Of The Catholic Church” that contains all relevant teachings together and summarizes the Catholic doctrine, teaches within the Fifth Commandment “thou shall not kill” that “ Human life is sacred, because from its very inception it reveals the creating hand of God” (C.C.C., 2258).

As far as we can see, the main question, as some theologians and religious leaders have explicitly said, is not whether a fetus is a person but how best to respect and protect the intrinsic value of human life (Dworkin, 1993). This is the question that I address in this thesis. More recently, with a better understanding of human reproduction, the advances in assisted reproduction techniques and the revolutionary claims of the ultimate impact of genetics on medicine, the concept of life faces enormous changes that must be taken in account.

For most religious believers, not only for Catholicism but also for Judaism, Islam and in some Eastern groups such as Hinduism, the intrinsic value of life comes from God. That life is given by God, is what makes it sacred and it is sufficient for claiming respect for and protection of human life. Religions vary with respect to what they consider to be the moment when a human being becomes a person and receives his or her humanness. However, all religions agree on an important value: the intrinsic value of human life.

B. Life From Secular View

Our modern society and the world in general are becoming increasingly secular. Canada in particular fits this description because its history is grounded on different human cultures that have immigrated and settled together in this land where they have had to share and respect each other's values, customs and traditions. In addition, religious teachings do not resonate as they once did and the secularization of spiritual matters has left society responsible for setting up a secular philosophy that could define many human concepts such as what human life is, what the purpose of living is and what being human means. It is not the purpose of this thesis to deal with these concepts but to explore the significance of the principle of sanctity of life. Thus it is particularly important to get an idea of what is understood as human life today from a secular standpoint.

In non-religious, secular, terms, life in short is the human experience of living, our "sensation of being alive and the elemental fear of its extinction" (Shils cited by Keenan, 1996, 12). Pain, suffering, health, disease, society, and culture all have been entangled with our concept of life and have shaped our reverence for it. The concept of life, then, is a complex one that depends on several factors. It changes according to the historical epoch, customs, beliefs and the social institutions that legitimize the experiences of each particular human being. The concept of life on the secular view is an evolving concept. It is shaped according to the individual experience of being alive, the living experience of our closest relatives and the external influences

resulting from the collective understanding of life. Among these secular approaches to what “life” is, I will present some of the most relevant today.

1. The Notion of Order and Purpose in Life

Erwin Schrodinger, a Nobel prizewinner physicist, is among those who have tried to answer the question of what life is from a secular viewpoint. He attempted to summarize all the knowledge available by his time and in light of it formulated a definition of ‘life’. For him “Life seems to be orderly and lawful behavior or matter, not based exclusively on its tendency to go over from order to disorder, but based partly on existing order that is kept up” (Chapter VI, 54, pg.69, 1944). One of the features that makes life so encompassing, as it is seen clearly in other living creatures, for example plants and animals, is that life does not belong exclusively to any species, race, or individual human being. Rather, it is something that passes from all living things, such as plants, insects, animals, and of course human beings, generation to generation keeping life in the world of the living. Besides, humans are the only species conscious of this order and capable of studying it.

This notion of order as one of the main attributes of life has been developed as a basis of the secular vision of what life is. It is underlined in the fact that a human being is one type of living ‘organism’. Indeed, this problem of organization is the most ambitious challenge of biology in order to understand life as the maintenance of such a constant set of conditions that make being alive possible. On this same path, another explorer with this approach is Edmund W. Sinnott, who wrote that “what is called

biological organization may indeed be the foundation upon which rest these highest aspects of the life of man" (1950, p.43)³. And he went further citing Nils Bohr in stating, "[t]he existence of life must be considered as an elementary fact that cannot be explained, but must be taken as a starting point in biology" (1950, p.11). In fact, one definition of science broadly accepted today is "the way of thinking that discovers order in nature about us" (Samuel, 1972, p.1).

However, Sinnot goes further stating that it is not the details about the order of the biological processes which are most important but the self-regulation of these life processes that moves persistently toward a final goal, -the form of a mature individual. It agrees with the early results of the Human Genome Project that has shown that this genetic code, far from being a blueprint, is only a guidepost, and that what makes a human being lies in what the body does with that code. Sinnot emphasizes that although science can provide us with accurate descriptions of biological processes, it cannot offer a complete understanding of what life is, a complex of relations of all those processes with a determined order and purpose. For him "it is this *directiveness* that is the most distinctive feature of a living thing" (1955, p.48, emphasis in the original). This duality of order and purpose is where Sinnot thinks is the key to understanding and reconciling the two parts, body and mind, of man's nature. So the concept of life cannot be reduced entirely to a scientific explanation. Rather, as Sinnot states:

³ For a more extensive discussion of this perspective of life, see Edmund Samuel, 1972. "Order: in life", Prentice-Hall, Inc., Englewood Cliffs, N.J.

“Everything that we have learned [and will learn about life] testifies to a complexity in physical structure, chemical composition, and physiological activity within it far beyond that which its visible simplicity would lead us to expect; and... our respect for it should be profound.”

2. The Medicalization of the Concept of Human Life

Today, life itself is not understood as a vital force coming from outside but is explained biologically as a complex interchange of physical and chemical processes that occur in an organism (Silver, 1998). With science as one of the most important sources for social theory and the medicalization of society, life has come under the scientific and medical gaze. Life, in particular human life, is reduced to a medical model; human life becomes a medical problem. In fact, today these two sources, science and medicine, have determined to a great extent the definition of life. One example is the “biological determination of human status” in the current debate concerning human embryos as it is presented in the Ethical Considerations of Assisted Reproductive Technologies⁴ (The Ethics Committee of American Fertility Society, 1994).

Science has become the source of popular consciousness that determines what is truth and what is not; moreover, it indirectly influences what is socially thought of as right and wrong. In this same enterprise, medicine has taken the position of a judge who

⁴ In Chapter 9 of this document, ‘The biologic characteristics of the preembryo’. Although this committee is aware that “... the status of the human embryo remains controversial today” it concludes that “... the biological characteristics of a developing human are among the principal determinants of human social status.”

determines what is normal from what is not and labels this last category as abnormal or in some particular cases “disabled”. Then, the physician’s primary responsibility in modern medicine is to regulate or restore the “normal” function of the body. This distinction between normal and pathological appeared in the XIX century and replaced the previous notion of natural balance and imbalance (Warner, Chapter 9, 1986). This play of words conferred the label ‘normal’ to life and ‘abnormal’ to death, illness, and disability. Furthermore, these concepts of normality have been extended equivocally to our thought of what is ‘good’ and ‘bad’, life as something good and death as something bad. I will examine this subject in more detail later.

3. The Notion of Person and Personal Identity in Human Life

One aspect of the secular approach to what life is, in particular human life, has been the analysis of what persons and personal identity are. Even though we agree that animals, plants, bacteria and cells are alive, none of them is valued enough to be recognized as a human life. It is because as human beings we are the only species with the capacity for rationality and consciousness of being alive, as well as with the extraordinary capacity to wonder about and intervene in our own life. There have been many theories that attempt to define what makes a human life so valuable, what it is that gives a man or woman his or her humanness. The concepts of personhood and identity have been used in this regard.

Personhood is part of the intrinsic value any human being has. However, a philosophical distinction between the concepts of ‘human being’ and ‘person’ has

been drawn. This difference is grounded on the conception of consciousness that is characteristic of the person. Consciousness, the ability to reason and the awareness of our own thoughts and actions, has become the measure to accept someone as a person through some modern philosophers, mainly J. Locke and I. Kant (Honnefelder, 1996). It is a person's life in only the psychological sense, generated and sustained by the cerebral cortex, which really counts from this viewpoint. This notion has been very important in legal discussions about brain function as measure of death as well as the moral status of a fetus and in the argument for infanticide. In these last debates, the fetus and human babies are not equivalent to persons, because they have not yet reached the age of reason; so none of them has a claim for a right to life (Singer and Kuhse, 1985; Kuhse, 1987; Hentoff, 1999). Human life only applies to those who are aware and conscious of themselves and their life. Taking this position creates a vague region between life and death. Those who lose their person status because they are unconscious remain living human beings, for instance patients in a coma or Permanent Vegetative State (PVS). So from this personhood argument, human beings who are not also persons have neither a right to life nor a right to continued life.

However, the problem is in our language. We choose a word, in this case 'person', to designate a living being to which we can apply a list of traits and resolve a philosophical discussion. If we really want to define what gives value to humanity, we should avoid this reductionist view of the person, and accept instead that this basic concept, as Strawson states, "cannot be defined by a combination of more basic concepts such as *consciousness* and *body*" (Cited by Honnefelder, 1996, p.152). The

concept person as well as life are possibly indefinable in our logical and analytical language, which poses a challenge to philosophy. We need another kind of language to describe and embrace completely all that makes one human, the essence of one's humanness. This brings us to recognize the terms 'person' and 'human being' as interpretations of each other, or in other words, "that we cannot understand a human being as the subject of ends without recognizing him or her as a person" (Honnefelder, 1996, p.152).

