

CLONING AND HUMAN IDENTITY

Dissertation submitted to the Jawaharlal Nehru University
in part-fulfilment of the requirements for the
award of the degree of

MASTER OF PHILOSOPHY

ALBERTO LISBOA MÁRIO



Centre For the Study of Social Systems
School of Social Sciences
Jawaharlal Nehru University
New Delhi 2004




जवाहरलाल नेहरू विश्वविद्यालय
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI 110 067

Centre for the Study of Social Systems
School of Social Sciences


Dated: 21-7-04


CERTIFICATE

The dissertation entitled "**CLONING AND HUMAN IDENTITY**" submitted in partial fulfilment for the M. Phil. degree of this University has not been previously submitted for any other degree of this or any other University and is my original work.


(Alberto Lisboa Mário)

We, recommend that the dissertation be placed before the examiners for evaluation.


Dr. (Susan Visvanathan)
Supervisor


Prof. Anand Kumar
Chairperson

ACKNOWLEDGEMENT

I am grateful to my wife Alda Benjamim Santos da Cruz Mario, because she was with me throughout this dissertation, inspiring me and solving the difficulties in my work. Her practical ideas about the fate of test tube babies, twins and adopted children and her reflections on the polemicity of human reproductive cloning added a vital dimension to my work. This dissertation could not have been written without her understanding, solidarity and friendship.

Dr. Susan Visvanathan , my supervisor, believed in me, and what could be possible, stood up for me to continue my studies in JNU. Her technical and professional orientation were invaluable. I have benefited greatly from her guidance as a supervisor and from her friendship.

Dr. Amit Kumar Sharma, stood up for me to continue my studies in JNU. I will always remember his vision in believing that research can be articulated in any language. I am grateful for his patient hearing of my doubts and for the theoretical orientation.

Dr. Brian Mendonça who appeared when I needed a friend, with whom to discuss and share my difficulties and the anxieties pertaining to the thesis. The manuscript was read and corrected in detail by him. His experience in research and of writing a thesis helped me to communicate my thoughts with greater clarity.

This dissertation was written first in Portuguese (official language in Angola) and then translated into English because it was only in this way that I could preserve the richness of the Portuguese expression in the English language. An invaluable contribution in this regard was provided by Blanche Mendonça Gomes who translated the entire dissertation.

Finally a word of appreciation to my friend Munish Kumar Tyagi, from the JNU library, who readily made himself available and helped to solve all the problems during the selection and location of bibliographic material.

All what I attempt to say to qualify the contribution of each of the persons mentioned would be inadequate because words fail me in expressing my thankfulness.

Alberto Lisboa Mario

Note on Translation

During the preparation of this dissertation, I observed that three linguistic cultures communicated mutually, i.e. i) in my mother tongue (Quimbundo), ii) in the official language of Angola (Portuguese), and iii) in the official language of JNU (English). As such the thinking process was done in Quimbundo, translated in to Portuguese and again translated into English. This helps us to understand that research can be articulated in any language.

This thesis is born out of the matrix of three people and three languages viz. myself (from Quimbundo through Portuguese to English), my Portuguese translator (from Portuguese to English) and my English tutor (from raw English translation to a more persuasive one). As a result there is perhaps a certain variation in the articulation of the thesis into English via Portuguese via Quimbundo. This, not only because of the fact that the linguistic conventions of each of these operative languages are distinct and at times irreconcilable.

The difficulties of such articulation are many: i) some phrases don't coincide due to the differences in grammatical structure, that is, between the Portuguese and the English version; ii) greater freedom of appropriate interpretation didn't take place because the translator is not a sociologist.

I trust that this dissertation will be appreciated in the light of the circumstances which led to its articulation.

CONTENTS

Acknowledgement	Pages
Note on Translation	
INTRODUCTION.....	1 - 11
Chapter One	
SOCIAL CAUSE OF CLONING :.....	12 - 31
Chapter Two	
HUMAN BEINGS AND CLONES : THE IDEA OF HIERARCHY:.....	32 - 51
Chapter Three	
CLONING, AND HUMAN IDENTITY:.....	52 - 75
CONCLUSION:.....	76 - 81
BIBLIOGRAPHY:.....	82 - 87

INTRODUCTION

Whether reproductive human cloning is an irreversible or reversible reality, it is important to prepare ourselves to confront the ethical, moral, cultural, political, legal, psychological, and other aspects in the best possible way. The utilization of reproductive genetic technology has a direct impact on the society, family and criteria of life and death. The issue brought forward by the cloning of the first human embryo, is that the human being whilst being the object of genetic manipulation, becomes also a sociological project.

This dissertation is about cloning and human identity. It is an attempt to observe if the existence of a "clone,"/ "alien"¹ is susceptible to provoke structural alteration in social relationships. It is also an attempt to study the quality of relations between sexual human beings and asexual human beings and the consequent alterations in human identity of the self.

In the context of several questions which the thematic of human reproductive cloning poses, we will study for now the following: Is human reproductive cloning susceptible to a new human form? Would there be a new human identity?

One takes into account that reproductive human cloning poses the question of continuity of definition or non-definition of the identity of human beings. It implies, above all, a consideration of the relationships between individuals. One of the fundamental problems which this confronts us with is how we arrive at our knowledge of all relations between individual bodies that are not perceptible by the senses. In one case it is the question of the origin of our knowledge of relationships between individual people, on the other it is the question of the origin of our knowledge of the relations between non-human objects and changes in them, i.e., their relationship as cause and effect. Actually in relations between an individual, the community and the society, clone/alien can be seen by symbols Haraway (2000). The clone then

¹ One proposes the use of the term "alien" to identify the human being born from IVF, the administrative parents and human cloning. All interpretations made on the subject of human reproductive cloning have strong similarities with the existence of twins, administrative parents and test tube babies.

becomes the field of relation and conflict between such poles, integrated by spirit and matter. The growing technology invades the bodies with the objective of manipulating such principles in its favor, suggesting that the vision of a natural mutable pole attached to the reign of necessity and permanence is dissolved when it can be more and more changed according to the criterion of culture Dobzhansky (1969).

To define the individual, it is necessary first to define alterity. This, "because of the socially symbolic necessity forbidding a 'pure' individual"²

One proposes that genetic origin is a criteria of defining differentiation between human beings in addition to the criteria that already exists, viz. gender, race, ethnicity, and religion Ritzer, George (1996). This criteria was also sustained by Bernad Jessie (1982) who in the 1940's initiated an approach of importance of "gender" in the organization of society. Charles Darwin (1859) spoke about the evolution of species by natural selection. Francis Galton, (1883) defended the practical improvement of human gender by the selection of "superior fathers" in order to generate "superior sons." According to Barth (1970) boundaries between ethnic groups are maintained through the social process of exclusion and incorporation.

Earlier Alberto Melucci had observed: "The return to the body initiates a new search for identity. He asserted that the body appears as a secret domain, to which only the individual holds the key, and to which he or she can return to seek self-definition unfettered by the rules and expectations of society. Nowadays the social attribution of identity invades all areas traditionally protected by the barrier of 'private space'".³ In the interpretation of this thesis the body which Melucci refers to is the object of the human reproductive process which includes all forms of cloning therein. These forms are i) the process by which we have twins ii) Medicine to assist Procreation (PMA) iii) adoption. The paradox of cloning as a model of social reproduction is explained as follows: To pretend to distinguish the axioms of biological

² Henri Atlan, Marc Augé, Mirelle Delmas-Marty, Roger-Pol Droit, Nadine Fresco. 1999. *Human Cloning*. Editions du Seuil PP.51.

³ Alberto Melucci, 1989. *Nomads of the Present*. Londres. Hutchinson Radius. Pp 123

nature, to relativize the importance of filiation, includes the same question relatively of all modes of PMA. On account of this on several occasions we will speak about “clone” / “alien”. to refer to the same thing.

Attempt in this thesis is to demonstrate that reproductive human cloning doesn't by itself alter a human identity. Nor doesn't alter the relation of subordination because we cannot define identity and individuals without ties, without relations and without symbols.

In the course of the thesis we will argue that the body becomes a person, a human being as a complex of social relationships. It is persons and not individuals who are the units of social structure. This will be understood more clearly when we will examine social habitus in the context of socialization as seen in Bourdieu (1977), Elias Norbert (1988), Durkheim E.(1925), Fox R. (1985) and Harker R.K. (1984).

From this perspective, it is important not to characterize individuals by their attributes, but to see how the relationships established, permit understanding and explain the social position of each individual in relation to a group of individuals.

The discovery of such relationships, that can be more or less expanded to a number of people varying the intensity that each establishes with the others helps us to understand the central or distant positioning tendency of the individuals in a social system or sub-system. It gives us an insight if they are more or less active, or if the fostered relationships take place beyond the direct attachments, in other words, beyond the dependency of the family ties.

The answers could be found if we examine questionable evidence among imaginary epistemological constructions like ‘an individual’, ‘a person’, ‘a subject’ and ‘an identity. We have two foci, viz. i) To identify cultural specificities and ii) to recognize the universe of human fact, social fact and cultural fact.

One sees a demonstration of how sociology studies reproductive human cloning. Symbolic relation is more easily understood than in the societies where institutional complexity, in some aspects, and scientific progress in others, supply a less immediate reading. On the other hand, sociology can directly observe the status of the role of man trying to gauge the reach of the symbolic and, even more, to understand better the effects of fascination and rejection to the human clone that arise.

I. HUMAN REPRODUCTIVE CLONING IN SOCIOLOGICAL PERSPECTIVE:

The peculiarity of this dissertation resides in the fact that it is written before the effective application of cloning techniques in human reproduction. When it comes to other techniques of artificial reproduction, cloning is a unique case. In all other techniques, speculation took place after the birth of the first babies. Such technical performance doesn't even guarantee, in the animal scenario, the normal development of a cloned individual. One cannot eliminate the possibility of Dolly getting old before time. Besides by the INRA research team observed in France" the high percentage of pre-natal mortality, deficiency in the immune system and premature death of a cloned deer".⁴ On the other hand, in the present state of affairs, there is wide consensus among the biologists in condemning the attempt to give birth to a child by the cloning process.

However, the technique improves day by day in sheep, then in cattle and in rats as well. Therefore, the present day debate tries to anticipate and begin clearly from the hypotheses that the efficient and secure technique of cloned reproduction of human organisms will be available in the medium or long term. In this perspective we see cloning as a characteristic property of systems of high complexity. To understand this better, it is necessary to explore it, approach it from several angles, making it intelligible through the game of multiple facets where its elements or its main fundamental principles are constituted.

⁴ La afin du <<Tout Génétique>> Vers de Nouveaux Paradigmes en Biologie, Paris, INRA Editions 1999.

Thus, to approach a study like this it is necessary, to propose certain principles that clarify the starting points of our interpretation on reproductive human cloning.

1. A recent interpretation is based on the fact that "human reproductive cloning is one technique which can produce another human being from a human cell. This is similar to the process of nature producing twins or when bio-technology produces test tube babies".⁵ The first principle is very important because as long as we are not capable of showing in life a cloned man – in the somatic form, one runs the risk of getting involved in serious difficulties in political and theoretical issues, not only in action but also in thought. The first question that we can ask is the following: Can the mechanisms of DNA duplication of genetic code transmission and protein synthesis manifest themselves outside living beings? This is a fundamental issue if the reply is negative(because these processes would depend upon a 'vital principle') then it would be useless to try to find out how such mechanisms would be able to appear, for the first time, in the absence of life. Its origin would be forever a mystery. But if on the contrary, the answer is positive, then we have to admit that the field in this domain is open to observation and experimentation.

Theoretically it is possible "to produce real twins by artificially splitting the embryo in the state of four cells, thus creating two new embryos of two cells. These can be immediately transferred to the uterus of the mother (or to the uterus of a carrying mother) or frozen an subsequent transfer".⁶

2. The second principle is to consider that human being and 'alien' have the same biological origin. Since in our nature we are only one, if the DNA leads all the organic processes, then we are all subject to such a principle that can be accessed by way of genetic study configuring such

⁵ T.A. Brown. 1995 *Gene Cloning. An Introduction*. Third Ed. UMIST, Manchester, U.K. Pp5-7, 153. And see: Joel de Rosnay. 1988. *L'aventure Du Vivant* Ed. Seil. Paris Vie. Pp. 196-205, J.P.Renard, S.Chastant, P.Chesné,[...]1999.*Lymphoid Hypoplasia and Somatic Cloning*.Lancet, 353.pp 1489-1491. and David Zuzuki S. Peter Knudtson, *Genethics: The Ethics of Engeneering Life*. London: Unwin Human, 1989.

⁶ Ibid.

science, to an historical and powerful practice to an unbelievable level. The mosaic nature of our genome is even more striking when we consider differences in DNA sequence between currently living humans. "Our genome sequences are about 99.9 per cent identical to each other. Difference among the method of making twins, test tube baby and clone are the following: clone is made from somatic cell and the tube baby and twin are made from sexual cell".⁷

3. The popular imaginary created by reproductive human cloning is similar to the twin situations created in archaic societies and the process of eugenics provoked by western societies. We suggest that, in certain aspects, "the rituals of Africa, America, India or Oceania can be used in comparative interpretation and allow us to see distinct characters related among themselves".⁸

These cosmogonies illustrate the passage from non-differentiation to differentiation. Several rituals and practices translate the horror of similarity and the unthinkable character of the absolute identity of both human beings. Finally the symbolic domain of nature and the supernatural is expressed through its sexuality.

4. To consider the clone as a symptom and a product of weakening the cohesion of the society, where there is less solidarity among members and more individuality. It is therefore to be analysed as "social fact" Durkheim(1925).

Therefore, the reproduction of human cloning cannot be explained only by the possibilities or impossibilities of genetic engineering, but by the fact that it is a profound social fact: the state of society, whose cohesion is influenced by the cultural and religious system that gives an incentive to it.

The dissertation is concerned with three basic levels:

⁷ Ibid.

⁸ Henri Atlan, Marc Augé, Mirelle Delmas-Marty, Roger-Pol Droit, Nadine Fresco. 1999. *Human Cloning*. Editions du Seuil PP.51.

1. The reference to the scientific data which indicates the great possibility of "the reproductive human cloning - a somatic form that will become real".⁹

2. The reference already existing keeping in mind the cell form, where the natural production of "the twin is found in nature, and conformed by culture".¹⁰

3. The reference to the question of the social imaginary about duplicity or horror or similarity and "the character of the absolute identity between twins or two human beings that comes from our ancestors".¹¹

The three references take us to an understanding, where human reproductive cloning has not only a technological dimension but also a social dimension. Reproductive human cloning is a social phenomenon.

Thus, it is possible to place the cloning process in relation to social cohesion and, thus establish the theoretical fundamentals of this issue. Cloning is seen as the criteria of the degree of cohesion between contemporary societies. The analyses suggest that it is the new characteristic of contemporary society, emphasizing its importance in the life of human being.

The clash caused by perspective of the reproductive human cloning is more and more evident. The public at large, as well as scientists, industrialists, political authorities etc understand its consequences and implications in many facets of social life.

Among the wide issues of social nature, related with the perspectives of human reproduction by cloning, the following sociological view comes to the surface:

⁹ T.A. Brown. 1995 *Gene Cloning. An Introduction*. Third Ed. UMIST, Manchester, U.K. Pp5-7, 153. And see: Joel de Rosnay. 1988. *L'aventure Du Vivant* Ed. Seil. Paris Vie. Pp. 196-205,

J.P. Renard, S. Chastant, P. Chesné, [...] 1999. *Lymphoid Hypoplasia and Somatic Cloning*. Lancet, 353, pp 1489-1491. and David Zuzuki S. Peter Knudtson, *Genethics: The Ethics of Engeneering Life*. London: Unwin Human, 1989.

¹⁰ *ibid.*

¹¹ *ibid.*

1. The issue of cloning studies the relation among nature, culture and religion, it speaks about the body and how it relates to technology. In other words, how technology changes the form in which our body exists, how it can be thought of and how it relates to the self and with our cosmologies.

2. What kinds of human beings have we become? This question seems to be continuous to the heart of social theory, embodied in a host of investigations of subjectivity, self, the body/clone, desire, identity. It reactivates a theme that was central to sociological and anthropological thought in the early decades of the 20th century. In different ways Emile Durkheim, Max Weber, Marcel Mauss, Norbert Elias, George Simmel and Karl Marx focused upon the relations between social arrangements and the capacities, moral frameworks, cognitive organizations, and emotional economy of the human being as a creature with a history and a sociology.