It is this concept of person that makes sense of the notion of potential person. This category has been often attributed to embryos as a separate status deserving moral recognition and as special respect because of its potential to become a person (Bunney, 1992). Moreover, this moral consideration to those who do not have yet the traits of a person but have the potential to become one, has been applied also to other human beings such as children and mentally handicapped people gaining the same respect and protection as a person. Furthermore, this interpretation supports the idea that the notion of person in human beings is not a single faculty that is captured in a single point in time or in a particular stage of human development, but a process that is always present and evolves.

This broader notion of person is what appears in the modern idea of human dignity, where "neither race, sex or other physical attribute, nor religion, moral acumen or intellectual power are the base of this dignity, but solely being human" (Ibid., p.144). This dimension emphasizes that each human being is *quid inicum*, something unique

and valuable by itself. Consequently, it is why this intrinsic dignity, a secular concept, has found recognition beyond all religions, cultural or moral differences.

The concept of personhood is very closely linked with the concept of identity.

Nevertheless, the notion of identity is grounded in more than the idea of consciousness and it is bound to multifaceted philosophical problem such as existence and the genesis problem, the problem of identity, number, and quality of life of the people we bring into existence (Heyd, Chapter 4-6, 1994; Parfit, 1984). For the modest purpose of this thesis I would say that identity could be understood from two categories: social and essential. Social identity refers to the person's self-concept, which is determined from membership in a social group. Our self-perception is the result of our own features that make us different from others. How we perceive others and how others perceive us forms our social identity (Moghaddam, 1998). Physical traits, qualities, talents, social standing, and psychological character are some of these elements that shape our social identity. Essential identity, on the other hand, describes one or more qualities that identify us as part of a group, are common to all individuals and ensure our existence as individuals. In Saint Thomas Aquinas's words "sicut humanitas est essentia hominis", the essence of the human being is his or her humanness (1940, chapter I, B, p. 40). "Identity [in both social and essential categories] is a broad concept that can encompass the many diverse features that collectively define you" (Goldenberg, 2000). So personal identity can be understood only within the broader framework of human life.

The concept of human life is part of a person's identity; and identity is understood as a gradual process. It is shaped through the life of each person. "Identity formation is a continuous process" (Heyd, 1994, p.167) where biological, psychological and social factors are entangled. A person's identity is related to individual experiences throughout life, and for some authors these living experiences are what make us essentially what we are and what we value of life.

The value we put on human life, according to David Heyd, comes from our own living experience and by accomplishing our own "volitions" (1994). "For most of us it is not [that] mere life [is] valuable, it is rather that we value those things that life make possible" (Kuhse, 1987, p.21). It gives us a clear explanation of what life is worth to us and why it is valued by us. This argument has allowed a new approach to end-of-life decisions, specifically the "quality-of-life approach" (Kuhse, Chapter 5, 1987). This perspective assumes that people will have a worth living just if they can experience what makes them happy such as reading, jogging, watching television and the like. From this assumption, some philosophers such as Peter Singer and Helga Kuhse argue for infanticide and euthanasia for those with severe disabilities (Specter, 1999; Hentoff, 1999). If so, who can decide what are those experiences and conditions that make a human being happy and allow us to judge a human life not worth living?

As cited by Bishop Friend, Dobzhansky observed, "Human quality is an ethical precept, not a biological phenomenon" (1997, p.527), as quality of life is not a medical

phenomenon. The concepts of human quality and quality of life are embedded in and refer to the concept of life. It is not possible to mention them without a clear understanding of what human life is. This disregard misleads the reality and value of human life and falls into the controversial reductionist standpoint. The logic of the quality of human life is connected with the individual and the environment where the individual lives. It refers to the person's life and the existence of other members of the society, their survival. In fact, talking about quality of life implies recognizing that it is in and from the human day-by-day experience where this concept makes sense (Maldonado, 1995). Furthermore, the delineation of the quality of life is not the only purpose of the objective and scientific knowledge that offers us an external description of what human life is. On the contrary, it is a comprehensive understanding of what human life is that embraces the totality of knowledge of human life.

4. A New Approach of Human Life from Dying

The concept of life has change in particular during the last decade not only because of the rapid development in biology and medicine, and a better understanding of human reproduction and fertility, but also because of the day-to-day challenge of clinicians, ethicists, lawyers and lay people in general facing a person's moment of death. The medical crusade for extending the human life span, a misguided "for life" campaign in my opinion, has raised many ethical questions and increased the number of people who need many kinds of medical and emotional assistance during this last stage of life, our death. Death is a more problematic issue today than it was before.

Contemplating death, we realize that even though this experience is very personal, we need to share it with others. This is perhaps one reason why today talking about death is a daily concern. In this perspective, palliative care has become a main factor in the events leading up to death. Because of the historical goal of medicine as a fight against death, when these crucial last moments come the clinicians become resigned to the fact and leave the challenge of facing these instants to the chaplains, pastors and priests. In Hippocratic medicine, leaving the patient alone when his condition was critical was one of the measures in managing diseases. It was, if it is not now, known as medical abandonment. Palliative care, on the contrary, faces this challenge with the goal of providing the best quality of life and care in these last moments. Relief of pain, control of symptoms and the most personal and emotional assistance involving his or her family are part of the purpose of this medical practice. Dr. Nuala P. Kenny, in a recent lecture at McGill University, shows that she is very conscious of this concern and is promoting an evaluation of the goals of medicine from the knowledge gained from the practice of palliative care. "Lessons in Living from the Dying" is the title that the Council of Palliative Care has chosen for a series of lectures concerning this matter (2000).

In addition, some physicians are very interested today in the experiences of patients and families facing this common denominator in human life, death. Some of them are Drs. Towers, Barnard, Boston and Lambrinidou who have spent around three years in the "qualitative research" that resulted in the publication of the book "Crossing Over: Narratives of Palliative Care" (2000). In this book, the authors develop a human

perspective of dying as part of every human life, and as Towers says what they found are “indicative of the absolute necessity of “individualized, holistic care”” (Martin, 2000, p.7). In the words of a layperson, “We seek for truth but we never expect to know the whole truth about anybody or anything. But we long to be in touch with what others have experienced before we were born and with what others will perceive after we are gone” (Elliot, 1995, p.H14).

This new approach in end-of-life issues calls for a new definition of human death. This last stage of life used to be a punctual and recognizable moment. The last breath and the irreversible cessation of the organic functions, in particular circulation and breathing, were easily identified for the physician as well as for the family at the bedside. Moreover, this moment used to be in the patient’s home. Today, human death occurs at the hospital and the medical technology can intervene in it and break or alter its natural course. The punctual moment of death is today a process that can be stopped and extended indefinitely sometimes. Today, identifying the end of life is not as easy as it was. Today, the broadly accepted definition of death among clinicians, lawyers and some theologians is based on the diagnosis of the death of the whole brain. This diagnosis requires completing a series of complex medical and technical criteria that have made the definition of death a techno-scientific and biomedical concept.

This objective definition of death has given rise to many metaphysical questions about our existence, controversial discussions around the concept of human being, human

life, personhood, and important bioethical dilemmas. Furthermore, this reductionist view of dying has brought us to establish this vital moment as something to which we have a right instead of a natural stage of human life (Gerleín-Echeverry, 1997). The Palliative care approach to human life reminds us to take the process of dying, our *finitude*, as a fundamental component in our definition of human life.

Finally, we can say that science offers us an incomplete vision of what life essentially is, as Towers et al assert and a lay person writes, “Medical science may extend [our] life but cannot make [us] immortals” (Elliot, 1995, p.H14). There are so many questions concerning the meaning of life and being human that science cannot answer completely and very often human beings turn to God, religion, spirituality or their community for some comfort as well for answers to these questions. It does not mean that biological facts should be disregarded, but it calls for formulating a definition of life with other viewpoints. Psychological, cultural, religious and social elements are entangled in our definition of life and reproduction. These issues are not and cannot be entirely explained by science. We, as Sinnot writes, “should not limit ourselves to an approach through science only, important as this is. The philosopher, the poet, the artist, and the mystic should all contribute their insights here, for all are concerned with life” (1955, p.120). This real and pressing necessity for a more holistic approach to our lives is clearly seen in the current and frequent demand from hospitalized patients to consider their spiritual needs and the present numerous publications concerning comfort, healing, and end-of-life decision-making. It is also perceived in

the growing interest of dealing with the relation between religion and health in specialized and popular media (Sloan et al, 2000; “Rethinking Medicine”, 2000) and the broad interest in spiritual or religious information online (“Internet Opens Up...”, 2001).