3. Understanding the separation of biological differences often lead to a problem in the long standing debate in a series of current representations regarding the body that surpasses distinctions based on gender, race, age, relationship, and others. Such distinctions, hierarchies and relations are cultural, since they have cultural meanings built by man, historically constituted in a relational form by human beings, but it has nothing to do with the biology of the bodies. They are representations, zodiac signs, non-materials and therefore passive in change. What does not change are the biological characteristics of that body (as for example, the division between male and female bodies).

4. Identity and Individuality. Yet "questions of identity and individuality could arise even in small scale cloning, even in the (supposedly) most innocent of cases, such as the production of a single cloned child within an intact family."¹² Personal identity is, we would emphasize, a complex and subtle psychological phenomenon, shaped ultimately by the interaction of many diverse factors. But it does seem reasonably clear that cloning would at the very least present a unique and possibly disabling challenge to the

¹² Leon R. Kass, M.D., 2002. *Human Cloning and Human Dignity*. PublicAffairs, New York. Pp 114.

formation of individual identity.

Cloned children may experience concerns about their distinctive identity not only because each will be genetically essentially identical to another human being, but also because they may resemble in appearance younger versions of the person who is their 'father' or 'mother': Of course, our genetic makeup does not by itself determine our identities. But our genetic uniqueness is an important source of our sense of who we are.

5. cloning and the new kind of relations between subject and object. mode of theoretical knowledge for understanding social reality, viz, 'praxeological knowledge' Bourdieu(1973), which is knowledge about the interaction between individual actors and objective structures.

6. The ties that link the life of the human species and biological evolution, change old oppositions between fertility and sterility. Artificial insemination and in vitro fertilization separate, more or less completely, the reproduction of traditional categories of the heterosexual experience. The sterile can become fertile, as several permutations of substituting paternity become possible in this case. The opportunity given to gay couples, for example, of producing and the fact that sexuality has nothing to do with reproduction – or vice-versa – is useful to reorder sexuality in relation to the styles of life (although, as usual, in great measure only by means of reflexive appropriation).

There are several other important issues like for example: (i) Change of structure of social relations. (ii) the issue of transmission of culture and genetic past. (iii) the end of reproduction as destination.(iv) the contemporary conception of man.

II. A Brief Outline of the study:

Following this objective, the dissertation is structured around three chapters:

In the first chapter we raise the issue of causes, either of the human cloned process, or the social imaginary built around it. Here we underline the importance of society in the life of man as a social and cultural being and

emphasize their main characteristics, fundamentals, limitations and ambivalences. It gives emphasis to the analysis of the family relations. At all times, the function of the family, relatively the social cohesion, seems to be absolute.

We propose that new ways of thinking about values and identity emerge from the interaction between these realms, and we claim that new technologies have the potential to impact the formation of integral human beings in our postmodern age of fragmented identity. These technologies are not only changing our environment, but also the way in which we know our own selves.

In the Second Chapter we trace two moments:

a) We try to remove the mysticism from the subjective notion of sudden apparition and transformation of human cloning that is so rooted in the social and popular imaginary that everything is scientific fiction. When we try to idealize the way by which the cloned would have appeared, we have often the tendency to imagine a sudden beginning, either spontaneous or provoked by any mad or causal accident.

b) However, we place here the cardinal issue of the question of subordination between human beings, the clone and 'alien' as well as the possible sociological methods for the study of human cloning. The nucleus of the answer lies in the reference to the functional correlation of many human beings. It is unique and exclusively the correlation of functions that man performs to one another that we call society. How can we analyse these surreal dimensions in sociology? How to distinguish the real facts from scientific fiction? How to interpret the life of those that are the result of technological revolution? How to interpret human reproductive cloning to better understand it and; above all, to better manage it? The analysis is challenging.

c) In the Third Chapter, we concentrate the study of the "dominant" representations regarding subject, body and its relation with the world. To understand the epistemological basis of our body conceptions in a

better way. In other words, which are the interpretative pictures through which we understand, discuss and even study and do research on body and self.

We study the strictly social effects of this return to a biological basis for essential inequalities. The representation of an immutable, 'natural,' necessary biological order legitimizes the presentation of an immutable, 'natural,' and necessary social order.

The last chapter ends with the argument that the socialization of "clone"/ "alien" is a social process.

As such, the dissertation will explore the four technical issues:

- a) The quality of social relationships.*
- b) The contemporary question of morality.*
- c) The negation of God.*
- d) The control of human reproduction.*

It is within a sociological framework we pose and attempt to answer these questions.

CHAPTER ONE

SOCIAL CAUSE OF CLONING:

THE CONTEMPORARY STRUCTURE OF SOCIAL RELATIONS:

While discussing the reproduction of the human by cloning, we should make, before anything else, an analysis of the society in terms of subordination, i.e. the human being/clone. This is because, it seems, that it is in the society that we find the roots of cloning as a result of the technological advance, and the result of the social imaginary that is being created. On the other hand, we try to develop, through this analysis, the concepts that fit into the reality of the relation between 'man', 'clone' and 'alien', as the basis of our category of thought.

Clone is 'a biological organism, a collection of a vast number of molecules organized in a complex structure, within which, as long as it persists, there occur psychological actions and reactions, processes and changes'. Clone becomes a person, a human being as a complex of social relationships. "It is persons and not individuals who are the units of social structure, such that 'we cannot study person except in terms of social structure, nor can we study social structure except in terms of the persons who are the units of which it is composed".¹

It has been said that society represents the analytical counterpoint of the community, as it was conceptualized, at the first time, by Tonnies (1972). The community (*Gemeinschaft*) represents a social unity and not a rare territory, characterized by relations of identity, sharing and affective or emotional closeness, on the basis of language, belief and/or ethnic group. In the perspective of *Gemeinschaft*, society is constituted by associations of diverse character ('designates'), in the sequence of concepts of the 17th and

1 Radcliffe-Brown, A.R., 1976. *Structure and Function in Primitive Society*, London: Routledge and Kegan Paul. pp.193-4.

18th centuries, viz. a social group of rational and voluntary basis, whose adherence would presuppose a voluntary and free act of individuals and whose relations could be defined as fragments and segments, impersonal and secondary.

It is to society that several authors refer as to a different social configuration of traditional community: the organic solidarity as a result of the division of social work (Durkheim, 1977), society of contract (Maine, 1880) society of industry (Spence, 1969) society as headquarters of the 'great tradition' (Redfield, 1961) and, although not entirely in a dichotomy like other authors, 'modern society' highly technological, bureaucratic and touched lightly by a formal and instrumental rationale aimed at profits, where there is an inverse of a substantive rationality extensive to several types of economy and society (Weber, 1978).

Going by the concept of society, as understood by the disciples of the structural-functional school (Parsons, 1988; Lukmann, 1982), society is the basic structure of the social system, the mark of the organizational and institutional frame and the means of involvement where all the interactions and forms of communication take place. As such, the society generates several forms of social differences, during the symptomatic ways of social changes and social evolution, and permits or limits several types of action.

Therefore, the theory of society is a specific sociological theory that is interlinked and is interdependent on theories that belong to other subsystems (biological, psychical, cultural) respectively of biological, psychological and anthropological sciences, constituting an integral part of the theory of social systems and is co-present to any system of social action. However, for the inter-actionalist theorists (Weber, 1978; Goffman, 1974), society does not exist without individuals; it is a social construction, in other words, it is a product of interactions and strategies, in harmony or not with the individuals in the social arena and, as such, society is a simple designation for the complexity of the social, giving place to the so called sociological nominalism that Weber was accused of.

Taking into account that under such contrasting views lies the old dichotomy of analytical priority, either, around structure or in turn of action, it is important to refer to the attempts to overcome such dichotomy. These include Elias (1980), in his theory of social configuration, *a la* the theory of structuring social action in Giddens (1984), to the theory of the areas (economic, social, political, cultural-symbolic) mediated by the concept of *habitus* in Bourdieu (1979, 1980). For these authors, if there is no action without an organizational-structural context, then the society as structure is constantly reproduced and re-created by the individual, collective and social actors, either in terms of macro-social or in terms of the micro-social.

Since many authors like Durkheim and Pritchard equate social structure with social relations, it is pertinent to sketch some studies about social structure.

Although in his earliest study, *The Andaman Islanders*, published in 1922, Radcliffe-Brown used the term structure to describe the regularities in kinship relations, economic organization, and religious customs, it was only later, in 1935-40 that he actually felt the need to define the term. According to him, the empirical reality with which social anthropology has to deal is the process of social life of a certain limited region during a certain period of time. Observing this process shows that human beings are connected by a complex network of social relations and the term social structure denotes this network of actually existing relations. It includes the following: all person-to-person relations; relations within: social groups and sometimes between social groups; the arrangement of people into social classes and categories; and what Radcliffe-Brown calls social organizations-that is, relatively permanent groups which unite to perform certain activities.

According to Evans-Pritchard who mainly derived his concept from his observations of the Nuer society of southern Sudan, social structure consists of relationships between groups Evans-Pritchard (1940).

Raymond Firth introduces the concept of social organization to take account of the other activities which go on in society but represent variations from the structural forms. This latter concept is important because most

concepts of social structure play down any discrepancy between rule and practice in society *Firth* (1951)

Another variant of the concept of social structure is provided by S.F. Nadel in his *The Theory of Social Structure*: social institution, since an institution is a complex or cluster of roles Nadel (1957)

While the above is not a complete account of the concept of social structure in British social anthropology, it does indicate the main features of the notion as commonly used. Disagreements and dissensions began to appear in the 1950s, and some of the main problems identified were the following.

Some differences between the French and the British traditions of sociology and social anthropology need be noted at the outset.

Unlike the work of the British social anthropologists, Durkheim's analysis ranged from pre-industrial to industrial societies and included a comparison of the social structures of the two types i.e mechanic and organic solidarity Durkheim E. (1973).

Mauss developed the study of collective representations, or, in other words, that of cosmological notions.

It is in the work of the French structuralist anthropologist Claude Levi-Strauss, however, that a contrasting conception of structure emerges most clearly, one which influenced later British anthropologists as well. Like Mauss and others of the *Année sociologique* group, Levi-Strauss begins with data from many societies about similar institutions or cultural products, and analyses them into their constituent elements in order to establish their fundamental relations, so that general characteristics of several societies can be revealed from a small number of cases. Like Mauss, too, he recognizes the possibility that there can be several modes of arrangement of the same activity or function, and yet attempts to establish relations which give to the terms they unite a position in an organized whole, But for Levi-Strauss structures are characteristic of a more general nature which pertain to the human mind rather than to the solution of particular social problems.

In Marxism, the infrastructure or the economic structure, which consist of relations of production corresponding to the development of productive forces at a particular stage, and the super-structure, which consist of non-economic institutions whose character is explained by the nature of economic structure. Notions of structure change, and what was typical of one time span is not so at another historical moment.

As such reproductive human cloning appeared as a consequence of profound changes in the modern society as a result of a process of industrialization, which confronts right from the beginning, issues of social (dis)order, of social differences and inequalities (of class, gender, ethnic and regional groups and others), and subsequent cultural and symbolic manifestations.

Human reproductive cloning is understood as a logical consequence of continuous weakness of cohesion of the society in which we live. This is a result of continuous scientific conquest and the problems that follow. They are often presented as solutions to human crises. Therefore we begin our approach by the enumeration of principal characteristics which help us analyze contemporary society.

Today, one observes that contemporary society changed the mechanisms of interaction between Man and Nature and also among the different actors of the society. In pre-industrial society, the interaction was a result of an action between the social actors and Nature, in its pure or transformed state, and in the struggle to possess, on the part of different actors, of that Nature. On the other hand, in contemporary society, the center point was the interaction among the social actors, the study of its strengths, its balance or its absence. What was present were the abstract simulations and theoretical knowledge codified and capable of guiding the actions of individuals and group Bell (1976).

The main tendency of contemporary societies is to replace the relations of a particular type by relations of universal type. "Such fundamental tendency

is solidarity with the law of family, i.e. 'nuclearization' concomitant with post-industrialization. In industrial society, the statutes are not transmitted but are acquired; they should be attributed to universal criteria and not to family positions of an established heritage; the school becomes a place where formation is acquired. The family assumes, therefore, a limited function; the modern demand for mobility, the collective participation in common values of education, the ideal of universal submission to the identical principles of promotion and achievement have reduced its scope".²

The individual is confronted directly and in a solitary way, by the all-powerful institution of society and deprived of help from institutional sources of integration in a group, and of identification with another, such as the ecclesiastic structures or rituals. In these circumstances man doesn't have controls that could make him feel that society is a transcending power capable of controlling passions and individual needs. Such a situation was very well foreseen by Durkheim, who proved that in the inclination of the global market, the tendency of separation between producers and consumers led to the rise of anomie such as absence of limits and rules, a topic that was fully developed in his book entitled *Suicide*.³ The lack of rules, that is invoked in the book, to explain the excess of individuality makes man even more the master of his own destiny. Since these selfish beings take these behavior codes from themselves they become less permeable to beneficial influences and a superior moral authority.

Durkheim described the annihilation of affective identification that was very important in primitive societies, and the disappearance of the integrating role of neighbors, family, learning, in the area of civic instruction and in the area of economy. He also showed that the organization that is based on territorial groups, such as villages, colonies, provinces, had the tendency to disappear in favor of big cities and anonymity.

2. Raymond Boudon. 1992, *Traité de Sociologie*. Press Universitaires de France. pp 313

3. Emile Durkheim, 1952, *Suicide*, London: Routledge and Kegan Paul. pp.208-216.

As such, the collective life can only be maintained if the society is divided and segmented into smaller groups that, on one hand limit when they fail, and sanction deviations, but on the other hand, represent a condition of existence for the individuals. A group is not only a moral authority that guides the life of its members, but is also a source of life *sui generis*. Durkheim privileged, as such, all the groups that could fix rules and limits to man, viz. those that had a social integration role.⁴ He thought, namely, of corporations that could possibly avoid the threat of individuals becoming an anomaly, isolated and defenseless before the powerful states day by day. If today, the idea of a re- actualization of the corporations seems old, the idea of indispensable existence of secondary groups or third elements that set between the individuals and the state is more than justified.

It looks as if Durkheim had foreseen the advent of modern universalism and wanted to introduce a guideline against different forces of that evil: He thought that a society composed of infinite atoms of dis-organized individuals and a hyper-confused State making an effort of integration is a sociological monstrosity.

Today social reality confirms that perspective. That's why it is coherent to take up the question of new characteristics of contemporary society and show the concrete social effects of the forms of organization that have a tendency to develop into societies similar to the super- industrialized countries i.e. how such societies interrelate with the previous ones. It is a long inquiry during which we try to answer a social question of contemporary society viz. under what conditions do the functioning of techniques remain compatible with the demands of the new life in the society.

In contemporary society, post-industrial work, globalization and internationalization of services, the notion of network and its dynamics indicate the interconnection of reciprocal channels of influence. This is possible by the articulation of individuals belonging to the totally strange

4. Ibid. Pp. 241-272.

technical groups or, on the contrary, distant beings closely associated by a solidarity. Contemporary societies would be characterized by production of service, with the use of information, in small-decentralized business organizations that employ qualified professionals Freire (1993).

In today's world, the types of pre- and contemporary society still coexist. There is an interaction between different interests, family structures, religion, tradition and customs. It is enough to indicate a factor of such coexistence to exemplify this fact, viz. globalization that unifies the overall human community in some part because of the creation of high-consequence risks which no one living on the earth can escape. New forms of cooperation are called for: although generally acknowledged, in a world of distinct nation-states they are as yet insufficiently developed.

This approach is at the center of interrogations developed in the recent years regarding the forms of actual solidarity and the consequent difficulty to circumscribe the notion of society. Such a difficulty increases under the prism of existence of "different" human beings and emerges from the social institutions. This is because we find changes in the notion of technical objects connected to the concomitant advance of technologies of human and social reproduction and new forms of alienation, reification and fetishism.

It is effectively during this phase that alienation introduces a fundamental influence in the relations of men among themselves and of men with nature. Under its impact, an essential rupture takes place in the process of formation of subjects in its needed interactions with the objects that surround them. We emphasize the rupture of relation between the subject and the object.⁵ The object by becoming autonomous from the subject, and by inverting the active and particular condition of elements of such a process creates a subordination of subject to the object. The subjects, holders of renewable capacity and creative activity, lose control over themselves and on the products of its activity. Thus, men are literally relegated from the condition

5 Bourdieu, Pierre. 1973. Three forms of Theoretical Knowledge in Social Science Information, 12pp. 53.

of subjects to the condition of simple objects. They are no more capable of understanding and recognizing the social forms, in which they are immersed as a result of their own will and social activity.