Life, then, is for human beings more than a set of biological facts. It is a complex understanding and feeling of being alive where individuals’ needs and differences are taken into account, where thoughts, beliefs and emotions as well as social and cultural background can play a role in what we define as human life. Understanding what life is and how we define it, we can now look at the current advances in medicine, at those related to our being human in general, and at issues at the beginning of human life in particular, and analyze in what measure this novel knowledge poses a potential threat to what we respect and protect of human life.

C. Science, Modern Medicine and Human Life

Life and death have been the most mysterious matters challenging human understanding. This has been perhaps because the beginning of life and the moment of death are two events outside of our consciousness. No one is able to either recall his/her birth or talk about the moment of his/her death. These events usually have remained beyond human control. The moments at the beginning of life and the time of death have been the extreme limits of the dominion of human knowledge. Life and death have been seen as “natural” events impossible to access and which we have been

unable to explore scientifically. However, these events have been challenged by religion and medicine. Both attempt to explain these phenomena, and medicine in particular aims to prolong life and prevent death.

Medicine has been concerned with these human phenomena of life and death because it embraces the goal of preserving and prolonging life. This concept is implied in the goal of medicine as Dr. John Gregory, a very important figure in the history of medical ethics, states in his definition of medicine: “the art of preserving health, of prolonging life, and of curing diseases”(Beauchamp and McCullough, 1984). The main medical achievement has been to prolong life, delay death, and extend the human life span. But there are some doubts about the role of medical advances in these achievements. Over the last two centuries “medicine had played a negligible role in the rise in health and it is foreseen as having a very modest role for medical care in the future”, Thomas McKeown argues in his book, *The Role of Medicine: Dream, Mirage or Nemesis* (1976). He also suggests that some of the main reasons for improved health and prolonged life span have been changes in agricultural practices, the food trade, that weather conditions may have improved and social development. Moreover, McKeown states that the chief factor in further health gains would be not in medical advances but in personal behaviors such as exercise, a balanced diet, quitting smoking and in general establishing a healthy lifestyle (Ibid.). And this statement seems still to be accepted as true today. Currently, Dr. Richard Lewontin states in his critique of medical-science development that the eradication of some of the main infectious illness such as tuberculosis and measles in the past century was not the result of the

implementation of vaccines, but by rising standards of living and better nutrition (1995; Reynolds, 2000). In fact, today, much of the medical advice for achieving the apparent maximum lifespan in tolerable health is to just adopt a healthy lifestyle, eat and drink in moderation, do not smoke and have regular moderate exercise ("Who wants to..." 2000-1). These measures, rather than being a product of medical advancement, are general life guidance that correspond today to the branch of health we call preventive medicine. But it is very often ignored because Public Health programs in education and prevention do not look as exciting as developing new biotechnology or combating directly any illness already in course.

In this chapter, I will explore the role of modern science in the goals of medicine and the impact of some new technological advances in medicine on the concept of life. I will explore also some of the ethical dilemmas that these novel biomedical possibilities have generated.

1. Modern Science

Medical knowledge is nurtured by science; and science, among its functions, offers an explanation of the natural world. It is constantly explaining why things are the way they are. So, this knowledge goes beyond theological knowledge providing us, and particularly scientists, with new ways of understanding and manipulating the material world. This breakthrough brings the production of a new set of techniques, practices, and inventions that change the quality of our lives, and the understanding of life itself (Lewontin, 1995).

The aim of science is to gain knowledge of the world in its uncommitted search for the truth. Scientists explore the world and then offer knowledge expressed in terms of singular propositions, also called facts or data, and general propositions such as hypotheses, models, laws, rules and theories. The final goal of science is to find the theory that comprehensively and coherently explains our reality. We think that science is objective, but science is also a “social institution” that provides us with a strong understanding of our reality grounded on a set of methods and a body of knowledge that we call ‘scientific’. Recently, in a discussion about faith and science, Max Nemni, a retired professor of political philosophy, reminds us “Science is a process of ever-recurring falsification of previous hypothesis rather than the affirmation of everlasting truths” (2000, A15). Science is integrated into and influenced by the structure of our society (Lewontin, 1995). The goal of science is under the rule of the needs of our society and is guided by those forces that have control over money and time⁵.

Even though science seems to be objective and open-minded, science is culturally dependent (Kuhn, 1963; Sattler, 1986; Flamenbaum, 1999). Moreover “subjectivity and irrationality or nonrationality may influence the scientific enterprise” (Settler, 1986, p.41). Examples of this are: the experimental abuses in concentration camp research during World War II committed in the name of medical science (Katz, 1996; Ernst and Weindling, 1998); the controversial placebo-controlled trials for perinatal

⁵ A clear and current example has been the race to map the human genome and the challenge to patent claims by researchers, universities and biotech companies.

transmission of HIV in developing countries based on a blurred and relativistic “standard of care” (Levine, 1998; Clark, 1998); the recent moving of some foreign scientists to Canada for “much more generously funded area for research” and a less “cautious attitude towards science and technology” in comparison with Britain and Europe in general (Martinuk, 1999); and the heated discussion about the ownership and patenting of the results of the HGP (Human Genome Project) (Kahn, 2000).

The direction of scientific development always has been influenced by those with a vested interest in science. It does not undermine the value of science in our society. Today, however, when scientific knowledge is crossing its own frontiers controlling and manipulating human life without a clear purpose and moral compass (Somerville, 2000; McCabe, 2000) we should examine very carefully our modern medicine.

2. Modern Medicine and the New Genetics

Today, modern thought has brought new forms of understanding life. Lee M. Silver identifies three different forms: all living entities on earth referred to as *bio-life*; computer scientist-created *artificial life* (a-life); and the future *virtual human life* that remains in science fiction films (1998). Moreover, within Silver’s *bio-life* we distinguish vegetative and animal life from human life. Nevertheless, I think this distinction among diverse kinds of “life” today has an impact on our own understanding of what life is, as we can see in those patients who remain alive connected to any of the life support machines or those people the conception of whom

occurred in a lab without the presence of their parents. For this essay I am particularly concerned with *human life*.

Now, we should consider the changes to the concept of human life itself, with the current knowledge in medicine, in particular of genetics and the expectations of new advances in this field. The beginning of life, the basis of our existence, and the key to understanding who and what we are have been some of the secrets of Nature to which we testify a profound reverence for life. Today, some of those mysteries have been disclosed through the development of biomedical knowledge, above all with the rapid development of molecular genetics. This is the revelation of medical knowledge, and it is within its revelation of the complexity of the human body that science and scientists are unfolding the wonder of this feature of God's creation, religiously speaking. New medical knowledge reveals to us more about the nature of God, or the way Nature acts, and our existence as human beings. This could be explained by man-made things such as a piece of music, a poem, a sculpture or a letter, reflecting in part their author, their creator. So our ability to create, to be authors, is a reflection of a divine element in us.

This enterprise of the conquest of nature is part of a deep ideological and reductionist view of what life is. What I am referring to here by 'reductionism' is the standpoint that reduces life to physico-chemical systems (ontological reductionism), tries to explain this under just one theory (epistemological reductionism), and undermines the other elements of what make life (Settler, 1986). Genetics has been the area where

most reductionism has occurred and today is an active field of research. “Every week there appear... reports of genes that have been discovered for this, that or the other thing. The rhetoric of those claims is always in the conditional mode. Could lead to a treatment, may have an effect...” said Dr. Lewontin in the 24th annual Osler lecture at McGill University. However, according to Lewontin, these claims are far from true (Reynolds, 2000). In fact, “the new genetics will not revolutionize the way in which common diseases are identified or prevented... [But on the contrary] in our rush to fit medicine with the genetic mantle, we are losing sight of other possibilities for improving the public health” (Holtzman and Marteau, 2000, p.141,143).

Far from the accomplishments that scientists claim can be done, the truth is that a number of new possibilities are being presented to us. To start, with the results of the HGP, a multibillion-dollar program of American and European scientists, the complete “book of life” for each individual would be opened and read (Harris, 1998). This would allow clinicians to compare bits and pieces of the genetic sequence of a person with a particular disorder with a reference sequence from the so-called ‘normal’ individual, which may permit understanding the origin and physiopathology of the disorder. We then might find a therapy to correct the ‘abnormality’ or provide what is missing. In addition, this same process of comparison would let us locate genetically some human traits and also compare with other species in order to know what it is to be human. In this process, genetic testing and screening play an important role. I will refer to genetic screening, a genetic testing used for “testing members of a particular population for a disorder or condition for which there is no family history or

other evidence of its presence” (Medical Ethics Council of the British Medical Association, 1998.)

Genetic screening offers different new medical procedures, for instance: screening for disease; pre-natal screening; and screening for desired traits. The first two types of screening are related to the early diagnosis of disease, and the last one concerns a ‘selection’ process. But all of them disclose information that would be used for third parties of diverse kinds. On the one hand, this information would be useful for the medical team in order to advise their patient and his or her family of a particular disease and look for a treatment. But, on the other hand, the results of the screening also may be sought by employers, by the government, by insurance companies and the like with a ‘selective’ purpose. These new possible circumstances generate novel ethical dilemmas that demand careful consideration.

First, the management and availability of the information that results from any genetic screening test would generate some new and serious cases of discrimination. For example, in obtaining or keeping a particular employ (Martindale, 2001), in the result of an application for a certain kind of insurance or mortgage. Another deeper and more complex case of discrimination is the possible termination of a pregnancy as a result of a prenatal screening. In fact, this last possibility complicates even more the ethical and political battle over abortion, and raises new moral questions in human reproduction like: “Should we aim for the birth of “normal” babies rather than those with disabilities?” (Glover, 1992, p.128) and so, should we avoid the birth of disabled

babies and allow the termination of those pregnancies? Is it a parent's or society's obligation? These are just some of the questions that we have to deal with today and in the years coming, and a clear case of the new conflict of interests between the current human generation and future ones.

Some of the reasons why finding an answer to these interrogations, whether to aim for the birth of normal babies rather than those with abnormalities, is very difficult are the determination of "normal" or "worth living" and the evolution of medical assistance for the disabled babies. Concerning the determination of normal and abnormal, this distinction is part of our modern medicine as it was mentioned in a previous chapter. as a result of the medicalization of human life. Considering labelling people as normal, it could generate a sort of discrimination against those who do not fit this category. Moreover, new ethical questions appear about who should define the parameters of this normality in humanity. Thinking that medicine or genetics in particular is the master area that tells us what is a normal human being is strongly reductionist and overlooks the immense amount of variability from a normal individual to another (Lewontin, 1995). There are many inborn genetic disorders in which a defective gene results in a defective physiology but those people carrying this defective gene can lead a perfectly normal life. Examples of this are inherited metabolic disorders such as Wilson's disease, where the copper detoxification process is defective; Celiac Disease, or intolerance to gluten; and Galactosemia, where the metabolism of the simple sugar galactose is affected.

Another level where genetic screening could generate a certain kind of discrimination is that the notion of using prenatal screening to detect genetic and other abnormalities is a form of discrimination against the disabled. This particular argument is well distinguished and analyzed by Lynn Gillam (1999). And as Gillam says it is “correct to say that prenatal screening and selective abortion will not inevitably lead to increased intolerance of people with disabilities, there are dangers of negative social outcomes, which need to be recognized and combated” (Ibid., p.166). This position results from a historical development of the medical possibilities. For example, during the XVIII and XIX centuries medical assistance that could be offered to a seriously ill and disabled newborn were very limited, and the moral options were to let him/her die or perform a resuscitation procedure to keep him/her alive. According to Hippocratic medicine, the physician should let nature and the process of dying follow their course. Later in the XX century, with medical advances in neonatology and the improvement in surgery, some very ill newborns such as those with Spina Bifida were able to remain alive and lead a perfectly normal life. Today, the new genetic technologies, including prenatal screening and diagnosis make it possible to prevent the existence of those people who would have a serious illness or disability. Yet, because we have the possibility to do this, should we do? According to W. Glannon “we have a moral duty to prevent the existence of a person who would have... a life that on balance is bad because of severe pain and suffering” (1998, p.192). His analysis is grounded on the moral principle of beneficence that requires us to prevent avoidable harm such as pain and suffering, and on the principle of justice that obligates us to provide the opportunities for leading a “decent minimum level of lifetime well-being” (Ibid.,

p.188) in the people we bring into existence. Glannon uses here a standard-of-living concept of “decent minimum level” which is not reached for those people who experience severe pain and suffering associated with disabilities. This concept then supports a moral duty to prevent the existence of those people who would have a severe disease and disability.

But, this new possibility to intervene in the existence of human beings raises more complicated ethical questions. Should we have the right to prevent the existence of future generations? Is it a right or a duty? What are the criteria we should follow to determine who should exist? Should we have any responsibility to those future generations? Even though those future generations seem to have no interest or right because they are not born yet, the present population has some responsibilities to them. Because our choices today will affect those future generations, we ought to respect them and evaluate carefully the outcomes of our actions. In addition, human embryos and previous stages of life have interests too. We should consider this position as Kant thinks about those who have not reached the conditions of a person for the reason that it is “a good and even necessary idea for practical purposes to consider the act of begetting as one by which we bring a person into this world without that person’s consent” (from *Metaphysic of Morals*, p.280-281, cited by Honnefelder, 1996, p.144). This position takes on special interest knowing that today human reproduction seems to be controlled by science.

3. New Techniques in Assisted Human Reproduction

Today, advances in assisted reproduction techniques and a better comprehension of the human genetic code have given rise to a novel set of interrogations. What does this new disclosure of information imply about our existence and our way of understanding human life? Why do we need this information? Are medical reasons a complete and sound justification for it? Is this genetic enterprise morally justifiable? Is this genetic enterprise simply a mirror of the dehumanization of medicine and the mechanistic way of seeing the human being? For instance, The Council on Ethical and Judicial Affairs of the American Medical Association, addressing multiplex genetic testing⁶ in particular, states “information provided by nonindicated testing may result in unnecessary psychological distress, lifestyle modifications that negatively affect quality of life with no resulting benefit, or requests for treatment that are founded on misconceptions rather than medical science” (1998).

Today, with the dynamic development of biotechnology, human reproduction and the beginning of life have lost, in some particular aspects, the reverence humanity used to have and profess for these matters. These stages of life have become another physiological process under the rule of physicians, scientists and lay persons. One of the first instances of human control over biological life was the matching of the natural ovarian cycle and the contraceptive methods in women, which allows couples to choose whether or not to have children and also decide when they should be born. For some time in Communist countries such as the former East Germany and China,

⁶ “The term *multiplex genetic testing* can mean different things.” Here it refers to “tests for completely different conditions... offered in a single session” (HCR, July-August 1998).

abortion was or has been used to terminate some pregnancies and eliminate some unwanted children as an alternative method of birth control. Abortion in this respect is seen as the last control over the result of the human reproduction process.

Furthermore, it is relevant today because considering cloning technology as reproductive method for those who are unable to conceive by any other means, some scientists say that “to prevent the birth of a badly deformed baby [result of this process] they stop any pregnancy that appears to be going wrong by abortion” (Onion, 2001).

Pregnancy is a naturally occurring biological function and, prior to modern medicine, was allowed to follow its natural course. Assisted-reproduction techniques (ARTs) that involve medically assisted conception (MAC)⁷ have been developed in order to enable infertile couples to fulfill their desire of having a child. First it was artificial insemination that built a flourishing market around the commerce of women’s eggs and men’s sperm. Today sperm and egg banks are available for infertile couples. Even more, it is possible to buy some of these germinal cells through the Internet⁸ with many “concerns over exploitation and illegal sale of human tissue, to issues of professionalism” (Kahn, 1999). This actual possibility for infertile couple has given rise to complicated questions not only about the nature of human reproduction but also around the concepts of family and parenthood (“Babies made to order”, 2001). These new medical practices in human reproduction that involve new power over human life

⁷ “Medically Assisted Conception is a generic term which includes many medical procedures. MAC involves non-coital reproduction in which medical technology is used to achieve pregnancy” (Berkowitz and Snyder, 1998).

⁸ See website www.ronsangels.com

have challenged traditional practices. Recent advances in reproductive biotechnology have questioned the natural concepts of life and its commencement. It is because now it is controlled and manipulated by external factors. The traditional definitions of these concepts have lost their broader frame and the “natural way of being” that they once entailed. Before our current knowledge and the ability of scientists in reproduction, ARTs, the moment of conception or beginning of life had remained a sacred mystery. Now the sacred encounter between a woman’s egg and the man’s sperm, which occurred in the privacy of the obscure middle third of the Fallopian tube, has become a public biological moment in a petri dish or test-tube (IVF). The “magic, divine or natural” moment of beginning of life is now a simple-minded biological event.

Moreover, another important aspect of advances in human reproduction is that before modern medicine infant mortality was high. It is now well understood that prenatal care results in significant improvement in the quality of the pregnancy and the outcome of the infant. This modern prenatal care includes routine screening for infectious diseases and, more recently, genetic disorders associated with severe disabilities (Baird, 1994).

From a religious and impartial view of human life, bringing someone into existence is considered valuable because it is the result of an act of procreation, rather than an impersonal process. Procreation generates life, and since life is intrinsically valuable, procreation is valuable. The late Cardinal John O’Connor in an article discussing

cloning as a new way to bring a human being into the world says “it is ironic that now, near the close of the 20th century, a century that spent great time and effort to have sex without babies, some want to have babies without sex” (1997, p.683). It shows very clearly one of the greatest changes in human reproduction today: human reproduction that used to be an interpersonal and sexual process is becoming an impersonal and asexual process.