Thus, Giddens argues “ From the beginning, markets promote individualism in the sense that they stress individual rights and responsibilities, but at first this phenomenon mainly concerns the freedom of contract and mobility intrinsic to capitalistic employment. Later, however, individualism becomes extended to the sphere of consumption, the designation of individual wants becoming basic to the continuity of the system. Market-governed freedom of individual choice becomes an enveloping framework of individual self-expression”.⁶

Therefore, human begins to ignore the character of links that are established among themselves and shape their social life according to the productive relations that they maintain with nature.

Extrapolating the dimension of technical material in production, alienation affects more deeply the human condition because it establishes an alienated relation between men-worker and other men, between men with themselves and men with nature Marx (1975). Alienation of work annuls the subject-condition of man arising from a result of his work, besides inverting the character of social relations with other men and with nature in the ambience of socio-cultural forms.

In such a society, the diffusion of new technologies, like in vitro fertilization (IVF), S.O.S. villages, human cloning, informatics and the automation of the work process would increase the freedom and autonomy of the super-qualified worker.

The objective of introducing new technologies and new forms of organization of the work process Gray(1995) is to rationalize the growing post-industrial production and to reduce the work-force, following the logic of continuous increase in productivity of the post-industrial system. One pretends

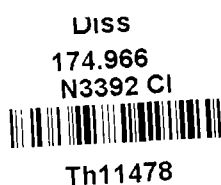
⁶ Anthony Giddens, 1992, *Modernity and Self-Identity*, Polity Press, Oxford, pp.196.

to increase the production and appropriation of added value, replacing the variable capital by the constant with an accretion capital of the organic composition of the capital. Dolly is the fruit of a particular logic of technology, completely in tune with the present historical moment, and not a presage form of future times, darker or aberrant, away from the existence of established standards. An example, Dolly is a legitimate expression of a new order, a persistent and fatal logic of producing organisms more productive, efficient and profitable to the capital.

One notices that economic evolution takes place during the transition between those two historic societies. In the contemporary society it has the function of orientation and predominance of the tertiary sector (commerce, transports, several services: finances, education, health and others). This is even to the extent of attending an extraordinary specialization and technical and scientific qualification that corresponds to the greater interaction between man and technology; even the generalization of information connected to production and society in general Bell, Daniel(1976).

We can say, all changes into goods, men too are seen as goods. The alienation begins when we put goods in the place of the fundamental elements of all sociability, undoing the bonds and the socio-economic vestiges that allowed the appearance of the system of production of goods and which guarantee its social reproduction. Goods appear naturally as the subject, transcending the history before men came to be seen as goods. All the relations between those men and nature suffer necessarily the mediation of goods, money and capital. The goods appear as autonomous and create a unilateral determination on men. As such, (goods) become the radiator of sociability and subordinate subjects and object, transforming them into things. Man looks at himself and others as things viz. goods.

The present is effectively marked by two supplementary demands: singularity (an object by measure, multiplication of options, configuration of choices, detailed specifications) and replaceability (an object by measure can always be replaced by another identical or similar). In the job market it is



174.966
M3392
C1

necessary that the candidates fill up certain requirements. Jobs are even more defined and the people who occupy those places are even more replaceable. Therefore, it is convenient to think of the growing specialization and the growing of impersonality together. The job market moves towards the constitution of individual-equivalents, of subjects replaceable by one another ignoring the specialized character of his professional capacities. It refers to obtaining singular individuals (a certain genetic combination) that are at the same time 'group oriented' and, soon, replaced by multiples and all identical.⁷

One notices clearly that the changes percolate not only to the economic dimension but also to the cultural dimension. Innovation and aesthetic experimentation have a structural function before producing an infinity of new goods with a progressively newer appearance. Culture more than ever becomes the central sphere of the process of human and social reproduction. The images, the representations and the cultural forms become a fundamental market area for action. The components of cultural sphere are converted totally into goods. With the expansion of new informational technologies, the production and circulation of information became one of the most important goods of this system. Thus, the conflicts and contradictions that were related before only to material production are spread and invade also the sphere of cultural production. All this is accompanied by a profound change of habits and consumer attitudes in social relations.

According to Walter Anderson, "there are three major forces shaping the transition from modernity to the postmodern age: (i) the breakdown of old ways of belief (this has been going on for the last century) (ii) 'the birth of global culture', with a worldview that is truly a 'world view'; and (iii) the emergence of a conflict about the nature of reality, social truth and epistemology which, like class, race and nationality, are now contested by all groups in society".⁸ These forces are so powerful that nothing can stand

7. Henri Atlan, Marc Augé, Mirelle Delmas-Marty, Roger-Pol Droit, Nadine Fresco. 1999. *Human Cloning*. Editions du Seuil PP.107.

8. Ziauddin Sardar, 1998, *Postmodernism and the Other*, Pluto, London, pp. 17.

before them: "It is impossible to return to a previous culture and industrial form," says Charles Jencks - The transition, the onward march to postmodern times, is 'irreversible'.⁹

Another consequence would also be the profound change in the State and its impact on the political forms. The great distinction is that the present political disputes displace universal interests to give way to the particularities of human kind, religious, gender-specificity, ethnic, sexual, ecological, domination of other planets etc. Besides this, the struggles in the political are replaced by the logic of the political scenario for the masses. In other words, the search for rational arguments to convince, and the presentation of political projects, characteristic of modern politics, was replaced by seductive images in the scenario of masses in the politics of the post-modern.

One observes also that the main characteristics of contemporary society are the following: (i) The consideration of man as pure means. (ii) The auto-nomination of the individual, during the separation from his environment. (iii) Society is composed by an infinite atoms of individuals.¹⁰ (iv) Individuality is built from rupture or distinction. (v) The growing lack of personality. (vi) The fragmentation of values.

Today, social demands force us into the tendency of becoming others, to be even more strangers to ourselves.

According to Foucault, "the modern subject is a contingent product of an entanglement of representations and social technologies".¹¹

One doesn't exclude the possibility of the dynamics of technical network capable of threatening the notion of society while giving priority to the functional dimension. The 'greater sociologic factor' according to our vision, refers to the extension of such networks in the formation of technical solidarity --a crucial and simultaneous fact of life in society.

9. Ibid, pp.17.

10. Emile Durkheim, 1952, *Suicide*, London: Routledge and Kegan Paul. pp.23

11. Foucault, Michel, 1978, *The History of Sexuality*, NEW York, pp.56.

By that we mean a vast cultural transformation is happening in contemporary societies today and associated with ephemerality, discontinuity, decentralization and fragmentation. The question is not if this new mindset is right or wrong, but what is the impact of this perception of reality on our conception of "clone"/"alien" and self. An example of transformation is the family institution in contemporary society.

II. THE QUALITY OF RELATIONSHIPS:

The family institution suffers, a progressive decay of its functions when it is removed from the church and the state. Besieged by the Church, State, economic life, political parties, youth movements, divorce institutions, the emancipation of women, and the recognition of children's rights, family bonds became more fragile. "The concept of the family itself also enters into crisis, as this is no more considered a natural institution but a merely conventional social structure".¹² The family has been called the giant shock absorber of society the place to which the bruised and battered individual returns after doing battle with the world, the one stable point in an increasingly flux-filled environment. This is better understood if it is recalled that at earlier stages the family group was the primary, indispensable survival unit for individuals. It has not quite lost this function; especially for children. But in more recent times the state -- and most recently the parliamentary state with certain, minimal welfare institutions -- has absorbed this function of the family like many others. The state level of integration has, for more and more people, taken over the role of the primary survival unit, first in the form of the absolutist state, then in the form of the one -- or multi-party state,¹³ a role that seems indispensable and permanent. We see examples of structures and functioning of SOS villages.

¹². Mondin B. Op.cit. pp.53

¹³. Claude Lévi-Strauss, 1963, *Structural Anthropology*, Penguin, Harmondsworth, pp.49-50.

Social critics have a field day speculating about the family, "The family is near the point of complete extinction, says Ferdinand Lundberg, author of *The Coming World Transformation*. The family is dead except for the first year or two of child raising, according to psychoanalyst William Wolf. This will be its only function".¹⁴

According to this view, the family serves as one's portable roots, anchoring one against the storm of change. In short, the more transient and novel the environment, the more important the family will become. The most obviously upsetting force likely to strike the family in the decades immediately ahead will be the impact of the new birth technology. The ability to pre set the sex of one's baby, or even to program its IQ,¹⁵ looks and personality traits, must now be regarded as a real possibility. Embryo implants, babies grown in vitro, the ability to swallow a pill and guarantee oneself twins or triplets or, even more, the ability to walk into a babytorium and actually purchase embryos -- all this reaches so far beyond any previous human experience that one needs perhaps, to look at the future through the eyes of the poet or painter, rather than those of the sociologist or conventional philosopher.

Super-industrialism, however, the next stage of ecotechnological development, requires even higher mobility. Thus we may expect many among the people of the future to carry the streamlining process a step further by remaining childless, cutting the family down to its most elemental components, a man and a woman. Two people, perhaps with matched careers, will prove more efficient at navigating through education and social shoals, through job changes and geographic relocations, than the ordinary child-cluttered family. Indeed, anthropologist Margaret Mead has pointed out that we may already be moving toward a system under which as she puts it, 'parenthood would be limited to a smaller number of families whose principal functions would be childrearing,' leaving the rest of the population free to function-for the first time in history-as individuals.¹⁶

14. Alvin Toffler, 1971, *Future Shock*, Bantam Books, New York, pp 238.

15. *ibid.* pp 239.

16. *ibid* pp. 242.

The family cycle has been one of the sanity-preserving constants in human existence. Today this cycle is accelerating. We grow up sooner, leave home sooner, marry sooner, have children sooner. We space them more closely together and complete the period of parenthood more quickly. According to Dr. Bernice Neugarten, a University of Chicago specialist on family development, the trend is toward a more rapid rhythm of events through most of the family cycle.¹⁷

But if industrialism, with its faster pace of life, has accelerated the family cycle, super-industrialism now threatens to smash it altogether. With the fantasies that the birth scientists are hammering into reality, with the colorful familial experimentation that innovative minorities will perform, with the likely development of such institutions, as professional parenthood, with the increasing movement toward temporary and serial marriage, we shall not merely run the cycle more rapidly; we shall introduce irregularity, suspense, unpredictability--in a word, novelty--into what was once as regular and certain as the seasons.

When a mother can compress the process of birth into a brief visit to an embryo emporium, when by transferring embryos from womb to womb we can destroy even the ancient certainty that childbearing took nine months, children will grow up into a world in which the family cycle, once so smooth and sure, will be jerkily arrhythmic. Another crucial stabilizer will have been removed from the wreckage of the old - order, another pillar of sanity broken.

There is, of course, nothing inevitable about the developments traced in the preceding pages. We have it in our power to shape change.

Super-industrial Revolution will liberate human being from many of the barbarisms that grew out of the restrictive, relatively choiceless family patterns of the past and present. It will offer to each a degree of freedom hitherto

17 *ibid* pp.258.

unknown. But it will exact a steep price for that freedom. As we hurtle into tomorrow, millions of ordinary men and women will face emotion-packed options so unfamiliar, so untested, that past experience will offer little clue to wisdom. In their family ties, as in all other aspects of their lives, they will be compelled to cope not merely with transience, but with the added problem of novelty as well.

Thus, in matters both large and small, in the most public of conflicts and the most private of conditions, the balance between routine and non routine, predictable and non-predictable, the known and the unknown, will be altered. The novelty ratio will rise. In such an environment, fast changing and unfamiliar; we shall be forced, as we wend our way through life, to make our personal choices from a diverse array of options. And it is to the third, central characteristic of tomorrow, diversity, that we must now turn.

There is a movement from inward to outward in which an increasing number of people delink themselves from smaller, similar groups and proliferate to give rise to more sophisticated societies leading to nation states signified by a growing drifting away from each other. Owing to a rise in individualization – one of the integral features of modern state societies, is the tendency of people to change the nature of their relations with one another.

Together with the reduced permanence, a greater interchangeability of relationships, "a peculiar form of social habitus has emerged. This structure of relationships demands of the individual a greater circumspection, more conscious forms of self-control, reduced spontaneity in action and speech in the forming and management of relationships. Many family relationships, which earlier were obligatory, lifelong, external constraints for many people, now increasingly have the character of a voluntary, revocable union which places higher demands on the capacity for self-regulation of the people concerned, and equally for both sexes".¹⁸

18. Norbert Elias. 1988. *The Society of Individuals*. Basil Blackwell. Oxford and Cambridge .MA pp 204-5

Changes in professional relationships are tending in the same direction; many paid professional activities have become interchangeable in more developed societies. Even nationality has become exchangeable within limits. This whole development contributes towards a tilting of the I-we balance towards the I in the more developed countries. The individual now has to rely far more on himself or herself in deciding on the form of relationships, whether to continue or end them.

Despite the individuality of the individual, the human being still needs the warmth and impulses of other people. This need of being an independent individual yet yearning for the presence of others is described as the conflict of the we-less.

Except in the case of children, we see the displacement of the family as the survival unit of the individual. But recently the parliamentary state has taken over this role. In fact – like in the case of SOS villages, societies organized as states are given special importance. We lack the space here to enquire in more detail why this is the case.

Another important phenomena and the cause of the present cultural crisis at the world level was the clash between the modern and the traditional, where the prevailing tendency seemed to be the rupture, the annihilation and not the interactive dialogue. In fact, today's modern phenomenon of westernization spread on a large scale by means of mass communication leads many people especially the youth to break away from the culture they grew in accusing it of being old, stale and poor.

In fact, there should be neither incompatibility nor exclusion nor supremacy between modernity and tradition: they are realities that belong to a particular context and are called to a dialogue and mutual enrichment, because all that is modern may not be worth the applause and all that is traditional may not be worth preserving and passing it on. The culture closed within itself is condemned to be anemic and marginalized. Take the example of Angola.

The war installed in Angolan society a culture of death, of insensibility, of violence, of vandalism, of illegality, of banditry, of intolerance of ego, of alcohol, of prostitution, of laziness, of tax evasion, of misery, and of beggary. In this way Angolan society came to be identified with a culture. In that kind of culture, only that anonymous man is found (Das Man) Heidegger, because the individual moves in subjection to the others.¹⁹

The situation was acute, because many generations of people were born and lived in this culture. We take into account that Angola was colonized for 500 years (until 1975) and until 2001 was facing a civil war .

This civil situation presently aggravates the mental condition of individuals already suffering. If the cause related to the war or discrimination, there are a vast number of symptoms. They include greater anxiety of separation and delayed development, disturbed sleep and nightmares, lack of appetite, behavioural tendency towards isolation, lack of interest in playing and, in smaller children, difficulty in learning. In older children and adolescents, the reactions to stress may include aggressive and anxious behaviour and depression. Many adolescents, especially those, who have gone through terribly distressful experiences, are not able to perceive any future for themselves. They may face life with great pessimism, suffer from serious forms of depression or, in the worst of circumstances, commit suicide. They may not want to ask adults for help or sustenance. Furthermore, brusque changes in the family conditions, like death or disappearance of the parents, can leave the youth without any guide, any model to follow and without sustenance. During the conflicts, some adolescents are responsible for the care of younger siblings.

Let us consider the break of confidence. Apart from suffering for the consequence of his own difficult experience, children of all ages see it reflected in the adults who have them in their charge. Seeing the parents or other adults important in their life to be vulnerable may undermine their

19 Heidegger M ., 1976, *Essere e Tempo*, Longanesi & C., Milano, pp.162-163.

confidence gravely and contribute to their feeling of fear. The children find it difficult to understand when the armed struggle brings about changes, like extreme protectiveness or authoritarianism.

The way, in which individuals and societies exist together, react and interpret tense situations, may markedly vary from culture to culture. Although many symptoms of an illness may have universal characteristics, the forms in which people express, experience and give importance to their illnesses depend greatly on the social, political and economic contexts. In the same way, the manner in which different cultures struggle with the manifestations of emotional anguish is based on different systems of belief. In some spiritual traditions of the East, for example, the body and the mind are extended like a continuation of the natural world. In fact, in ethno-medicinal systems, the body and the mind depend always on the actions of others, including those of spirits and ancestors.

Relatively little is known about the psychosocial long-term effects of recent lengthy civil wars. The loss of parents and other close family members leaves a life-long impression and can dramatically alter life-pathways. During the events marking the fiftieth anniversary of the Second World War, many people recalled the pain and sorrow they suffered as children at the loss of loved ones and described how such losses continue to affect them.

To summarize what has been said, more and more functions to do with the protection and control of the individual that were previously exercised by small groups like the tribe, or the parish, manor, guild or estate, are being transferred to highly centralized and increasingly urbanized states. As this transfer proceeds, individual people, once they are grown up, increasingly leave behind the close, local protective groups based on blood. The groups cohesion breaks down as they lose their protective and control functions. And within the larger, centralized and urbanized state societies the individual must fend far more for himself. The mobility of people, in the spatial and social sense, increases their involvement, previously inescapable throughout life, in family, kin group, local community and other such groups, is reduced. They

have less need to adapt their behaviour, goals and ideals to the life of such groups or to identify themselves automatically with them. They depend less on them for physical protection, sustenance, employment, for the protection of inherited or acquired property or for help, advice and sharing in decisions. And as individuals leave behind the closely knit, pre-state groups within the more and more complex state societies, they find themselves confronted with an increasing number of choices. They not only can but must be more self-sufficient. On this point they have no choices.

Keeping the context that we just described, as a frame of reference, we will now analyze the difference between human and clone in the next chapter.

CHAPTER TWO

HUMAN BEING AND CLONES: THE IDEA OF HIERARCHY

I. Myths and origins:

The issue of cloning is not recent. Plato in his *Republic* (1906) had already preached the principles of eugenics an idea that was criticized by his own disciples. Throughout human history, man has tried to understand the issue of human cloning. The major events and ideas, related to the issue of cloning from the nineteenth century to the present day are varied. We begin with the ideas of the Charles Darwin (1859) pass through the practices of, Francis Galton, (1883) of Hitler, of the Tribunals of Heritage and come to the mid-twentieth century where we see the discoveries of the first amino acid, of DNA polymerase I, and of the genetic code. We also see the start of biotechnology, the cloning of Dolly, and the claim for the birth of the first human clone in 2003.

Cloning has long been a theme in novels and science fiction films. Most of these stories tend to be traditional narratives of divine retribution for violating the sanctity of human life. In recent times they employ the language of genetics, and they often dwell on the horrible consequences of genetic manipulation. A typical story appeared shortly after the 1976 controversy over recombinant DNA research.¹ Stephen Donaldson's *Animal* is about a famous geneticist named Avid Paracels who became the victim of 'genetic riots' that took place when news spread about his efforts to create a superior human being. The public was morally outraged by his research. He had threatened the 'sanctity of human life.' The geneticist lost his grants and had to abandon his career. 'I can't understand,' he complained, 'why the society won't bear biological improvements. What's so sacred about biology?' Other novels, such as Robin Cook's *Mutation* and Michael Stewart's *Prodigy*, convey the same theme. 'No man has the right to tamper with the building blocks of human life.'

¹. Arlene Judith Klotzko. 2001. *The Cloning Source Book*. Oxford U NIVERSITY press. Pp 84.

Research projects associated with cloning have evoked a similar sense of horror and dismay. As early as 1938, a British magazine called *Rums* reported on research taking place at the Srangeway laboratory and tissue archive in Cambridge, England, the first laboratory devoted to tissue cultivation. The writer predicted that 'canned blood' would be used to create new lives, and he wondered: 'What exactly will be created? Could you love a chemical baby? Will the sexless, soulless creatures of chemistry conquer the true human beings?' Dreams of such creatures have been fueled by new biological technologies associated with agricultural and fertility research.

In 1993, scientists from George Washington University (GWU) 'twinning' a non-viable human embryo in an experiment intended to create embryos for in vitro fertilization. When they reported their work at the meeting of the American Fertility Society, newspapers, magazines, and television talk shows covered the experiment as if it involved a cloning technology for the mass production of human beings.¹ While the scientists viewed their research as a contribution to helping infertile patients, the media stories about the research envisioned selective breeding factories, cloning on consumer demand, the breeding of children as organ donors, a cloning industry for selling multiples of human beings, and even a freezer section of the 'biomarket.' Journalists anticipated a 'Brave New World of cookie cutter humans,' and they asked if the GWU scientists were playing God. A *Time* magazine survey found that 75% of their respondents thought cloning was not a good thing, and 58% thought it was morally wrong. Thirty-seven percent wanted research on cloning to be banned; 40% called for a temporary halt to research.²

Yet, public responses to the GWU experiment in 1993 and then to Wilmut's experiment four years later were not all so negative. For some, cloning held the promise of creating perfect cows, sheep, and chickens, or perhaps even perfect people. Reflecting deterministic assumptions of genetic essentialism, media stories have suggested that clones would surely be identical products of their genes.

2. *ibid.* P. 85.

Reproduction has often appeared in mass media stories as a commercial transaction where the goal is to produce good stock. Sperm banks are described as a place to shop for 'Mr. Good Genes' where potential parents scan lists of desirable genetic traits. Why not, in this context, use cloning to produce and reproduce perfect babies? They could, after all, be dependable reproductive products with proven performance. Cloning has also been viewed as a way to assure a kind of immortality.

In this context, the human cloning began to *take shape*, transforming suddenly into something, which was not only possible but also becoming a reality. The problem of cloning was not limited to scientific laboratories and to the universities but moved firmly in the public scenario. The media became the vehicle of this migration feeding the social imaginary.

Whether science fiction or not, such experiments and possibilities instill themselves powerfully in the contemporary imaginary. We begin to accept everything as something that can happen at any moment, now or in the near future. The *Brave New World* had foreseen the proper social reality of the contemporary society. The people in *Brave New World* no longer have the characteristics that give us human dignity. Indeed, there is no such thing as the human race any longer, since they have been bred by the Controllers into separate castes of Alphas, Betas, Epsilons, and Gammas who are as distant from each other as humans are from animals. Their world has become unnatural in the most profound sense imaginable, because *human nature* has been altered. In the words of bioethicist Leon Kass, 'Unlike the man reduced by disease or slavery, the people dehumanized a la *Brave New World* are not miserable, don't know that they are dehumanized, and, what is worse, would not care if they knew. They are, indeed, happy slaves with a slavish happiness.'³

But the post-human world could be one that is far more hierarchical and competitive than the one that currently exists, and full of social conflict as a

3. Francis Fukuyama. 2002. *OUR posthuman Future*. Fifth Avenue, New York, N.Y. 10010.pp. 6.

result. It could be one in which any notion of 'shared humanity' is lost, because we have mixed human genes with those of so many other species that we no longer have a clear idea of what a human being is.⁴

The crucial issue that is dealt with here is 'how' all this affects subjectivity. The imaginary is implied in this process. What is questioned here is the structure of social relations. However, it is necessary to explore what that means, examining different fields of study that exorcise the phantom of differentiation and of duplicity.

II. Human Being and Clones:

The problematic of biological difference or non-difference between man, and "clone"/ "alien", is similar to the analysis of differences between sexes, in all its plenitude. Even in social sciences, many researchers and noted authors begin from that premise and continue to search for differences between men and women. Some obtained results still not contested, such as those that attribute to women a greater interest for the sphere of relations and affections and to the men a greater preoccupation for autonomy and efficiency. But many things changed after the second half of the 20th century.

Ligia's study of social differences shows that "such change is reflected mainly in two complementary aspects: on one hand, the average differences observed in individuals of different sex are considered, by a greater number of researchers, as more of social facts rather than natural facts. On the other hand, special attention is given in demonstration of conditions that contribute to the decrease in differences, which will eventually disappear or invert".⁵

It is not the biological nature of beings that defines its psychological and social characteristics, but the nature of the texture of relations in which the people participate that moulds the manner of how they behave in relation to others, i.e. how they reciprocally represent each other here and how their own identity is built.⁶

4. *ibid.* pp.218.

5 Ligia Amácio. 1998. *Masculino E Femenino.A Construção Social da Diferença*.2ª Edicao. Afrontamento. Pp...Preface

6. *ibid.* pp. 9

It is clear that the discussion of sexual categories made on the basis of the social definition of the human being and of the 'alien' (as well as on the social definition of its own modes of being) is not limited to the establishment of a binary difference between these social categories.⁷ The discussion however establishes an asymmetric difference among them. One thinks that the human being shows a diversity of competence that constitutes him as an universal reference, the individual ideal, apparently free from contexts, while the 'alien' person is constituted as a reference exclusive of clones, as a collective ideal of that category, and it has a meaning only within the contextual frontiers in which it is defined.

The asymmetry in these symbolic universes overtakes the expectations and judgments and are situated in a work context, such as the exercise of authority, translating not only in different positions in which the actors are placed, but also in the different symbolic occurrences in which the observers of both origins have access. Let us see the traits of the female stereotype which constitutes an implicit and normative theory for the behaviour of women and the fundamental aspect in the characterization of individuals in the female category.⁸

This while the traits of the male stereotype do not only constitute a significant structure of behaviour orientations but distinguish the individuals more for the degree of autonomy that manifests itself in their actions rather than the category to which they belong.

On the other hand, the historical dimension of the relation of domination that makes the individuals internalize these representations in ones self concept and reproduce them in their behaviour in different situations, revealing thus the interference of their modes of being in their modes of placing. Thus, if the nature of inter group relations is what gives sense to the behaviour of difference and discrimination, such relations distinguish through a historical dimension, making the categorization to invoke identifications

7. ibid. pp. 87

8. ibid. pp. 179

purely functional, temporarily stable and significant or permanent. The similarity between the “universal” pattern of a person and the socially constructed mode of behaviour of the dominant group members allows the appearance of the self, that is only apparently non-categorized and universal (Turner, 1987). According to Hurtig and Pichevin, (1986) the self of the group members of ‘alien’ emerges apparently marked by the social category to which he belongs. As revealed by the results of recent studies made by Lorenzi-Cioldi (1991) the author observed that the girls revert more to the contents of their stereotype category for the construction of their self-concept, than the boys.

The structure of relations in inter-group, and the representations of dominant and dominated beings associated with them introduce, as such, an ideological cause that interferes at the psycho-sociologic level of specific contexts of the real or symbolic confrontation between the members of both ‘categories’.

The biologic origin, even as a simple factor of cognitive organization of characteristics and behaviours, does not constitute the main dimension of differences among beings. In the same way according to the founders of social sciences, the biological differences between man and woman are finally translated in a difference between society and nature. And common sense also attributes to the females a biological dimension that has no correspondence in the conception of a male being.

Here lies the first asymmetry on which others will anchor a unidimensional construction of “clone”/ “alien”. This “clone”/ “alien” is defined by a physical and affective existence oriented to a specific social function and shows a form of collective behaviour that loses its essence outside the environment in which it defines. On the other hand, the pluridimensionality of construction of the human being defines an existence that extends to several social instances, and it is the independence of this behaviour of specific contexts that an individual essence is conferred.

It is in the context of this symbolic universe that the identity of man and woman of any biological origin is constructed and it is this identity that supplies the resources for the construction of the reality that are inserted. But these processes also continue to be crossed by asymmetry. When the categorization of the biological becomes relevant, we soon observe the difficulty felt by the 'alien' in the construction of the image of oneself

The tendency could be instrumental and would run the risk of being reduced to a new form of slavery where the 'clones' would be the means of expression of possible qualities of their genomes, by virtue of which they would have been chosen. They could become slaves of their genomes and also of other human beings that would have fabricated them with that objective. Human character would be irreducible to genes, and the similarity with other human beings. We can even think that its own humanity could lead to possible revolt.

From this pragmatic point of view, one asks, why does it matter whether we even consider conceptualizing 'clone' as a group? One reason to conceptualize clone as a collective, one thinks, is to maintain a point of view outside of liberal individualism. The discourse of liberal individualism denies the reality of groups. According to liberal individualism, "categorizing people in groups by race, gender, religion, and sexuality and acting as though these ascriptions say something significant about the person, his or her experience, capacities, and possibilities, is invidious and oppressive".⁹ The only liberatory approach is to think of and treat people as individuals, variable and unique. This individualist ideology, however, in fact obscures oppression. Without conceptualizing clone as a group in some sense, it is not possible to conceptualize oppression as a systematic, structured, institutional process. If we obey the injunction to think of people only as individuals, then the disadvantages and exclusions, we call oppressions are reduced to individuals in one of two ways. Either we blame the victims and say that the

9. Linda Nicholson. 1995. *Social Postmodernism*. Cambridge University Press. pp.192.

disadvantaged person's choices and capacities render them less competitive, or we attribute their disadvantage to the attitudes of other individuals, who for whatever reason don't "like" the disadvantaged ones. In either case, structural and political ways to address and rectify the disadvantage are written out of the discourse, leaving individuals to wrestle with their bootstraps.¹⁰

The possibility of conceptualizing ethnic, religious, cultural, or national groups, for example, rarely comes into question because their social existence itself usually involves some common traditions - language, or rituals, or songs and, stories, or dwelling place. Women, however, are dispersed among all these groups. One finds the specific characteristics and attributes of the gender identity of women by comparing their situation with that of men.¹¹

The conceptions of gender, race, ethnicity as part of an identity, more often seek to name people as a group - that is, a self-conscious social collective with common experiences, perspectives, or values - than to describe individual identity.

Conceiving gender as seriality becomes especially important for addressing this mistake. In Sartre's conceptualization, a group is a collection of persons who mutually identify, who recognize one another as belonging to the group with a common project that defines their collective action. A series, on the other hand, is not a mutually acknowledging identity with any common project or shared experience. Women need have nothing in common in their individual lives to be serialized as women.¹²

The formation of ethnic identities may be regarded as part of a process of racialization when categories of "race" are explicitly invoked or when popular or specialized biological and quasi-biological discourses are drawn upon to legitimate projects of subject-formation, inclusion and exclusion,

10. Young. 1990. Chp.2.

11. Linda Nicholson. 1995. *Social Postmodernism*. Cambridge University Press. pp.193

12. Sartre ,Jean-paul.1958. *Being and Nothingness: An Essay on Phenomenological Ontology*. London: Methuen. pp 53.

discrimination, inferiorization, exploitation, verbal abuse, and physical harassment and violence. However, individual acts and collective projects of boundary formation, discrimination, exploitation, and violence may or may not involve explicit inferiorization and may or may not contain references to biological notions of 'stock,' 'blood,' genetic differences, and bodily attributes such as color and capacities such as 'intelligence.' Appeals to ethnicity and cultural difference, by invoking ideas of shared origin, 'kith and kin,' and 'nation' may in fact smuggle in quasi-biological conceptions. Moreover, as Cohen (1988) in particular has emphasized, rhetorics of social class have often contained appeals to biology, enshrined in ideas of codes of breeding.

According to Lorde:

"Being women together was not enough. We were different. Being gay-girls together was not enough. We were different. Being Black together was not enough. We were different. Being Black women together was not enough. We were different. Being Black dykes together was not enough. We were different. It was a while before we came to realize that our place was the very house of difference rather than anyone particular difference".¹³

At birth individual people may be very different through their natural constitutions. But it is only in society that the small child with its malleable and relatively undifferentiated mental functions is turned into a more complex being. Only in relation to other human beings does the wild, helpless creature which comes into the world become the psychologically developed person with the character of an individual and deserving the name of an adult human being.

Rousseau and Marx considered property as the origin of inequality, while Durkheim considered it to be the division of labour. In the work of *Discours sur l'origine de l'inégalité* of Rousseau, men in the natural state are free and equal and do not possess property; each one is happy with the fruits of nature [...] From the time man begins to cooperate and to accumulate

13. Lorde 1982, pp. 226.

goods, such primitive state changes with no remedy: equality disappears, property is created and the division of labour takes place.

Accordingly, the more sharply delineated figure of the grown-up, the individuality that gradually emerges from the less differentiated form of the small child as it interacts with its fate, is also society-specific.

What has emerged clearly enough from the study of the civilizing process¹⁴ “ is the extent to which the general modeling and thus the individual shaping of an individual person depends on the historical evolution of the social standard, viz. on the structure of human relationships. Advances of individualization, as in the Renaissance, for example, were not the consequence of a sudden mutation within individual people or of the chance conception of a specially high number of gifted people; they are social events”.

The individual person is not a beginning and his relations to other people have no beginnings. Just as in a continuous conversation the questions of one evoke the answers of the other and vice versa, and just as a particular part of the conversation does not arise from one or the other alone but from the relation between the two, from which it is to be understood, so each gesture and act of the infant is neither the product of his ‘inside’ nor of his ‘environment’, nor of an interaction between an ‘inside’ and an ‘outside’ which were originally separate, but a function and precipitate of relations, and can be understood like the figure of a thread in a net only from the totality of the network. Likewise” the speech of others develops in the growing child, something which is entirely one’s own, entirely one’s language, and at the same time a product of his relations to others, an expression of the human network within which one lives”.¹⁵ In the same way, ideas, convictions, affects, needs and character traits are produced in the individual through intercourse with others, things which make up one’s most personal ‘self’ and in which is expressed, for this very reason, the network of relations from which one has

^{14.} Norbert Elias. 1988. *The Society of Individuals*. Basil Blackwell. Oxford and Cambridge .MA pp...23.