Furthermore, with genetic screening, presently current biomedical knowledge has given us the power to foresee some future child’s features in order to address the decision-making process of whether or not to bring someone into existence. It means to rule over who should come to live and who should not, or in other words who can or cannot be part of humankind according to genetic features. It is often called selection done on the basis of some sort of genotypic and phenotypic traits; reproduction gains the notion of “human strainer”. This new notion of reproduction raises the questions: “Who is in charge of [human] quality control? What qualifications are relevant to quality controllers, and who in our society possesses the qualifications to determine who can or cannot enter our human community?” (O’Connor, 1997, p.683); which moral criteria must be applied in order to clarify the problems posed today in human life and human reproduction? Additionally, the potential application of cloning and the knowledge from the HGP would give to human beings the power of determining and manipulating future generations, “genetically produced” ones. This new power in our hands embodies novel moral

questions that require fresh approaches to the problem of existence, life itself, and human reproduction.

So far, we can see that biomedical advances have given us a better understanding in biological terms of the nature of what life and human reproduction are. However, there are so many questions concerning the meaning of life and being human that science cannot answer them and very often humanity turn to God, religion and spirituality for some comfort as well for answers to these questions. Religion as the most pervasive of human phenomena captures some basic features of what it means to be human and what human life is beyond mere biological facts. Concerning these interventions into human procreation, the Catholic Church states these artificial techniques “entrust the life and identity of the embryo into the power of doctors and biologists and establishes the domination of technology over the origin and destiny of the human person. Such a relationship of domination is in itself contrary to the dignity and equality that must be common to parents and children” (Donum Vitae, 1987, II, B:no.5, p.30).

In this respect, the Sanctity-of-Life doctrine has been one of the theoretical bedrocks of medical ethics and the law in our society. And we should avoid devaluing or dismissing certain views simply because they are associated with religious beliefs. Let us explore the argument and significance of the Sanctity of life principle in approaching assisted reproduction techniques and genetic intervention.

III. THE CONCEPT OF SANCTITY OF LIFE TODAY

Following the objective of being ethical, pursuing an ideal conduct, medical decisions have been grounded by moral convictions that guide clinicians to attempt to protect human life and restrain improper technological interventions such as active euthanasia or compulsory genetic screening. One of these moral convictions is the principle of “Sanctity of Life”. This concept considers the intrinsic value of human life and has played an important role in biotechnological issues for some time.

The principle of Sanctity of Life has been one of the theoretical bedrocks of medical ethics and law in our society. In particular, this principle has been invoked in discussions against abortion, euthanasia, medical termination of life, and prevention of death. In these situations this principle supports and enforces a prohibition against killing any human being regardless of its condition.

Today, however, the value of the principle of Sanctity of Life is often overlooked in bioethical discussions. This is so, perhaps, simply because this principle is frequently associated with religious beliefs or traditional conservative values. Moreover, the definition of the concept and its scope, value, and plausibility in light of the growing control over life and death have become weak and inconsistent. This is because the principle of sanctity of life entails in some sense a deep reverence for human life that allows nature alone to control events at the beginning and end of life.

The Jesuit James F. Keenan made an impressive review of this concept of “sanctity of life” for the conference “Sanctity of Life and Human Dignity” held in Bielfeld, Germany in 1992. Keenan notes that even though this concept seems to have its roots in religion or theology, it is surprising that sanctity of life receives very little attention and rarely is cited in documents in those fields. Moreover, the concept’s origin has not been determined nor yet explicitly analyzed. “Sanctity of life” has been strongly criticized for its weak theoretical background, although these criticisms have been based on several different interpretations of it (1996).

For a general panorama of the theoretical background of this principle I will summarize the analysis on sanctity of life given by E. Keyserlingk (1979), in his study for the Law Reform Commission of Canada.

A. The Sources

Beginning with the roots of the concept of ‘human life is sacred’, there are two sources, one in theology, the other in experience and intuition. Both were examined to some extent in the previous chapter when we discussed the definition of life. The basic idea is that when we really know what life is, we can understand what is sacred about it.

From the theological perspective Keyserlingk identifies two major themes that support the principle of Sanctity of Life. These are:

- Man's dignity, worth and sanctity are from God, and not due to some quality or ability in man.
- Life is a gift in trust, it is on loan, man does not have dominion over it.

These two ideas are in agreement with the Judeo-Christian traditions as well as Eastern religions such as Hinduism. However, as Keyserlingk states, "it is appropriate and convincing only to those who accept the religious view point, who are believers" (1979, p.13). In Canada, we are talking about 85.3% of believers (this sums the religions that follow the Judeo-Christian tradition or accept the principle of Sanctity of Life in their doctrine) against 12.4% of non-religious people according to the World Almanac 2000 (Almanaque Mundial 2000; 1999, p.79). This data provides a good reason to take into account what the religious perspective says about life, even though there are a large number of people who do not practice their religion, are not or never were religious.

From the roots in experience and intuition the argument differs in where the value and sanctity of life are grounded. This does not rest on God but on the 'nature of things'. This secular position has been developed by Edward Shils and is based on the "common experience" of human beings. "The experience of a deep respect for human life can be traced ultimately to the nature of things, to the way things are" (Keyserlingk, 1979, p.14). That human life is widely believed to have an intrinsic, innate value has been the result of the experience of being human, because from a secular point of view dignity, worth and sanctity are inherent in humans and a

consequence of what we are and can do. To be a human being is to have an intrinsic and undeniable value recognized in the Charter of Human Rights under the word 'dignity', and human life is sacred because of its investment in human creativity.

This same definition of what makes human life sacred is also discussed and defended by Ronald Dworkin (1993), another philosopher who approaches the principle of Sanctity of Life from a secular point of view. He describes how almost everyone shares this respect for life grounded on an intrinsic and innate value inherent to men, but disagrees on how best to apply this principle to real issues. Examples such as human survival, the flourishing of mankind and the worries about future generations label human life with a sacred value over other moral principles. This concept of sacredness is inbuilt in each human being, and it explains why we consider some things sacred also because these things are extensions of a human life or are valuable for men. For instance, a great work of art is sacred because it is the fruit of human creativity, and other animal species are sacred because they are products of nature.

Very recently Gregory E. Kaebnick (2000) follows this secular approach on the sanctity of nature and refreshes this concept of sanctity, sacred or intrinsic value of life, reminding us, as Dworkin does, that this principle has "twin bases": the divine/natural and the human. This argument reinforces Keiserlingk's idea that the religious and secular views may not be so far apart. Both viewpoints speak about "standing in awe" before human life (1979, p.15). For believers this awe is caused by the conviction that life is from God, while for non-believers it is caused by the

conviction that the nature of life is such as to allow humans to experience their own vitality.

Neither of these two sources or roots of the concept of sanctity of life explains completely and satisfactorily this principle. Both theological and secular views have particular deficiencies. The first is only appropriate among believers and the second does not offer a sound and convincing argument for all the questions. The differences and lack of reconciliation between these approaches suggest that both roots as “twin bases” are needed for sustaining this concept of sanctity of life. Furthermore, a practical agreement, one very important for the discussion of this thesis, is the affirmation of this principle of Sanctity of Life. The problem, then, is how this principle should be applied in biomedical decision-making.

B. The Analysis of the Concept

Before we attempt to apply the concept of “sanctity of life” to Biomedical ethics, it needs to be defined appropriately in order to clarify its scope and moral significance. I will avoid the understanding of absolute prohibition entailed by this principle for some theologians and follow its more frequent use as a particular foundation that conveys a basic disposition or attitude. In medicine, as Helga Kuhse states, “sanctity of life means the sanctity of *human* life – that is, the bodily life possessed by us between conception or birth and death” (1987, p.3). This view refers to the strictest version of the “vitalism” argument, which holds that human life should be preserved in all situations and never interfered with it. However Keyserlingk states that this option “is

more a predominant attitude that a 'school' professing a single body of tenets" (1979, p.20) and can be assumed as a 'test of moral rules' (Ibid.).

Going deeper into this argument, vitalism states that the principle of Sanctity of Life is the only one that counts in the decision-making process concerning matters of human life. This position is staked on the immeasurable value of human life that is taken as absolute and independent from any other moral principle. In addition, historical precedence, for instance the Nazi medical/experimental atrocities and "Doctor Death", Jack Kevorkian, has created a precautionary position against the "slippery slope" argument that reinforces the strong point of vitalists. Agreeing that in some cases life should cease to be preserved or to be interfered with it could undermine the worth of life in such cases.

Measuring the worth of life, Kuhse (1987) makes a philosophical distinction between the life of a human organism and the life of a 'person'. This differentiation is grounded on her notion of consciousness present in a person but absent in a human organism as it has been discussed in a previous section of this paper. It is the foundation of her 'quality-of-life' approach. However, "sanctity of life" goes beyond determining human social status, as the biological characteristics of a developing human have established it according with The Ethics Committee of The American Fertility Society (1994). They state, "the biological characteristics of a developing human are among the principal determinants of human social status" (Ibid., p.31S). However, they accept that this position is not broadly held today, and American law

and social policy just recognize a human being as a member of society at birth. In fact, the notion of the potential for consciousness during human development in the mother's womb and childhood cannot support Kuhse's quality-of-life approach. The real quality of life is in its very existence (Maldonado, 1995); the value of life cannot be weighted in terms of characteristics of an individual life such as expectancy, health or usefulness. This would involve a reductionist approach to the concept of life and human being. Yet this concept of quality-of-life is useful if we see it as a daily standard-of-care measure.

Another formulation of vitalism is the "playing God" argument mentioned in the 1982 report *Splicing Life* from the U.S. President's Commission that expresses the worry about intervening in the natural processes of life. This preoccupation, today very fashionable with genetic engineering and assisted reproduction techniques, is a perfectly reasonable argument to deal with from a rational and secular perspective, as Kaebnick (2000) plausibly explains. He says "it is to worry about the human relationship to nature and to maintain what we ought not aspire to being God" (Ibid., p.17). This position not only expresses fears of some commentators but also reveals the human wisdom to do the right and good and avoid causing harm. The idea of playing God is not at all a religious position, but a reminder of the responsibility of all of us in the decision-making process concerning those matters that involve the life of other human beings. Keyserlingk (1979) points out two qualifications about this matter. First, as human beings we are limited and so our medical technology has also its restrictions in controlling life and death. Second, it is influenced by the very

important issue of the patient-physician relationship, including the responsibilities and rights of both actors in this “vital health association”.

Finally, we can say that the principle of Sanctity of Life, as Keyserlingk writes, “means that life is precious, should be respected and protected, treated with consideration, and is a principle basic to our society” (1979, p.42). In fact, as I attempted to probe in the previous chapter about what human life really is, the complex and broad understanding of human life with respect to which many disciplines such as theology, biology, psychology and even the humanities and arts are linked, is a sound reason and a bedrock for the principle of Sanctity of Life. Now, it is my intention to answer the question of how we can apply this principle to current clinical decision-making.

IV. THE SANCTITY OF LIFE DOCTRINE

The frequent use of this term, ‘sanctity of life’, outside of religious and theological fields shows its emerging social role as a foundation of a basic preoccupation concerning intrusion into the natural processes of human life, rather than an absolute constraint, as some of the authors cited in this thesis have asserted (Keyserlingk, 1979; Kaebnick, 2000). Taking this view, the Hastings Center recognizes that sanctity of life “can guard against the erosion of respect for life in our society”(131,9), as mentioned by Keenan in his review (1996, p.11). Human life is not only what we know about our body, faculties, and human reproduction but also an experience of being alive, the ability to create as an extension of being alive, the biological and psychological authenticity of each human being, the human experience of awe before “life” and our relationship with the world. Human life is sacred because it is life in this broad sense (Shils cited by Keenan).

Following the same path of Keyserlingk’s work and after summarizing and analyzing the main approaches to understanding the principle of Sanctity of Life, the application of this principle is the matter of this section. I first argue that the Sanctity of Life Principle can be used as an ethical principle that leads to a set of moral rules concerning the modern medical issues in question. Then, I describe the Uncertainty Principle and the ethics of responsibility as clear manifestations of the Sanctity of Life Principle, and finally how this principle can help us in the search for a consensus in Bioethics today.

A. Sanctity of Life as Ethical Principle

As Keyserlingk demonstrates, the principle of Sanctity of Life is meaningful and fundamental in biomedical decision-making. In fact, any human and social ethics has the fundamental concept of life and the integral conception of being a person as their bedrock. The Sanctity of Life Principle then would be understood in the sense that “life is precious, should be respected and protected, treated with consideration, and is a basic principle of our society” (Keyserlingk, 1979, p.42). This principle serves as an “ethical principle⁹”, impersonal, distinct from ordinary practical judgments and demands, and independent from rewards and sanctions. The role of the principle of Sanctity of Life, as well as other ethical principles, is “to provide us with standards of relevance or ‘reasonableness’ when appraisal of lower order rules is required” (Ibid., p.41) in our decision-making process concerning life issues. In particular, this principle reminds us of the complexity of human life and strongly rejects any reductionist view of this concept. Then the principle of Sanctity of Life is directed to the organization, regulation and correction of those sorts of moral rules that help to identify, analyze and resolve those particular problems that arise in the practice of clinical medicine around life concerns.

In this purpose, the principle of Sanctity of Life should recall what we mean by human life in its most holistic sense, an indivisible synthesis of the physical, psychological, spiritual, and transcendent traits of any human being. So that, in the moment of setting up a system of moral rules grounded on the principle of Sanctity of Life

⁹ According to the “Levels of Moral Discourse” used by E. Keyserlingk in his work, he cites the views of Henry David Aiken on the role of abstract principles (citation 64, 1979)

concerning the new medical technologies, one should take into account the different levels dealing with the concept of human life. Callahan's proposal is one example of this. He identifies five main issues where the principle of Sanctity of Life should be taken into account and where a set of moral rules would be developed. These issues are:

- The survival and integrity of the human species
- The integrity of family lineages
- The integrity of bodily life
- The integrity of personal, mental and emotional individuality
- The integrity of personal bodily individuality (Ibid., p.43)

As we can see according to the holistic view of life, there are still some other issues that are not included in this list, such as those concerning the relation between human beings and the planet. Specifically, I have in mind issues such as the use of non-renewable resources, the traits we share with other animal species and the genetic manipulation of food crops. These issues are as important to human beings as the others that have been mentioned. But it is my purpose in this thesis to focus above all on those issues linked to our modern medicine and human life. In fact, it is my opinion, as Potter claims, that "the over-specialization in either branch [of Bioethics: environmental and medical,] can be counterproductive to the goal of acceptable survival on a global scale" (Meine, 1989, p.283).

This over-specialization is especially evident in our modern medicine, which has been the cause of the heated debate concerning the moral responsibilities in medical practice. This specialization is not only presented in medical knowledge but also in the way health care is offered. Today, a hospitalized patient is usually seen, asked and prescribed for more by his or her family physician and the remission from one specialist to another is part of medical assistance. This problem is seen by just going to any hospital, reading the medical charts and listening to the medical care team asking frequently “whose is this patient?”, and then many doctors’ and technicians’ names come as response. This situation also can be seen by talking to any patient, who usually is unsure who his or her doctor is. This circumstance makes it more difficult to apply a holistic view of life and human being in medicine.

Coming back to Callahan’s list of issues where the principle of Sanctity of Life should be taken into account, these sorts of topics make us aware that some modern medical practices would threaten human life. Moreover, even though each proposed issue has certain specific aspects of human life that warrant discussion, there are some medical issues such as the advances in genetics and reproductive medicine, that for their complexity and breadth involve more than one of those features of human life.

Callahan has identified five aspects of human life: “species-life; familial, lineage-life; body-life; person-life; and body, individuality-life”, that correspond to the mentioned main issues that Keyserlingk finds adequate (1979). He follows the same broadly accepted structure of moral reasoning (Grundstein-Amado, 1991; Kushner, Belliotti, Buckner, 1991; Sgreccia, 1994). However, what makes medical decision-making

today a very problematic matter is that most medical advances entail the improvement in some way of one of these aspects of human life, but omit the real concern of human life as a whole. It is in this respect that sanctity of life as an ethical principle is very important in specifying a set of moral rules concerning these issues. For example: respect for life in its broad sense, respect for the inviolable integrity of each individual human life and the special nature of the transmission of life (Meyer, 2000).

In this process the Sanctity of Life principle become a test of moral rules. Somerville offers in her book two tests that can help us to know whether a new technique in modern medicine, human genetics and reproduction would be accepted as morally right or wrong. Both tests are strongly bound with the concept of life and its sacredness. The first, “does this procedure or technique demonstrate profound respect for life?” is concerned with the understanding of what life is and the respect that it is worthy of. This test calls first for recognition of the complexity of human life, not only in physical structure, chemical composition, and physiological activity but also in taking into account the diverse religious interpretations, people’s beliefs and experiences that in sum lead us to a deep reverence for human life. In fact, the Sanctity of Life Principle urges us to keep this in mind before making any decision that could alter or hazard what we revere as human life. In particular, with the new possibilities given current knowledge in human genetics, such as genetic screening and artificial reproduction techniques, many moral questions should be answered before its application.