¹⁵ Ibid. pp33

emerged and into which one passes. And in this way this self, this personal 'essence', is formed in a continuous interweaving of needs, a constant desire and fulfillment, an alternating taking and giving. It is the order of this incessant interweaving without a beginning that determines the nature and form of the individual human being. Even the nature and form of his solitude, even what he feels to be one's 'inner life', is stamped by the history of his relationships -- by the structure of the human network in which, as one of its nodal points--he develops and lives as an individual.

Even for the people we are accustomed to regarding as the greatest personalities in history, other people and their products, their acts, their ideas and their language were the medium within which they acted and on which they acted. The specific nature of their co-existence with other people allowed their activity, (like that of everyone else), a certain scope and certain limits. A person's influence on others, his importance to them, may be especially large, but the autonomy of the network in which he acts is incomparably more powerful than he.

What bends and limits individual, (seen from the other side), is the exact opposite of this limitation: their individual activity, their ability to take decisions in very diverse and individual ways. Individual activity of some is the social limitation of others. And it depends only on the power of the interdependent functions concerned i.e. the degree of reciprocal dependence_who is more able to limit whom by his activity.

In short, what one wishes to state is the change, in other words, the singularity of each person as unique human being and at the same time, his belonging to a human species.

III. CLONING, HUMAN SPECIES, and DIVERSITY:

When we try to establish a relation between cloning and human diversity, we can reflect upon nature and culture. We can speak about the body and how it is related to technology. Such a thematic offers a powerful metaphor of an aspect that escapes the most common distinctions of human/clone or nature/culture, propagated in our thought. This allows us at

the same time to understand the extent to which the question of body and self permits us to analyse the issue of reproduction in terms of the social and biological continuity of the human species.

On the other hand, it helps us to see if the existence of a clone and the 'alien' is contingent to a new human species and to another self. It also helps us to see what happens when science -- whose social practice is to discover nature -- begins to modify the relations that are considered natural. How do we continue thinking in the terms mentioned above, if through social practices we already have the possibility of displacing physical characteristics among varieties, to clone organisms, to change the biologic composition of any organism and to define how they will develop (not according to the immutable rules of nature, but according to our cultural and historical representations)?

Moreover, in terms of the connection with the discussion on biotechnology, such thought that unifies the nature pole, when it is ontologically distinct from the culture pole, allows, for example, the elevation of a DNA as a unifying principle of the organism in all living beings. Since in our nature we are only one, if the DNA leads all the organic processes, then we are all subject to such principles that can be accessed by way of genetic study (configuring such science, to an historical and powerful practice at an unbelievable level). The "clone" then becomes the field of relation and conflict between such poles, integrated by spirit and matter. The growing technology invades the bodies with the objective of manipulating such principles in its favor, suggesting that the vision of a natural mutable pole attached to the reign of necessity and permanence is dissolved when it can be more and more changed according to the criterion of culture.

There is a series of current representations regarding the clone that overtake differences of gender, race, age, relationship and other such considerations. Such distinctions, hierarchies and relationships are cultural in the sense that they are meanings culturally built by human being, historically constructed as a result of the relation between human beings but have nothing to do with the biology of their bodies Monteiro(1999). They are

representations, signs, and are immaterial of that passive form of change. What doesn't change are the biological characteristics of that body (as for example, the division between the male and female bodies), unless in the case of mutation or mutilation.

It is true that human being has a body, in other words, that it is a body. In fact the live microscopic cell of the 'alien' has also in his DNA all the useful and specific details regarding race, sex, pigmentation, color of eyes, etc all the details that make him unique and non-repeatable, that is, different from others. Like "clone"/"alien", his body comes out perfect, either in totality or in the single elements: the perfection of the circulating apparatus, of the nervous system, reproductive organs, etc, and a marvelous and extraordinary wisdom and therefore of a self.

There are many views regarding man which can be used to understand cloning. Clone or 'alien' is one social being (Aristotle, Merleau Ponty, Marcel); man is a social being: he is known in the encounter with others (Marx, Mounier, Buber, Marcel, Scheler, Nedoncelle); man is a finite being; he is born and dies consciously that his 'I' doesn't coincide with his being (Guardini, Wittgenstein, Adorno); in him there is a deep distinction between the one which is and the one which could be; he is conscious of what he actually is, not all that can/ should be (Heidegger, Bloch); he is free: he is conscious of being the master of his own being, of his own life, of his own future (Sartre, Garaudy); he is however, a conditioned being: depends on nature and society, on his being and on his acting (Spinoza, Marcuse, Levi-Strauss); in certain measure, he is also alienated: he feels diverse, worse even from what he should be (Hegel, Marx, Nietzsche, Tillich, Heidegger); so, he transcends matter, time, space, and is absolute (Plato, Aristotle, Plotino, Barbotin, Buber, Heschel).¹⁶

We admit humanity as a plurality of unique human beings. One sees this from the point of view in which the reproductive process is based only on a genetic heritage.

¹⁶. Mondin B. Op.cit. pp.119-120.

Even when they had evolved biologically into what we call none too modestly- *homo sapiens*, 'wise man', the species to which all the people alive now belong, we must assume that for a long time this was still the case. "For the changes which followed—the advancing division of functions, the increase in foresight and the ability to curb short-term impulses, with all that these changes brought with them—were symptoms of further bodily evolution but of a social and mental development in the biological species".¹⁷ Of course this means postulating a human essence, and here God is re-introduced into our exhibition: the diversity of men proclaims his power, his richness; the unity of their gestures demonstrates his will. The individuals from this process will have the same genetic chromosome characteristics of the donor individual. The process includes the removal of DNA from the nucleus of an ovum of the mother. The DNA removed by the father's cell perhaps from the skin -- replaces such genetic material. An electric shock can be used in the cell so that it begins to split like a normal embryo. Then the ovum is implanted in a normal way in the uterus in a fertility clinic.¹⁸

Differences among the method of making the twins, test tube baby and clone are the following: A clone is made from somatic cell and the tube baby and twin are made from sexual cell.¹⁹

Essentially sociable, the 'alien' is destined, by nature, to grow in humanity through society and culture. That is why, if there is no culture in a society then its growth becomes impossible.

The kaleidoscopic nature of our genome is even more striking when we consider differences in DNA sequence between currently living humans. Our genome sequences are about 99.9 per cent identical to each other.²⁰ The variation found along a chromosome is structured in 'blocks' where the

17. Norbert Elias. 1988. *The Society of Individuals*. Basil Blackwell. Oxford and Cambridge .MA pp 134.

18. T.A. Brown. 1995 *Gene Cloning. An Introduction*. Third Ed. UMIST, Manchester, U.K. Pp5-7, 153. And see: Joel de Rosnay. 1988. *L'aventure Du Vivant* Ed. Seil. Paris Vie. Pp. 196-205.

19. Ibid...and see J.P.Renard, S.Chastant, P.Chesné,[...]1999.*Lymphoid Hypoplasia and Somatic Cloning*.Lancet, 353.pp 1489-1491.

20. Daly, M., Schaffner, S.F.,Hudson T.J & Lander E.S. *High Resosution Hiplotype Structure in the Human Genome*. Nature gent. 29, 222-232. 2001.

nucleotide substitutions are associated in so-called haplotypes. These 'haplotype blocks' are likely to result from the fact that recombination, that is, the re-shuffling of chromosome segments that occur during formation of sex cells (meiosis), tends to occur in certain areas of the chromosomes more often than in others in addition, the chance occurrence of recombination events at certain spots and not at others in the genealogy of human chromosomes will influence the structure of these blocks. Thus, any single human chromosome is a mosaic of different haplotype blocks, where each block has its own pattern of variation. The delineation of such haplotypes account for most of the variation in each block.²¹ For example one sees what happened when groups of *Homo sapiens* began to fan out from Africa. Most archaeological and genetic evidence has pointed to the formerly popular 'replacement' theory, by which the new arrivals evolved separately and gradually replaced their early human neighbors; but more recently new data have rocked the boat in suggesting that the African emigrants instead interbred with the local populations.

Tracking the movement of people between 10, 000 and 30, 000 years ago across Europe and Asia, the settlement of Oceania, and the migration from Asia into North and then South America, across what is now the Bering Straits, are all studies that are clarifying our evolutionary and migratory history.²² Native Americans, according to these types of study of the genetic record, are the descendants of a small proportion of the peoples inhabiting Asia more than around 30,000 years ago, having gone through a 'bottleneck' before then spreading out across a new continent.

A recent study looked at the DNA of over a thousand individuals living in different world regions - Africa, Eurasia (Europe, the Middle East, Central and South Asia), East Asia, Oceania and the Americas whose families have been there for generations. The results show that of the tiny amount of variation in DNA, most of it (more than 93 to 95 per cent) is among individuals

21. Julie Clauton and Carine Dennis. Nature. Publishing Group 2003. Essays in Chapter 9: pp.95.

22. Ibid. pp 58.

of the same population in the same geographical region²³. No more than about 5 per cent of the variations were due to differences between major population groups. And the greatest diversity of all is among people living in Africa which is not surprising, given that it was just a few of their ancestors who left the continent to populate the rest of the world, and therefore a very small genetic sample.

In the Talmud, there is a note on the unity of appearance of each human being that is appropriate to mention at this point. It is nothing else but a factual note: "when man prints several forms with one mould, they all look alike. But the Creator printed one form for each person (and fixed his nature) with the same seal of the first man, however there is no one similar to anyone".²⁴ With a very special style, this text begins to underline the character of the humanity of each individual, which is simultaneously universal and individual.

As we saw, the biological identity of an individual cannot be reduced to its genetic chromosome identity, due to the hereditary cytoplasm and to the epigenesis role in its own development. One shouldn't also forget the identity of a human being in the broader social and cultural dimensions. Then we would have, according to that thought, a natural substrate, common to all beings and objects of the earth, that are objects of cultural representations on the part of human beings, carriers of that culture particular to each people, in each context, or even to each individual of the culture while representation of nature is, as such, multiple, mutable, historical and relational. For Ralph Linton, all existing human varieties are members of a single species by the most elementary of biological tests. They all produce fertile hybrids on crossing. Moreover, these hybrids appear to be, if anything, more fertile than the parent strains and at least equally vigorous.²⁵ The results of crossing human varieties appear to be identical with those obtained from, crossing strains within any plant or animal species after the strains have become fixed

23. Ibid. Pp. 96

24. Talmud de Babylone *Traité Sanhédrin*. Pp 37a e 38a.

25. Ralph Linton, 1936. *The Study of Man An Introduction*. D.Appleton-Century Company, Inc. pp.

by inbreeding. In view of this, it seems highly improbable that any of the human varieties derive from different sub-human species.

Even without the hybridization test, the evidence that all human beings belong to a single species is overwhelming. The physical differences between various human varieties look large to us because we are so close to them, just as the physical differences between individuals whom we know seem much more marked than the differences between strangers. Actually, the differences between even the most diverse human varieties are not very great, and all of them lie in secondary characteristics. Human beings have their color phases, as have many other mammalian species, can be of his large and small varieties, and a wide range of minor variations in such matters as hair texture, shape of the skull, and limb proportions.

However his skeletal structure, organs, and musculature are practically the same in all varieties, and the differences which do exist are so slight that they can be detected only by experts. An equally intensive study of any other mammalian species of fairly wide range would reveal almost as much variation and in many cases a good deal more. Thus the widest range of variation in our species is much less than that in the black bears and only about one-half that in a single species of South American spider monkeys. How the present human varieties have come into existence is a problem which is by no means solved, but our present knowledge of evolutionary process makes it possible to guess with a fair degree of probability.

Earlier we spoke of the way in which even the semi-human primates seem to have spread over the world and suggested that our own species, when it appeared, must also have been capable of a very rapid spread. Even our first ancestors were probably equipped with tools and fire, making it possible for them to exist in many different environments, while they certainly had no non-portable property which might tie them to a single locality. Every species has a tendency to breed up to the available food supply, which, for gregarious animals, is fixed by the territory which the herd, moving as a whole, can cover.

The discovery of the basis of genetic variation has opened inroads to understanding our history as a species. It has revealed the remarkable genetic similarity we share with other individuals as well as with our closest primate relatives. To understand what make us unique, both as individuals and as a species, we need to consider the genome as a mosaic of discrete segments, each with its own unique history and relatedness to different contemporary and ancestral individuals.²⁶

With the discovery of the structure of DNA we have then, as possible causes for the present diversity of human types, the tendency toward variation which is common to all mammalian species, the operation of natural selection in each of the varying environments in which human groups live, and the favorable conditions for the fixation of variations present in small, continually inbreeding groups.

However, there is another factor in the situation the importance of which must not be overlooked. This is the matter of social selection arising from the group's preference for a particular physical type. This type of selection sometimes assumes a direct and vigorous form. Thus among the Tanala, in Madagascar, "there are two groups which differ markedly in skin color although they seem to be much alike in their other physical characteristics and are nearly identical in culture and language".²⁷

Human varieties have an incurable tendency to mix wherever and whenever they are brought into contact with each other. Whether new varieties may arise as a result of such if hybridization is still an open question.

Throughout the history of our species two forces have constantly been at work. On the one hand the combined factors of variation, selection, and fixation of traits by inbreeding have worked steadily toward the production of a greater number of human varieties. On the other hand, the ease with which human strains can and do cross has worked to blur the outlines of these

²⁶. Watson, J.D.& Crick, F.H.C. *A structure for deoxyribose nucleic acid*, Nature 171,737-738 (1953).

²⁷. Ralph Linton. 1964. *The Study of Man*. Student's Edition. New York ,N.Y. pp.30 .

varieties and to produce multitudes of individuals of mixed heredity and variable physical type. The first of these forces was dominant during the early period of man's existence. The second became increasingly important as time passed and has risen to a crescendo with the elimination of space and the breakdown of old local groupings which are characteristic of modern civilization.²⁸

The issue of cloning is connected to a fundamental domain that became totally embedded in internal referential systems of contemporary society: viz. reproduction. "The term reproduction can be used to refer to the social continuity like the biological continuity of the species. The connecting terminology is not occasional biological reproduction is now totally social, i.e. evacuated by the abstract systems and is reconstituted through reflexivity of the self".²⁹ Reproduction was never an issue of external determinism: e.g. various types of contraceptive methods were used in all pre-modern cultures. Nevertheless, in most of the cases, reproduction depended on destiny. With the advent of the contraceptive methods, more or less infallible, with the reflexive control of sexual practices and with the introduction of reproductive technologies of different types, reproduction is now an area where there is a variety of choice.

Genetic engineering, whose potentialities one can now understand, includes dissolution of reproduction as a natural process. Genetic transmission can be humanly determined through these means, breaking as such the last tie that connected the life of species to biological evolution. In that process of 'disappearance' of nature, the emerging field of decision-making affected not only the direct process of reproduction, but also the physical constitution of the body and the manifestations of sexuality. Therefore, those fields of action address issues on species and of the identity of the clone, as well as other processes of formation of identity.

28. Ibid. pp 32.

29. Anthony Giddens, 1992, Modernity and Self-Identity, Polity Press, Oxford. pp. 219.

Reproductive technology changed the old oppositions between fertility and sterility. Artificial insemination and in-vitro fertilization separate, more or less completely, the reproduction of traditional categories of heterosexual experience. The sterile can become fertile and various permutations of substituting paternity are also possible.³⁰

In-vitro fertilization (IVF) uses many techniques which have been available for a long time. Certain innovations had allowed these techniques to be used to fertilize human ovum outside the body. Through IVF method, it is possible to transfer one 'sexed' embryo to the uterus of a woman, using the techniques of amplification of ADN. The male and female embryos can be distinguished through those techniques, and the embryo of the desired sex can be implanted. There also exists frozen embryos process that allows the storage of embryos for an undefined period. In this way multiple pregnancies are possible without the need of stimulating the ovaries or collecting the ovum. In the same way it is possible for example to generate the birth of identified twins after years of interval.³¹

The central issue was: how is 'clone' constructed as a category within different discourses. How is origins difference made a pertinent distinction in social relations. And how are relations of subordination constructed through such a distinction. The whole false dilemma of equality versus difference is exploded since we no longer have a homogeneous entity, i.e. 'clone' facing another homogeneous entity, i.e. 'man' but a multiplicity of social relations in which genetic difference is always constructed in very diverse ways and where the struggle against subordination has to be visualized in specific and differential forms. To ask if clone, 'alien' should become identical to men in order to be recognized as equal, or if they should assert their difference at the cost of equality, appears meaningless once essential identities are questioned.