Keyserlingk, beginning with those questions of fact, has formulated some of these interrogations. "What do we know so far and what can we really do?" (1979, p.44) These questions are related to what Lewontin (1991), Holtzman and Marteau (2000) criticize, concerning what our real possibilities in human genetics are. "How reliable is our knowledge and how safe are our techniques?" (Ibid.) Knowing that science is not as objective as scientists try to claim, as it was discussed previously, it should be noted that the cloning of Dolly was successful only after 300 attempts, and that admitted errors in safety research have caused harm. One example of this is the death of 18-year-old Jesse Gelsinger in a gene-therapy trial. These new medical possibilities require more careful analysis and scrutiny. Concerning genetic screening questions about the knowledge this technique discloses have been formulated. To the question "Who should know about our genetic makeup and why?" some philosophers have concluded that "at least on the levels of law and social policy, practically nobody is either duty-bound to receive or entitled to have that knowledge" (Takala and Gylling, 2000). Furthermore, on the basis of the right of self-determination others defend, in the new ways to acquire personal genetic information, there is a new "right not to know" (Räikkä, 1998).

Following with the second test that Somerville proposes, "Does [this new technology, and the possibilities it brings,] pose any kind of threat to the human spirit?" (McCabe, 2000, p.12). She defines human spirit as "the intangible invisible immeasurable reality that we need to find meaning in life and to make life worth living" (Ibid.). Concerning this second, more fundamental question, Keyserlingk formulates also

some queries human genetics and ARTS raise that should be assessed. “What kind of genetic composition, what kind of human being do we want, and do we have a right to want?” (1979, p.45). The breakthrough of the year 2000, the completion of the genome sequences of complex organisms and in particular the human being, brings new information that is changing the way we understand what to be human is and offers the potential to alter our view of the world in which we live (Pennisi, 2000). However, it is not clear how society will deal with this. We are talking now about redefining our concept of being human, normalcy and deviancy. In fact, today, many of the philosophical discussions concerning human genetics have involved the conceptualization of terms such as ‘disability’ (Reindal, 2000; Harris, 2000) and ‘worth living’ (Glannon, 1998; Shapira, 1998). Moreover, as Keyserlingk says “the scientific data must be as reliable as possible, but the kind of human we want will determine what data is judged relevant and significant, what distinctive qualities of human being “ought” to be genetically encouraged, and which characteristics will be judged genetic defects to be cured or modified” (1979, p.45).

In this groundwork, neither one person nor a particular community or field can assume the ethical right to define what life and to be human are, and judge what moral rules should be applied. Nevertheless, we are urged to look for a moral compass that can help in our decision-making process, as it has been claimed repeatedly since the beginning of Bioethics thirty years ago (Potter, 1971; WHO, 1976; Annas, 1989; Berlinguer, 1994; Sgreccia, 1994; Montt, 1995; Escobar-Triana, 1997; McCabe, 2000; Summerville, 2000; Pennisi, 2000; Appel, 2001).

B. Sanctity of Life as Our “stewardship” and the Uncertainty Principle

Thus “Sanctity of Life” gains a positive orientation and can be used in the more universal and general sense that Keenan emphasizes as our “stewardship”, “user-friendly” to non-believers (1996). This understanding of the concept of “sanctity of life” underlines that we do not enjoy dominion over human life, yet we have a right to the use of it. These ideas are understood from the religious view rooting the sanctity of life in the activity of a creator that entrusts to human beings appreciation for the inestimable value of life and responsibility for it in a “stewardship” (Congregation for the Doctrine of the Faith, 1987). Shils on the other hand “appeals to the common human experience of awe before ‘life’, [where life] belongs to the species and, further, to the world of living” (cited by Keenan). Then, “user-friendly” means to act prudently in matters of life. This act with caution and prudence is what would lead us to do the right thing as O’Connor ends his article citing Paul Ramsey’s “Fabricated Man: The Ethics of Genetic Control”. We should bear in mind that “the good things that men do can be made complete only by the things they refuse to do” (1997).

The meaning of “stewardship” or “user-friendly” can be seen clearly in “the New Uncertainty Principle”, often mentioned today by some politicians and activists for complex environmental issues, and that is finding its way into international agreements (Appell, 2001). This principle is based on the fact that most decision-making concerning new technologies lacks complete knowledge of their risks and powerful future consequences. In fact, it is easier to prevent any damage than repair it later. Besides, this precautionous attitude has been cited in previous documents such as

the statement from the conference in Racine, Wisconsin, in 1998. I quote from Appell: "When an activity raises threats of harm to human health or environment, precautionary measures should be taken even if some cause-and-effect relationships are not fully established scientifically" (2001, p.18). This precautionary principle calls for paying more attention to what the public wants and appears also to be the attitude of the general public when we consider the different demonstrations against genetically modified crops, economic globalization, and human cloning.

I do not know a poll that assesses public opinion concerning this new biological knowledge, modern medicine and genetic techniques with the potential to alter our view of the world and our life. A small example is a series of opinions from eight university students from diverse departments and backgrounds who were asked about human cloning. Seven of them found this real possibility of cloning human beings in some or another sense wrong. Most of them manifested fear about it and agreed that a set of guidelines should be drafted and a reevaluation of the priorities of science and society in general should be done (Ayles and Etheridge, 2001).

The importance of involving the public in the deliberation of these matters is that the new possibilities with the knowledge in human genetics have raised important questions about human identity and free will, and about the relationship between the public and the private in ethics (Parker, 2000). The question today is not just what is good for me, but what is good for society in general too. In addition, modern society is characterized by the existence and interaction of various moral traditions that have

made this reflection very difficult to reach as a consensus about novel ethical questions. This reality challenges the traditional decision-making process and advocates for a new ethical approach, a “what is good for society” approach, as Somerville suggests (McCabe, 2000). I will argue later in this chapter that the Sanctity of Life principle could help us in this quest for consensus.

C. Sanctity of Life and an Ethics of Responsibility

Concerning the ethical questions in the context of relationships that have been raised today in our modern medicine, we need to examine the Ethics of Responsibility.

The rapid development in modern medicine has raised ethical questions beyond individual concern. We can see this situation knowing that genetic information has implications and effects not only for the affected individual, but also to his or her family and to the general society. Moreover, the measure of the value of human life today becomes more complex when we have to face valuing the lives of others, particularly those who are not yet living, those potential lives such as frozen embryos and future generations.

Human genetics and the development of ARTS have challenged not only our concept of human life but also the responsibilities we own in relation to ourselves, our families, our communities, and to future generations. Ethics of Responsibility attempts to identify the moral duties which arise from these relationships between each of us and others. In fact, the formation of this new discipline, Bioethics, brings us to think through human intervention into the biosphere, environmental ethics and

our responsibility to future generations, as Potter states it in his proposal (1971).

Furthermore, other philosophers such as Hans Jonas have also developed this principle of responsibility in consideration to the unclear, future consequences of our actions (Sgreccia, 1994). In addition, because those who may suffer the consequences of our actions in human genetics and reproduction cannot claim their rights (genes, embryos, fetuses, newborns, future generations) an ethics of responsibility to them should be encouraged.

Today most of our decision-making on different levels of society is based on the discourse of rights. Human Rights, right to health, right to life, right to procreate and parent, right to die, are very common among the public and they appeal to those rights to make certain claims. This broadly known ethics of rights, as Keyserlingk says, “bases the decision exclusively on the existence and the status of the right. No other matters are relevant” (1979, p.146). Because of this, most philosophical discussions in order to help the legal statements of any government around the application of the new techniques in modern medicine, as well as in abortion, follow the clarification of the social status of the subjects in question –for instance human organs, frozen embryos, fetuses, gametes and stem cells– that obligates us to defend their rights. The common conclusion is that those subjects do not have rights, because they are not “persons”, the human social status that permits legally claims for rights. Nevertheless an emerging recognition of a special nature of those human cells, tissues and embryos is recommended because of their uniqueness and their capacity to develop into a human

being (The Ethics Committee of The American Fertility Society, 1994; Bunney, 1995).

The ethics of rights, as named by Keyserling, has ignored a large part of the realities in a relationship, which is most important in the ethics of responsibility (1979). This latter, on the other hand, makes decisions through “an act of weighing and balancing” all concerned aspects, benefits, risks and consequences in the course of a open discussion and dialogue with all involved parties. This ethics recognizes the worth and dignity of all concerned parties but also acknowledges at the same time an inequality in terms of need that appeals for help. Keyserlingk adds, “*attitudes* such as concern and caring are central to an ethics of responsibility” (Ibid., p.146, italics from the original). These attitudes with the basic concept of relationship are some of the omissions in the construction of the classic moral theories and principles that feminist philosophers claim should contribute to a better ethics (Held, 1987; Sherwin, 1992; Noddings, 1992).