30. Ibid, pp. 219

31. David Zuzuki S. Peter Knudtson, *Genethics: The Ethics of Engineering Life*. London: Unwin Human, 1989

CHAPTER THREE

CLONING AND HUMAN IDENTITY

Cloning, Human Body and Self:

When we use models derived from physical functions in trying to understand psychical ones, we are constantly forced to think in terms of stereotyped opposites such as 'inside' and 'outside', 'individual' and 'society', 'nature' and 'milieu'. The only choice left open to the individual seems to be whether to concede the decisive role in shaping a human being to either of these two polarities. The most that can be imagined is a compromise: 'A little comes from outside; we only need to know what, and how much.

Man is defined as a body which is an essential and symbolic element, and a visible, material portion where the spiritual condition i.e. self is reflected in body. Therefore the clone is not a man, just as the body is not a man. Mondin summarizes the reasons why the human body is not man: "even losing one portion of his body, we feel substantially the same; the corpse, even remaining for some time, substantially that which was before, it is no more a man. The self conscious distinguishes clearly between our being and our body-- in our activities there is a physical aspect and another psychical i.e. when I move one arm: there is a movement of arm and conscience of that movement, which does not happen in the case of dolls, robots etc".¹

This peculiarity of human nature, this ability of people, based on their physical organization, to confront themselves, with the aid of their knowledge and language symbols, as if they were people or objects among others, has led to their often having a curiously split image of themselves. Their verbal symbols are formed as if they themselves, as someone contemplating their own person from a certain distance, and as that which they contemplate from a distance, were different beings which might even have separate existences. Thus one speaks of oneself in one's capacity as object of observation by means of terms such as "my body", while in relation to oneself as a being able

¹. Mondin B, 1968 Op. Cit. PP 348.

to observe oneself from a distance one uses terms such as "my person", "my soul" or "my mind". It is not always said with sufficient clarity that these concepts represent two different perspectives of one's own person as if they were two different objects often enough existing separately. "The simple use of the term "my body" makes it appear as if I were a person existing outside my body who has now acquired a body in much the same way as a garment".²

It is incorrect to use the phrase 'I am my body', owing to the deep-rooted dualistic tradition. It is misleading because the concept "body", used in this context, is ambiguous. One can speak of a pyramid as a body, or of a star or a molecule. The ambiguity of the formulation that I myself am my body derives from the fact that the term "body" can refer both to pieces of lifeless and relatively unorganized matter and to highly organized biological units and thus to the most complex organisms. The statement "I am my body" or "I am identical to my body" can, therefore be understood to mean: "I am nothing but a piece of unorganized matter". And indeed, the idea that the living human organism, which, as long as it functions as an organism - i.e. until it dies - is constantly in flux, engaged in a development, a process, could be reduced simply to the forms of lifeless matter, undoubtedly plays a considerable role among the philosophical schools of our day. It may therefore be necessary to safeguard our statement that we refer only to two different perspectives and not two different forms of existence when we speak of our own body and our own person, from materialistic reduction.

In talking about the human body one often overlooks the fact that "a person's head, and especially his or her face is an integral part of this body. As soon as one realizes this one gains a better understanding of the nature of human I-identity. For the developing individual face of a person plays a central part, perhaps the most central part, in his or her identity as this particular person. Although the particular form of the other parts of the body are, no doubt, also of importance in identifying a person, no part is so unequivocally

2. Norbert Elias. 1988. *The Society of Individuals*. Basil Blackwell. Oxford and Cambridge .MA pp 188.

at the centre of a person's I-identity, both in the consciousness of others and for the person himself, as his face. And it is the face which shows most dearly to what extent I-identity is bound up with the continuity of development from childhood to extreme old age".³

Indeed, the development process a person's face undergoes from childhood to old age can serve as a prototypical example of a certain type of this process. It changes, but from a certain age on it takes on peculiarities which make it possible to identify a human face as always the same face, a person is always the same person, despite all the changes of ageing. The old logic possibly gives rise to the expectation that something absolutely immutable forms the hard core of all changes, the unchanging, undeveloping core of all development. The example of the development of a person, particularly the face, may perhaps make it easier to understand the fact that in the course of such a process there need not be anything that stands still and is absolutely unchangeable. The identity of the developing person rests above all on the fact that each later phase emerges in an unbroken sequence from an earlier phase. The genetic control that directs the course of a process is itself a part of this process. And the same applies to memory, both conscious and unconscious.

It is characteristic among philosophers to recognize in man the property of substantiality, i.e. the property of a certain stability, perfection, unity. To be an existence sufficiently autonomous, to be a reality which represents a center and subject of constant attribution of certain phenomena which is perceived as the efficient cause.⁴

In fact, certain manifestations (to live, think and want) are attributed to a single subject that is presented as an efficient cause. Man is not a simple substance. He is a composed substance, being constituted, at least, by two elements, the corporeal and the spiritual. Such elements, are considered

3. Ibid. pp 189

4. Mondin B, 1968 Op. Cit. PP.349

incomplete substances because neither one nor the other is sufficient to build a man. The complete substance of human being is neither body nor soul, but the body and soul in a deep union.

However, in relation to the self, there is a particularity that we should not forget when the ontological situation is not identified with the body.

In the metaphysics of Aristotle, substance refers to "all that has constancy, stability and autonomy in being";⁵ it is that which is in itself and not another thing. On the contrary, the occasional, is that which is not always and doesn't happen in the majority of cases, because its not an autonomous being. It doesn't have the capacity to exist by itself. But it is embodied in the being of another thing. Therefore it is not by himself, because it is by the merit of the subject that supports him. The substance has absolute priority in relation to the occasion. Further, the existence of spiritual substances (simple) are recognized, in addition to those materials that are made of matter and form.

However, many philosophers like (Hume, Kant, Fichte and Hegel), (Spinoza, Bergson, Heidegger and Sartre) "negated the substantiality of men";⁶

It is important to emphasize this point in order to see that the body does not become an inert entity only, to be bought and comodified.

We can distinguish very definitely between the self and the body. The body can be there and can operate in a very intelligent fashion without there being a self involved in the experience. The self has the characteristic that it is an object to itself, and that characteristic distinguishes it from other objects and from the body. This characteristic is represented in the word 'self,' which is reflexive, and indicates that which can be both subject and object.

In such instances there is a contrast between an experience that is absolutely wound up in outside activity in which the self as an object does not

⁵ Ibid. PP 347-348

⁶ Ibid. PP 350.

enter, and an activity, of memory and imagination in which the self is the principal object. The self is then entirely distinguishable from an organism that is surrounded by things and acts with reference to things, including parts of its own body.

The self, as that which can be an object to itself, is essentially a social structure, and it arises in social experience. After a self has arisen, it in a certain sense provides its social experiences for itself. When it has arisen we can think of a person in solitary confinement for the rest of his life, but who still has himself as a companion, and is able to think and to converse with himself as he had communicated with others.

The unity and structure of the complete self reflects the unity and structure of the social process as a whole; and each of the elementary selves of which it is composed, reflects the unity and structure of one of the various aspects of that process in which the individual is implicated. In other words, the various elementary selves which constitute, or are organized into a complete self are the various aspects of the structure of that complete self, are the various aspects of the structure of that complete self answering to the various aspects of the structure of the social process as a whole. The structure of the complete self is thus a reflection of the complete social process. The organization and unification of a social group is identical with the organization and unification of any one of the selves arising within the social process in which that group is engaged, or which it is carrying on.

There are various ways in which we can realize that self. Since it is a social self, it is a self that is realized in its relationship to others. It must be recognized by others to have the very values which we want to have, belong to it. It realizes itself in some sense through its superiority to others, as it recognizes its inferiorities in comparison with others. The inferiority complexes are the reverse situations to those feelings of superiority which we entertain with reference to ourselves as over against people about us.

Such a unique conception of substantiality of self has the merit of dissipating the mistake of Plato and of his disciples who considered "body

and soul as two complete substances united in an occasional and casual manner[...] and of safeguarding the unity of a human being"⁷. In fact, in our conception, we don't attribute the act of being to the body and another to the soul [...] The act of being is only one, of the soul, in which, since the beginning of its existence, the body is also present. From that moment onwards, that reality is complete either as substance or as species that is called man.

Therefore, the relations between the body and self are not accidental or occasional, but substantial and stable. Between the two elements there is a union similar to matter as a substantial form: two elements that penetrate deeply, so much so that it constitutes the one and only substance [man]. It is the self that makes the body become a body of the human species, conferring perfection and specific determination, reason by which it is also the act of the body.

Around the turn of the century, the 'spatial unity' of the subject was radically attacked by Freud's theory of the unconscious. According to psychoanalysis, the self is no unity, but is a battleground between conscious and unconscious thoughts and feelings.

There are passages in Sartre's well-known novel *Nausea* of which one could take the deep sense of self.⁸

What are often conceptually separated as two different substances or two different strata within the human being, i.e. his 'individuality' and his 'social conditioning', are in fact no other than two different functions of people in their relations to each other, one of which cannot exist without the other. They are terms for the specific activity of the individual in relation to his fellow human

7. Ibid. PP 351.

8. Jean-Paul Sartre, *Der Ekel*. 1949. *Romance*. Hamburgo. Pp 123.

This sort of painful rumination: *I exist*, I am the one who keeps it up. I. The body lives by itself once it has begun. But thought - *I am* the one who continues it, unrolls it. *I exist*. How serpentine is this feeling of existing - *I unwind it, slowly*. . . If I could keep myself from thinking! I try, and succeed: my head seems to fill with smoke. . . and then it starts again: "Smoke . . . not to think. . . don't want to think. . . I think I don't want to think. I mustn't think that I don't want to think. Because that's still a thought." Will there never be an end to it? My thought is *me*: that's why I can't stop. I exist because I think . . . and I can't stop myself from thinking.

beings, and for his capacity to be influenced and shaped by their activity. The terms also include the dependence of others on him and his dependence on others; expressions for his function as both sides of the same coin. The structure and configuration of an individual's behaviour control depend on the structure of the relations between individuals.

We understand that the body, as self, is a place of interaction, appropriation and re-appropriation, connecting processes organized reflexively. The body considered as a *locus* of self, becomes more amenable to the modern influences -- and as a result of those processes, its limits have changed. This study balances the importance of "clone" / "body" and the social environment in other words the nature/culture in the formation of human identity. On the other hand the difference between body and self is an important instrument for deepening the study of human identity. On account of the schism between the body and self of the "clone" it is not possible for us to view the "clone" as capable of having an identity crisis.

II. **Identity Crisis:**

The appearance of human and social forms of reproduction and the obvious changes in the body and social environment, suggest the following questions: if, in future, human cloning becomes technically safe and feasible, what would the social consequences be? After all, genetically speaking, it would be no different to having an identical twin - already one of 'nature's clones'. Environmental effects and life experience would ensure that the two or more cloned individuals would have (at least partly) different personalities. But what about their sense of personal identity? How might a mother relate to her 'son' who is actually his father's clone, but twenty years younger, fitter and more attractive? How might a daughter be affected psychologically as an adult, knowing she is her mother's clone, particularly if she, was brought into the world to replace a dead sister? What would be her parents' and teacher's expectations? And what would be the pressures on a child who knows that the parent from whom she/he is cloned comes to suffer from a disease for which the child's own organs are the only hope of a long-term treatment or cure?

Every human society, traditional or modern, has specific ways of thinking for the hereditary transmission of physical and psychical traces. Through this process of transmission, similarities and differences pertaining to a person, a body, illness, death, fertility, and sterility etc. are transmitted. All human societies consider three coordinates of human life, viz. 1) the shaping and the position of the individual within the social structure 2) the social structure itself and 3) the relation of social human beings to events in the non-human world.⁹

In modern western societies this set of representations is influenced by a rudimental knowledge of genetic theory which is scientifically established.

In traditional societies of today, the scientific basis is absent, but the conceptual elaboration is done from observation: on the other hand, the relations between individuals (including the relations of affiliation and alliance) show a relation of intimate solidarity, and substantial with the social, natural and surreal environment. The individual, as such, cannot in this perspective stay isolated as the sole object of observation; he only exists through his relation with the others in time and space.

We find in Africa, weddings among women that give the woman 'husband' (the one that paid the dowry of the other) the rights of the father over the progeny of the later (such kind of union doesn't have any sexual connotation and the identity of the biological father of the kids does not concern us right now). We also found examples of the birth of kids of a father who died many years ago, examples of transfer of 'spirit' or 'soul'.¹⁰

When the lineage heads of West Africa acquired slaves and incorporated in their own group, they tried to create a new individuals whose lineage would belong only to their master. This particular act tried to distinguish the lineage, on the basis of each individual 'patrilineage' or 'matrilineage', as per the mother's or father's groups and the *agnatic* and

9. Norbert Elias. 1988. *The Society of Individuals*. Basil Blackwell. Oxford & Cambridge .MA pp 97.

10. Erskovitz, M., 1924. *Culture Areas in Africa*. Pp. 173-184

uterine lineage where there is a cross-breeding of ideology, jurisdiction and psychology, viz. the logic of the matrimonial alliances.

What the slave loses, before anything else, is the social and symbolic plurality that constitutes the individuality for the descendents of slaves. Such plurality is progressively reconstituted from the “zero situation” whose memory will never be erased completely. It is important to add that such wiping of the symbolic inscriptions implies a kind of generation disturbance. In the past, in the societies of matriarchal line in the Ivory Coast the slave was at the same time a younger brother, son or the uterine nephew of his master (with this we should understand that he accumulated the “duties” corresponding to each of those positions); a slave girl was at the same time sister, daughter and spouse of her master (the children that she would give birth would be considered as sons of the master and would belong to his lineage, because the slave woman contrary to a free woman, doesn’t determine the lineage).¹¹

Let us take another example, the case of a man and a woman that due to the sterility of both want a child that belongs biologically to each of them. However, they can only have a boy; the birth of a girl would imply in such circumstances the transfer of the nucleus of a somatic cell collected from a woman. The father couldn’t be more than a social father. Biologically the child would belong only to the mother if the donor of the nucleus remains anonymous. In the case of an heterosexual couple, the father is the biological father of his children (that are, moreover ‘the carbon copy of the father’ and the adoptive father or social father of his daughters (who have the face of another).

In a way, we can say that the symbolic thought anticipated the possibility of technology.

If the thought which existed in archaic/traditional systems could be called ‘symbolic’, this is in an etymological sense. This thought established a

11. Henri Atlan, Marc Augé, Mirelle Delmas-Marty, Roger-Pol Droit, Nadine Fresco. 1999. *Human Cloning*. Editions du Seuil pp. 129.

relationship of complementarity and dependence between individuals. We can also see that there are analyses about the quality of relationships.

Sociology tries to solve such relations. In that context, it does not have an individual or a group as an object, but the relation that allows the passage from one to the other. That relation should be simultaneously symbolized and instituted. We could call it the relation of 'sense' or 'social sense'.¹² It is clear that such sense has nothing to do with the metaphysical, and mentions simply the relation of the inter-individual and the inter-social. Therefore, the intellectual object of sociology has a relationship with the origins of the roots in a way that the symbolic relation is more easily understood than in the societies where institutional complexity, in some aspects, and scientific progress in others, supply a less immediate reading.

On the other hand, sociology can directly observe the status of the role of man trying to gauge the reach of the symbolic and, even more, to understand better the effects of fascination and rejection of the human clone that arise.

The perspective of human cloning is, in a great way, connected to the concept of the Western subject Atlan (1999). The issue of reproductive cloning brings about, in a brutal and radical way, the sensitive and fundamental point of our philosophical heritage: that which is related to 'I' individual, the simplicity of the thinking substance (a *res cogitans* of Descartes), the continuous unit of an 'ego' founder of existence of the subject. The existence of human clones, if we can call it so, it's against what characterizes Western tradition, from point of view of Greek philosophy as well as from the Christian and spiritual point of view, i.e. the unity of a person, the singularity of the soul.

The individual like the bullock cart is only a name of a set, of a combination - relatively stable in its form and in its structural continuity, but without a proper nature. It doesn't have an essence. It doesn't have soul. It

12. Ibid. pp 121.

has neither subject nor thinking substance, nor a lasting reality that defines positively its identity.

Here it is important to take into account the concepts of individuality, universality and autonomy.

From the Buddhist point of view, as see it, "the Western individual, as a thinking, permanent and stable being, underlying the one who thinks (the *upokeimenon* of Aristotle: that under the 'subjective') is an illusion".¹³ It is due to either our ignorance or our attachment to desires that we forge and maintain the illusion of an autonomous 'I', whose existence, in reality, does not correspond to any reality.

Cloned bodies wouldn't have double souls, nor would imply the existence of diminished subjects since there is no subject in those that were created 'as usual'.

It is neither a duplicity nor contradiction. What is being studied is the difference between two registers of reality: on one side, we have that which complies with the supreme path of the spirit; on the other side, we have the words and the gestures of the human community. The passing between these two registers became easy due to the vacuity of the last register. For this reason, even when there is effectively nothing or nobody, we shall believe as if there are things and people. Even though there isn't effectively any sense or object, we shall believe as if there were words and things. Perhaps it would be necessary to move in that direction taking into account that individuality is neither an essence, nor a fact, but a combination of traces.

Seen from a certain distance, the African myths and rites allow us to see distinct characters related among themselves: the cosmogonies illustrate the passage from non-differentiation to differentiation: several rituals and practices translate the horror of similarity and the unthinkable character of the absolute identity of both human beings; finally the symbolic domain of nature

13. Marc Augé. 1999. *Individuos sem Filiação*. Al. C. Gulbenkian, pp.123.

and the supernatural is expressed through its sexuality.¹⁴

Several cosmogonist myths tell us how humanity (the sexual human, the human collectivities as a whole) separated progressively from the central magma where the distinction of gods, heroes, men and animals was not clearly established. The heroes of civilization are neither exactly gods nor exactly men. The 'cheating god' Wakdjunkaga the hero Amerindio of Winunbago who evoke the interest of Radin, Kerenji and Jung moves in the intermediary world between human and animal nature. He himself is not fully constituted: the androgen has penis and vulva, but it constantly escapes him, like a cartoon. This phenomenon expresses, on the contrary, the need for logic which, in fact, institutes definitely the confluence of Missouri and Mississippi: a human logic in which we don't mistake either the individuals or the organs, nor the sexes. We find the equivalent to Wakdjunkaga of Winunbago in Lievre and other tribes of Amerindias - or even in Raposo of Dogon studied in Mali by Marcel Griaule and Gennaine Dieterlen.

It happens that, in the genesis of human society, the twin couples, intermediary between initial non-distinctions and post order, play a particular role. In Western Africa, the condition of twins is an ideal because it reminds us of the time of origins where the twin couples of two sexes express the main bisexuality of a human being. Gennaine Dieterlen, while studying the representations of Dogon, found vestiges of the bisexual condition of the twins and came to the conclusion that although they were very sacred, the twins were not deprived from ambivalence; and we know that certain Dogon parents tried to avoid its arrival. For the Be, of Togo, as in the world of Bantou, twins were considered close to animals: the men twins were considered the double of a twin couple of monkeys.¹⁵

The Nuer assertion that twins are one person and that they are birds is a different example of this way of speaking. When they say 'twins are not two

14. *one dares to suggest that, in certain aspects, the rituals of America India or Oceania can be used in similar interpretation.*

15. E.E. Evans -Pritchard, 1956, *Nuer Religion*. Oxford University. Press. New York & Oxford. Pp.129.

persons' they are one person' they are not saying that they are one individual but that they have a single personality. It is significant that in speaking of the unity of twins they only use the word *ran*, which, like our word 'person', leaves sex, age, and other distinguishing qualities of individuals undefined. They would not say that twins of the same sex were one *dhol*, boy, or one *nyal*, girl, but they do say, whether they are of the same sex or not, that they are one *ran*, person. Their single social personality is something over and above their physical duality, a duality which is evident to the senses and is indicated by the plural form used when speaking of twins and by their treatment in all respects in ordinary social life as two quite distinct individuals. It is only in certain ritual situations, and symbolically, that the unity of twins is expressed, particularly in ceremonies connected with marriage and death, in which the personality undergoes a change.

The Nuer insist that" the dioscuric descriptive twins are birds – although they are common to many people. They say 'a twin is not a person (*ran*), he is a bird (*dit*)', although, as we have just seen, they assert, in another sense, that twins are one person (*ran*). Here they are using the word *ran* in the sense of a human being as distinct from any other creature. The dogma is expressed in various ways. Very often a twin is given the proper name *Dit*, bird, *Gwong*, guineafowl, or *Ngec*, francolin".¹⁶ All Nuer consider it shameful, at any rate for adults, to eat any sort of bird or its eggs, but were a twin to do this it would be much more than shameful. It would be *nueer*, a grave sin, for twins respect (*thek*) birds, because, Nuer say, birds are also twins, and they avoid any sort of contact with them. The equivalence of twins and birds is expressed particularly in connexion with death. When an infant twin dies people say 'ce *par*', he has flown away', using the word denoting the flight of birds.

However, no further attention should be paid to a resemblance of this kind. The multiple hatching of chicks is doubtless a resemblance which greatly strengthens the idea of twins being birds, but it is only part of a more complex analogical representation which requires to be explained in more general

16. Ibid. pp. 130

terms of Nuer religious thought Pritchard(1965). A twin, on account of his peculiar manner of conception is, though not Spirit himself, a special creation, and, therefore, manifestation of spirit.

In Bantou Africa, twins were considered a bad sign, because they bring men closer to animals who, within the same species, are all equal Marc(1999); but for Lele, as for the other societies of South Africa, the parents of the twins have a special prestige and a special role: they are mediators among men, animals, village and forest. Such sacredness is however placed at the margin of the human world, on the border of humanity and animality, a frontier that we reach only when identical twins are born.

The examples that we describe give us the idea that the issue of cloning upsets people, not only because of the problem of the identical and duplicate reproduction of a human being, but also because of the problem of symbolic transgression.

The character of what is identical, is similar and even equivalent whether it refers to the relation of continuity and permanence that a human being maintains with himself, through variations of his conditions of existence and of his states, or the relation that makes two realities different under several aspects. Cultural identity will then designate the fact, for a reality, of being equal or similar to another in sharing of the same essence.

Nevertheless the social life in western societies, with respect to Medicine for Assisting Procreation techniques, permits us to observe the coexistence between different systems in reality. We accept that all human beings of biological and technological (in vitro) origin have the same genotype - that is, the same DNA. Such would be the case of the clone and of twins.

The issue of storage of sperms and of renting the uterus is similar to the raw-material for human reproductive cloning. More and more children are being born of single women through artificial insemination. These children are immediately adopted by heterosexual or by homosexual couples. To these examples can be added cases of SOS villages as well as what we call, social

children or administrative children. There are many other examples. In a way, we can say that symbolic thought anticipated the possibility of technology.

In IVF there are several variations: donation of ovum by a another woman to a couple; donation of an embryo to another couple; renting of a womb; as well as the known situation of surrogate mothers.¹⁷

In the past thirty years, there has been an extraordinary evolution in biology such as the discovery of the genetic code, the mechanisms that rule the functioning of cells, the structure of cells, the molecular components, etc. Now biological evolution is not only determined by the set of changes and by natural selection but it can also be by the human being himself.

Whilst trying to eliminate all that subordinates one human being from the other, we might like to go further in the definition of individuals and see them constituted independently from any characterizations, even sexual. But at the same time, it is a fact that a pure individual doesn't exist. To think of a person is to relate him to another in any change. We cannot define a person without ties, relations or symbols. There is, therefore, a double movement.

The new human forms, for example, the tube babies, the babies generated by frozen sperms, or in the possible case, the example of cloned babies, will not alter human individuality in its essence, but it will register the respective evolution.

To consider that cloning changes human identity is similar to saying that the human being is only constituted by his body. Tell me which is your society and I will tell your identity – goes the saying. It is not the “clone”/ “body that determines an identity.

17. Joel de Rosnay. 1988. *L'aventure Du Vivant* Ed. Seil. Paris Vie. Pp. 196-205.

III. CLONE, SOCIETY AND INDIVIDUAL:

All observations which we have made so far about human reproductive cloning would be lost if we do not pose a question about the presuppositions of socialization.

In the writing of Norbert Elias as well as of Bourdieu, Durkhiem, Harker and Fox, the question of social habitus in combination with biological, physical and social unities has constituted a key analyses to explain how the human being becomes a person, a subject -- individual and social.

Three factors define social habitus viz. 1) During socialization we learn the models of behaviour, and the models of perception and thought 2) There is an interiorization of dispositions stemming from the 'interiorization of exteriority'. 3) The social habitus as a system of acquired dispositions equally has a capacity to provoke practices or actions typical of a culture.

Social habitus is the inclination to feel, think, perceive and to act in a certain manner depending on the conditions of life and of a person's trajectory. The social habitus is a principle which regulates the action. It is a base for present and subsequent action.

The most striking symptom for the group-relatedness of the organic structure of a human individual is the biological disposition of each child to learn a kind of communication which does not link the whole species but possibly only isolated groups. This biological disposition to learn a language which is only understood as a means of communication within a single human society and cannot usually be understood by people outside it, is a unique invention of biological evolution. It has only rudimentary parallels in the structures of other organisms.¹⁸

The relevant biological structure in human beings, their predisposition to learn a means of communication limited to a single sub-society within the species, and the advancement of this limited means among human beings,

18. Norbert Elias. 1988. *The Society of Individuals*. Basil Blackwell. Oxford & Cambridge .MA pp 171.

indicate very clearly the vital importance that precise understanding between members of a particular group must have taken on during mankind's long formative period.

The immense capacity for the selective preservation of experiences at all ages is one of the factors that play a decisive role in the individualization of people. The greater the scope for differences in the experiences engraved in the memories of individuals in the course of social development, the greater the chance of individualization. The faculty of memory can preserve learned knowledge and therefore personal experiences in earlier phases as means of active control of feeling and behaviour in later phases to an extent which has no equivalent in non-human organisms.

But to speak of the continuity of development anchored in memory as a condition of a person's I-identity is not enough. A development does not take place in abstraction. Each memory has a substrate. I-identity is not made possible only by memory of oneself and knowledge of oneself that are engraved in one's own brain; its basis is the whole organism, of which the brain is a part - though certainly a central part.

Each individual person, different as he or she may be from all others, has a specific make-up that he or she shares with members of his or her society. This make-up, the social habitus of individual forms, as it were, the soil from which grow the personal characteristics through which an individual differs from other members of his society.¹⁹ In this way something grows out of the common language which the individual shares with others and which is certainly a component of the social habitus--a more or less individual style, what might be called an unmistakable individual handwriting that grows out of social script.

The unique features of human being are closely bound up with this dominance of communication through symbols. These features are not genetically fixed, although they are based on a genetically fixed disposition.

19. Norbert Elias. 1988. *The Society of Individuals*. Basil Blackwell. Oxford & Cambridge .MA pp 182.

The two features we have in mind are, first, the ability to transfer a symbolic record of social knowledge from the generation to another, this knowledge being changeable and so capable of growth; second, the lack of biologically fixed, i.e. species-specific, form of socialization, or expressed positively, the presence of a form of communal life that can be changed in conjunction with the learning process, and is thus capable of development.²⁰

The habitus generates homologous formations across different social activities, such as funerals, ploughing, harvesting, circumcision, marriage" etc. Through the habitus, different conceptual fields are organized by the same set of symbolic relations -- the cooking calendars, the farming calendar, the daily cycle, the life, cycle, etc. The symbolic relations and modes of practice organizing these different fields are not only schematically equivalent, but also variants of a single type of structure.²¹ The importance of the habitus is that it is logically prior to actual events of practice and is simultaneously subject to strategic manipulation in practice. For this reason it is both product and resource. The habitus, thus, generates practices. Practices, in turn, reproduce specific objective conditions that lead to their generation via the habitus.

For Bourdieu social habitus is a "system of lasting, transposable dispositions' that functions as a 'matrix of perceptions, appreciations and actions".²² It is a mediator or orienteer of relations between individuals and society; also between structure and practice.

Bourdieu was of the opinion that "habitus does not exist in things nor in conscience, but in relations between two states of the social".²³ He said this to balance the importance of the social and of the individual.

Harker(1984) points out that the main point is that social habitus is a 'mediating construct, not a determinant one'. Fox (1986) says habitus portrays social life and cultural meaning as a constantly developing practice,

20. Norbert Elias. 1988. *The Society of Individuals*. Basil Blackwell. Oxford & Cambridge .MA pp.195.

21. Bourdieu, . P, 1977a. *Outline of a Theory of Practice*, Cambridge University Press. pp.143-6.

22. Bourdieu, P, 1977a. *Outline of a Theory of Practice*, Cambridge University Press. pp.82.

23. Norbert Elias. 1988. *The Society of Individuals*. Basil Blackwell. Oxford & Cambridge .MA pp.229.

akin to the conception of culture as always in the making. One notes that there is space or the possibility for the development and transformation of habit through specific events or circumstances.

In less differentiated societies, such as the Stone Age hunter-gatherer groups, social habitus may have had a single layer. In more complex societies it has many layers. Someone may, for example, have the particularities of a Liverpool-English or Black Forest-German European. It depends on the numbers of inter-locking planes in his society how many layers are interwoven in the social habitus of a person. Among them, a particular layer usually has special prominence.

In the comparatively less developed countries the relation of the individual person to family, community and state is usually different in a specific way from the corresponding relationship in more developed countries. In the former the single human being is usually more tightly bound to his family, which in this case usually has the form of an extended family, and his native village or town than in the latter. In many, though certainly not in all the less developed countries, the state represents a relatively new level of insertion.²⁴ The extended family and the native village are the older focal points of the personal we-identity of the individual. If we consider the relation of I-identity and We-identity, we might say that in all countries, both more and less developed, both are present, but in the former the accent on I-identity is stronger and in the latter the accent is on the pre-state we-identity, whether the family, the native village or the tribe. Among the older generation in states which only recently became independent, we-identity in relation to the state is often relatively weak, involving few positive feelings. This changes in the younger generation, but often without at first causing the strong emotional attachment to family, kin, birthplace or tribe to disappear.

In the present structure of human society, by contrast, the expression "we", and so, too, the social habitus of individuals in a wider sense, has

24. Ibid. pp 230.

many layers. The usefulness of the concept of the We- I balance as a tool of observation and reflection may perhaps be enhanced if we pay some attention to this multilayered aspect of We-concepts. It matches the plurality of interlocking insertion planes characteristic of human society at its present stage of development.²⁵

It is to give a mere selection of the possible We-relations to point out that people can say "we" in relation to their families or friends, to villages or towns where they live, to nation states, to post-national units combining several nation states and finally in relation to mankind. One readily sees that the intensity of identification varies widely with these different insertion planes. The involvement or commitment expressed by the use of the pronoun "We" is probably usually strongest in relation to family, domicile or native region, and affiliation to a nation state. The emotional tinge of we-identity grows noticeably fainter in relation to post-national forms of integration, such as unions of African, Latin American, Asian or European states. The function of the highest plane of insertion, humanity, as a focus of human we-identity may be growing. But it is probably not an exaggeration to say that for most people mankind as a frame of reference for we-identity is a blank area on their emotional maps.

In enquiring into *the* reasons for the different emotional charge at different levels of insertion, it is useful to bear in mind that the charges are variable. The family as a frame of reference for we-identity no doubt remains a human grouping which, for good or ill, commands a fairly high emotive charge in its members. But the tone of this feeling has changed markedly in connection with a profound structural change in the relation of the individual to every kind of social grouping, but particularly in the case of the family. At earlier stages of social-development the relation to what we now call the family, i. e. to the larger or smaller association of relatives, was completely inescapable for most individuals. For a long time people belonged to their families for better or worse. This bond was only alterable in the case of the

25. Ibid. pp237

generally less powerful sex, women, through marriage. The strength of family ties had much to do with the very extensive function of the family or, as the case may be, the clan, as a survival unit. The decisive change which occurred in we-identity and in the corresponding emotional orientation towards the family is largely due to the fact that the family is no longer inescapable as a we-group. From a certain age, the individual can usually withdraw from the family without forfeiting his or her chances of physical or social survival.

This greater frequency of non-permanent or, at least, potentially changeable relations between individual people is, one might perhaps say, one of the structural features of modern state societies, considered more generally, in which the advance of individualization bound up with the rise of these societies has played an influential part.

The advanced social differentiation that goes hand in hand with an equally advanced differentness between people, or individualization, brings with it a great diversity and variability of personal relationships. One variety of them which often occurs is marked by the basic conflict of the We-less I which was mentioned earlier: a desire for emotional warmth, for affective affirmation of other people and by other people, coupled to an inability to give spontaneous emotional warmth. In such cases the habit of circumspection in forming relationships has not stifled the desire to give and receive emotional warmth and for commitment in relations to others, but it has stifled the ability to give or receive them oneself. In such cases people are not equal to the demands made on them by a strong emotional affirmation by another person. They seek and desire that affirmation, but have lost the capacity to respond with the same spontaneity and warmth when they meet it.