Ethics of Responsibility is grounded on relationships. A human being is not an isolated living organism, but he or she is part of an enormous ecosystem. That our human species survives does not depend only on our actions, but on the consequences of those events in the global ecosystem. Even more, knowledge in human genetics and philosophical discussions about the effects of genetic manipulation over the identity of future generations has revealed that “we can easily affect the identities of future people, or *who* the people are who will later live” (Parfit, 1984, p.377, italics

from the original). And as I argue in a previous chapter, this identity or uniqueness of each human being is one of the sources of the sacredness in human life and deserves to be safeguarded. Then, it is this defense of human life where the Sanctity of Life principle can be articulated and applied to the Ethics of Responsibility. Recognizing the holistic concept of life and the risk of restructuring human life itself through the new medical procedures in human genetics and reproduction, a responsibility to society should be to promote what we value of human life. For example, in human reproduction, the knowledge we have today has been applied in order to uphold some people's claim for the right to procreate and parent, but a set of moral rules that include the responsibilities of becoming a parent should be included. Consequently, the Sanctity of Life principle could lead not only to the formulation of a list of moral rules but also a list of moral responsibilities that ensures a responsible relationship among us and those around us, including future generations, and avoids any hazard that the possibilities of modern medicine bring with its allure for knowledge.

D. Sanctity of Life in a Search for Consensus

Even though it is broadly accepted that new possibilities in human genetics and intervention in human reproduction have raised very important moral questions that should be assessed carefully, there is little consensus about how we should address these matters. Many historical reasons such the Nuremberg Medical Trial (Grodin and Annas, 1996) and the subversion of medical ethics to the ideology of the Marxism-Stalinist state (Pellegrino, 1995), and knowing the fact we are facing potential changes

in what we conceive of as human, human life and our relationships with the world in which we live justify and urge an international consensus in Bioethics today.

The consensus in Bioethics as well as in many influential moral theories plays an important role and transforms the mere moral discourse in a body of objective knowledge that can be applied in the medical setting as in other ethical issues (Jennings, 1991). Although there are diverse models of consensus, I will appeal to one that is linked with what I just discussed above in the Ethics of Responsibility. It is the consensus that emerges from a deep dialogue among the concerned agents in a relationship. This is the exercise of hearing different opinions as well as expressing one's own opinion in order to find the best reasons for supporting the final decision of the issue under discussion. Applied to the matter in question, it is the result of the democratic participation of the society in deliberation and choice. However, we should not ignore the risks and limitations of this pursuit. In our pluralistic and secular society, the best that ethics committees can do is to reach a peaceful agreement that in most cases corresponds to the "middle ground" on a particular matter (Keyserlingk, 1993). But concerning the actual issue in question that involves society in general, the survival of our species, and the preservation of the planet, a consensus should be not only possible but also necessary. So, accepting that a reasonable conflict-resolution is possible from a pluralistic approach, we should start identifying the primary values that must be recognized by all traditions and conceptions in humanity (Kekes, 1993). Furthermore, the success in this quest depends on shaping our attitude toward the diverse points of view.

It is in this search for consensus in Bioethics that the ethical principle of Sanctity of Life could be an approach as it has been for the different world religions concerning abortion (“Apoyo total de...”, 2000) and more recently against the human-cloning measure passed in Great Britain (“Religious Leaders’ Pleas...”, 2001). As was Potter’s primary concern when he proposed the term ‘Bioethics’, the survival of the human species should be our priority. In this purpose we should begin above all by endorsing respect for the life of each person as a primary value. The Sanctity of Life principle then could justify and support soundly the set of moral rules and responsibilities in decisions concerning human genetics and reproduction today.

There are two instances where we can see the real possibility to reach an international consensus in Bioethics around the Sanctity of Life principle. One is the presence of this opinion of deep appreciation for the value of life in the history of medical ethics in both Western and Eastern traditions. The admiration, respect and reverence for human life are clearly expressed in Hippocratic medicine, as I mentioned in a previous chapter, as well as in ancient Chinese medical ethics (Tsai, 1999). Moreover, ancient Chinese medical ethics calls to mind the important value of the relationships where the dispositions of humaneness and compassion are fundamental in the treatment of living creatures (Ibid.). The second instance that shows us a tendency to international consensus is the current widespread interest in Bioethics around the world, not only among academics but also as a response to diverse civic movements. An example of this is the preoccupation of the concerned environmental activists and lay public for the applications of biomedical technology. The Japanese, for instance, call for

consideration of “the negative effects that include the failure to adequately protect the welfare of the people” and have “negative feelings toward a too hasty advance of science and growth of technology” (Kimura 1987). This general attitude should be taken into account in order to answer the question: What does society want? And how do they want to live? In medical practice these manifestations of precaution with new technologies are useful to note the evident need of society for more holistic approaches to life, death and health – as the palliative care approach is teaching today. This call for a new and more comprehensive approach to the reality of humanity should be helpful in building a better interpretation of the notion of ‘Bioethics’ within a totally new holistic approach to life, health, environmental life, and nature.

V. CONCLUSION: Sanctity of Life, Bioethics and Ethics for Life

The term 'Bioethics' was coined by Van Rensselaer Potter in his book "Bioethics: Bridge to the Future", published in 1971. Since that time, Potter's proposal to form a new discipline, a 'bridge between natural and social sciences', has generated several streams without a consensus of what bioethics is or should be. However, Potter remains confident that through Bioethics we can find "a system of morality based on biological knowledge and human values, with the human species accepting responsibility for its own survival and for the preservation of the natural environment" (Meine, 1989, p.282).

Today, in an era of life manipulation, it is timely to examine how Bioethics has developed and evaluate how we deal with human life issues. This thesis has been an approach to rediscover the Sanctity of Life principle as a very important, meaningful and fundamental tool in complex biomedical decision-making and in the construction of an authentic Bioethics. In addition, I have shown that this principle can be used and applied not only in religious discussions but also in secular deliberations around moral issues concerning human life. In this venture, as in all discourse in Bioethics, I face the complicated challenge of trying to define what it is to be human and what human life is. However, no one should be afraid to address this fundamental question. It is true that there is no complete and final answer to this question. Yet in recognizing consciously and rationally this deep 'mystery' we can realize the immense value of human life. When I say "mystery", I am not saying that we cannot acknowledge the value of life, only that we can never master this concept.

Thus “life”, in particular human life, should be described objectively from the current biological knowledge that looks for the answer of the ‘how’ that is today in high development through genomics and the coming era of proteomics (Pennisi, 2000). Nevertheless, in defining “human life” we cannot leave the question “what for” without an answer. It is in looking deeply for the meaning of being alive that we can have a better sense of the concept of life. In fact, what is lacking in our ethical analysis in biomedical issues is this profound human need of transcendence, a goal to live, a ‘telos’, which guides us to the good. This is the “moral compass” society requires today (Somerville, 2000); the “lack of eschatology” in a society in “superabundant well-being” (Guillén, 2000); a need to rediscover the moral philosophy traditions (MacIntyre, 1984); a sense of relatedness (Kimura, 1987) and a notion of community (MacIntyre, 1984).

Accepting this double source in the construction of the concept of life, it is easier to incorporate the notion of sacredness. This sanctity of life that has also “twin bases”: the divine/natural and the human (Dworkin, 1993) that encompass both religious and secular morality. Today, not only do religious groups but also important figures of public life, such as B. Clinton and J. Rifkin, and society in general through public manifestations and global distress (Kimura, 1987; Martindale, 2000; Ayles and Etheridge, 2001) call our attention to the possible consequences of biotechnology. The concern in this attitude is the preoccupation that the application of new scientific knowledge in human life (as in nature in general) appears to violate the sacred. Thus,

in order to prevent us from acting in ways that threaten this, a legal position from the environmentalists comes to be helpful in biomedical issues. It is a responsibility “*to treat lightly and cautiously*” (Kaeznick, 2000, p.22, italics from the original), the precautionary or uncertainty principle that seems to find its way among policymakers today (Martindale, 2001).

However, it is still not clear how society will deal with the growing potential to manipulate human life. What we can say according to the final goal of Bioethics, understanding the complexity of human life, and recognizing the importance of the participation of all groups in our society, by sharing information and working together, is that we can protect and develop our lives by constructing a bridge between science and morality. For this, a common concept of life should be shared where objective biological and physical facts could describe the processes that make life possible. But only a philosophy of life would guide us to what is worthy and deserves reverence of it. Thus, a Bioethics not only for health professionals or for professional ethicists but that includes all living beings can articulate the diverse viewpoints and help society to reach a new consensus about what is ethical today around life issues.

This enterprise requires the firm and explicit effort of all involved actors on different social and cultural levels. Beside, being acquainted with the globalization in the economy and scientific knowledge, this proposal needs an international action that enforces a set of universal responsibilities concerning human life. In this agenda for human life, a redefinition of what it is to be human and what human life is should lead

above all to the priority of health, to equal access and social distribution, and the human dimension as essential factors in health care. None of these goals could be reached without the rebirth of ethics in a holistic Bioethics, an ethics for life.

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