What emerges is this: the advance of individualization, which can be observed in phenomena such as changes in the kin group and thus in the family in the narrower sense, has, in some ways, a paradigmatic character. This is better understood if it is recalled that at earlier stages the family group was the primary, indispensable survival unit for individuals. It has not quite lost this function, especially for children. But in more recent times the state - and

most recently the parliamentary state with certain, minimal welfare institutions - has absorbed this function of the family like many others. First in the form of the absolutist state, then in the form of the one- or multi-party state, the state level of integration has, for more and more people, taken over the role of the primary survival unit, a role that seems indispensable and permanent.

Nor is this all. Beside the two already discussed, the present advance of insertion has a third level. On close examination we see clearly that the welfare or otherwise of the citizens of a single state, including the G 8, no longer depends even in the present on the protection which this state _ or even a potential continental state like Europe – can afford them. Even today the chances of survival depend largely on what happens on the global plane. It is the whole of mankind which now constitutes the last effective survival unit.

We spoke earlier of the increasing impermanence, interchange- ability and voluntariness of many we-relationships, including, within certain limits, national status. Only the highest level of insertion, membership of humanity, has remained permanent, and inescapable.

Such, changes do not take place overnight. They involve processes that often take many generations. In the past the process of change has followed a particular direction. Larger social units took over the function of primary survival units from smaller ones. There is no necessity for the process to continue in the same direction. But it is not impossible. During the transition of the function of primary survival unit to social units representing a more comprehensive level of insertion, discrepancies of the kind we encountered on various occasions in studying we-I relations have arisen with great regularity. Again and again a split has developed between the actual takeover of the primary survival function by social units at a higher stage of insertion, and the persistent fixation of individuals we-identity on units of an earlier stage.

Further, the international process gives rise to the symbolic process. The more complex the society in which the self participates, the more differentiated the symbolic process. On other hand the individual develops a sense of self through participation in social interaction, and yet how this sense

of self requires a feeling of separation from others. J. M. Baldwin (1897) gave an early expression of the idea that 'the real self is the bipolar self, the social self, the socius'.²⁶ With Cooley(1956) we have the idea that the self is a mirror of others, that it is through the perception of others and the control of others that the child develops a self capable of autonomous action. Cooley had a clear idea of the specificity of social fact and of its ideal nature. In fact, he could have paraphrased Durkheim by stating that society is in the minds of individuals through the ideas they have of one another. G. H. Mead (1934) offers a more developed theory of the growth of the self through the use of language and gestures to participation in the play and the game.

With Piage (1926) increasing co-operation with peers permits the development of rationalized conformity, (which Durkheim would have described as organic solidarity.) Piaget thus brings out the educative importance of the peer group, a factor which is often overlooked in the stress on parental authority and school curriculum. What we miss in Piaget is a motivational force behind co-operation and the surrender of egocentrism. How does the child come to differentiate between the cognitive valence and the cathectic valence of an object? Does not moral realism remain an intrinsic feature of the adult personality both as a regressive potential, and as the non-rational element of value commitment?

Freud (1956) however, attaches himself to the cathectic meaning of children's behavior and verbalizations, rather than to logical cohesion. While Piaget's stages of the child's growth are given in terms of thought processes, Freud describes these stages in terms of the primacy of certain erogenous zones -- oral, anal, and phallic. Freud sees the transition from one stage to the other as a self-contained development, like embryological growth. Somehow the libido contained in love makes the object choice which integrates with the tensions of the dominant erogenous zone. Otherwise we have neurosis. Even though Freud was highly aware of the social factors which made essential the

26. J. M. Baldwin, 1897. *Social and Ethical Interpretations*. New York: Macmillan Co, chap. i.

frustration of sexual libido and the necessity of the incest taboo, in 1904 he still held to an organic theory of stages.

The section on socialization would not be complete without Durkheim's discussion of discipline.²⁷ As Freud might have put it: discipline is an aspect of the pleasure principle. In fact, it removes much of the sting of the immediate frustration by making the latter a preparation for and a guarantee of a future satisfaction. Discipline organizes internalized objects into a meaningful whole. Without discipline, unlimited desires interfere with one another and condemn the personality to the boundless frustration of *anomie*.

We have been to argue that, the socialization of the individual or the "alien" is a social process.

27. Emile Durkheim, 1925, '*Education Morales*. Felix Alcan, Paris. Pp.147, 148.

CONCLUSION

With reference to the proceeding discussion we begin to emphasizing the impact of the data supplied by genetic engineering:

As we observed in the introduction and in the second chapter, all the analysis about human reproductive cloning is intrinsically connected to other techniques. A sexual reproduction is not only the result of human reproduction. The body is not only the sole creation of nature, God or human cloning. The world of biotechnology has other techniques for the reproduction of human beings.¹

The hypothesis the identities and about the symbolic deficit raised by issues of human cloning, have the same nature as "alien" and even other human beings. In other words, if an Indian couple acquires an embryo of a Swedish couple, the problem of identity will be as in the case of a clone. If we freeze an embryo splitting the twins with the intention that the other is born two years later, the problems of identity would be similar as the clone. The issues related to duplication provoke the same reactions that the twins provoked in archaic societies. The problem of removing the parentage of the clone and his symbolic references is similar to the case of slaves in the West Africa. A sterile couple whilst acquiring a somatic cell collected from a person who is not a family member, would encounter problems of parentage similar to the ones caused by a clone. The problems of rejection are similar to those existing in Africa when a child is born and doesn't look like the father or like any of his close family members. Here we notice that the symbolic deficit and the disturbed reproduction are side by side, as it happens in the hypothesis of

-
1. T.A. Brown. 1995 *Gene Cloning. An Introduction*. Third Ed. UMIST, Manchester, U.K. Pp5-7, 153. And see: Joel de Rosnay. 1988. *L'aventure Du Vivant* Ed. Seil. Paris Vie. Pp. 196-205, J.P.Renard, S.Chastant, P.Chesné,[...]1999.*Lymphoid Hypoplasia and Somatic Cloning*.Lancet, 353.pp 1489-1491. and David Zuzuki S. Peter Knudtson, *Genethics: The Ethics of Engeneering Life*. London: Unwin Human, 1989.

human cloning. This is like the individuals produced by human reproductive cloning would be genetically identical to the twin brothers or twin sisters of those that would be cloned, being eventually separated by generations at the point of being considered sons or grand-sons.

The problems of clone-discrimination are similar to cases of gender, ethnicity and race etc. that the human being lived with.

When we speak of identity crisis today, the crisis of values or the crisis of institutions such as the marriage, the family, the state, or the several Churches, the syndicates, the political parties, we invoke in fact, more or less consciously, (as faults of the change relation), of the symbolic relation, that which allows us to grasp the other and obstructs us from constructing it as an absolutely strange entity. Besides this the discovery of the structure of DNA we have then, as possible causes for the present diversity of human types, the tendency toward variation which is common to all mammalian species,²⁸ the operation of natural selection in each of the varying environments in which human groups live, and the favorable conditions for the fixation of variations present in small, continually inbreeding groups.²

One of the more curious observations is that there are new characteristics in the structure of relationships, but not in human identity in his essence. This is because reproductive human cloning found a social context in which Atlan (1999) observes there is a twin movement. i) the progress exhorts us to define the individual "the more individual:" ii) the social symbolic context doesn't allow us to conceive a "pure" individual. On the other hand in social contexts could already be rooted models of opposition between human beings i.e. gender, race, ethnicity, religion, nationality, class etc. In comparison with these models, cloning is a drop of water in the ocean. The biological and physical causes are secondary. From here follows the conclusion that all types of problems in relations between sexual human being

2. Henri Atlan, Marc Augé, Mirelle Delmas-Marty, Roger-Pol Droit, Nadine Fresco. 1999. *Human Cloning*. Editions du Seuil pp. 126.

and the "clone"/"alien" have their antecedents in social existence or in social fact.³

The study which we have done in Chapter 3 in which we stressed that social habitus in combination with biological, physical and social unities has constituted a key analyses to explain how the human being becomes a person, a subject -- individual and social, it is analogous to the study of clone because of the following factors: (i) : clone is made from somatic cell and the tube baby and twin are made from sexual cell, from which who's heir the portion of DNA that passes only from father to son, via the y chromosome, or that goes from mother to daughter, via mitochondria.⁴ (ii) The socialization of the clone, "alien" is u a social process.

The specific view of the sociologist, according to us, depends on passing the considerations on the biological process of the individual and on the genetic differentiation, or still, the considerations of the difference by conscience or by psychic unity, to the important idea that the constitution of an individual depends on the relation with the other. Whether it deals with relations in European style, or the lineage systems in an African way, the relational structure is constitutive of the individual and his individuation. This is because the process of humanization is not only the consequence of a biological evolution. It depends also, and above all, in the symbolic order of nature, in the construction of a sense and intelligibility, in the establishment of a moral horizon. Man is defined as body which is an essential and symbolic element, and as if a visible, material portion were the spiritual condition i.e. self is reflected in body. Therefore the clone is not a man, just as the body is not a man.

The production of bodies outside the uterus is not a sine qua non for the change in relation and self. The study of social habitus gives us an understanding of cultural and social principles about how the human being is inserted in society.

3. Emile Durkheim. 1980. *The Rules Of Sociological Method*. The Free Press, New York. Pp.145.

4. Julie Clauton and Carine Dennis. *Nature*. Publishing Group 2003. Essays in Chapter 9: pp. 59

The rules of the nature begin, at least at the corporeal level of many species, to be technological, according to the cultural, political, economical and social interest. We think that we have a profound area of inquiry pertaining to how those worlds – before ontologically separate, as discussed above - relate themselves. We have opted for the study of the new forms of social organization and scientific practice, because we take into account the new scientific order, in which science becomes techno-science at the service of capital (big companies of biotechnology, normally associated with pharmaceutical laboratories). Scientific innovations occur more and more in experiments that have the objective of solving technical and practical problems, whose objective is quite often profit, as in the case of bio-reactors. The logic of advances in knowledge becomes submissive to the logic of the global market, either of food, medicines or agro-industry.

On the other hand, since long ago, we foresee the consequences of reproductive human cloning in the life of a human being and society: the cartography of the human genes will gather energies around one of the big searches of man: the understanding of its own functioning. The cloning and the technologies that can result from them will influence all the aspects of human life – the things that man can do, the manner we live and even if we want the types of people that we are. Those future technologies will offer to our successors a degree of control over the processes of life.

In a context where science takes such forms, associated to the huge capital; where new technological practices displace our most fundamental conceptions of nature/culture, which would then be the analytical outlets to understand that society?

Apart from actual changes in the social structure, how will a proposed new technology affect the value system of the society. We know little about value structures and how they change, but there is reason to believe that they, too, are heavily impacted by technology. One proposes that we develop a new profession of 'value impact forecasters' men and women trained to use the most advanced behavioral science techniques to appraise the value

implications of proposed technology.

At the University of Pittsburgh in 1967 a group of distinguished economists, scientists, architects, planners, writers, and philosophers engaged in a day-long simulation intended to advance the art of value forecasting. At Harvard, the Program on Technology and Society has undertaken work relevant to this field. At Cornell and at the Institute for the Study of Science in Human Affairs at Columbia, an attempt is being made to build a model of the relationship between technology and values, and to design a rule useful in analyzing the impact of one on the other. All these initiatives, while still extremely primitive, give promise of helping us assess new technology more sensitively than ever before.⁵

One way might be to assemble a small group of top social scientists an economist, a sociologist, an anthropologist, and so on-asking them to work together, long enough to hammer out among themselves a set of well-defined values on which they believe a truly super-industrial utopian society might be based. Each member of the team might then attempt to describe in nonfiction form a sector of an imagined society built on these values. What would its family structure be like? Its economy, laws, religion, sexual practices, youth culture, music, art, its sense of time, its degree of differentiation, its psychological problems By working together and ironing out inconsistencies, where possible, a comprehensive and adequately complex picture might be drawn of a seamless temporary form of super-industrialism.⁶

It is important to elaborate a cultural project, starting from the truth of a human being, where the quality of social relations should be the center. The new culture should start with the human being, that is, the culture of value and relation.

5. Alvin Toffler, 1971, *Future Shock*, Bantam Books, New York, pp.439.

6. Ibid. pp. 467.

“Each human culture, like each language, is a whole”, she writes, or declares, and if “ individuals or groups of people have to change...it is most important that they should change from one whole pattern to another”. Alvin (1971).

We do not present any laws for a social structure appropriate to the contemporary society, in other words, we did not propose a concrete frame of theoretical guidelines. Such issue should be dealt with by competent groups of professionals as we already mentioned.

Those conclusions are a clear demonstration of how sociology studies reproductive human cloning. The intellectual object of sociology has a relationship with the origins of the fields in a way that symbolic relation is more easily understood than in the societies where institutional complexity, in some aspects, and scientific progress in others, supply a less immediate reading. On the other hand, sociology can directly observe the status of the role of man trying to gauge the reach of the symbolic and, even more, to understand better the effects of fascination and rejection to the human clone that arise.

The concentration of process-sociology on human reproductive cloning give scientific access in this and other cases to problems which are known from the pre-scientific stage of knowledge.

As such the sociologist has material to elaborate and spread ‘theories’ starting from empirical observations that fit neither in the corpus nor in a specific tradition. All that technological development allows or promises today was already existing in a pure symbolic level in the social imagination of these local experts.

BIBLIOGRAPHY

BOOKS AND ARTICLES

Alvin Toffler, 1971, Future Shock, Bantam Books, New York.

Anna Freud, 1946 . The Ego and the Mechanisms of Defense. New York: International Universities Press.

Anthony Giddens, ,1984 The Constitution of Society. Outline of the theory of structuration. Cambridge. Polity press.

Anthony Giddens, 1992, Modernity and Self-Identity, Polity Press, Oxford.

Arlene Judith Klotzko. 2001. The Cloning Source Book. Oxford U NIVERSITY press.

Barth, F. 1970. Ethnic Groups and Boundaries—The Social Organization of Cultural Difference. London: Allen and Unwin.

Bernard Jessie 1982. The Future Of Marriage. New Haven. Yale University Press.

Bourdieu, . P, 1977a. Outline of a Theory of Practice, Cambridge University Press. pp.143-6.

Bourdieu. 1973. The Three Forms of Theoretical Knowledge in Social Science Information. 12(1).

Charles H. Cooley. 1956. Human Nature and the Social Order & Social Organization. Glencoe, III. The Free Press.

Cheikh Anta Diog, 1955 . Nations Negres et Culture. Paris. Gaetan morin.

Claude Lévi-Strauss, 1963, Structural Anthropology, Penguin, Harmondsworth, pp.49-50.

Clifford Geertz. 1973, The Interpretation of cultures, New York.

Darwin Charles. 1859. On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle For Life.

David Zuzuki S. Peter Knudtson, 1989 Genethics: The Ethics of Engeneering Life. London: Unwin Human.

Dubar Claude 1990. La Socialisation Construction des identites sociales et Professionnelles. Paris: Armand colin.

- Emile Durkheim, 1952, *Suicide*, London: Routledge and Kegan Paul. pp.208-216.
- Emile Durkheim, 1925, 'l'*Education Morales*. Felix Alcan, Paris. Pp.147, 148.
- Emile Durkheim. 1980. *The Rules Of Sociological Method*. The Free Press, New York.
- Emile Durkheim.1977. *The Division of Labor In Society*. The Free Press.
- E.E. Evans –Pritchard, 1956, *Nuer Religion*. Oxford University. Press. New York & Oxford. Pp.129.
- Eric H. Erikson , 1967 .*Identity, Youth and Crisis*. Cotuit, Massachusetts.
- Foucault Michel, 1978, *The History of Sexuality*, NEW York,pp.56.
- Fox Robin. 1985. *Lions of the Punjab: Culture in the Making*. Berkeley University of California Press.
- F. Musgrove, (1965).*Youth and Social Change in Youth and Social Order*. U.S.A. Indiana University Press.
- Francis Fukuyama. 2002. *OUR posthuman Future*. Fifth Avenue, New York, N.Y. 10010.
- Galton Francis. 1870. *Hereditary Genius*. New York : Appleton.
- Georg H. Meed, 1934 .*Mind, Self and Society*. Chicago University of Chicago Press.
- GIDDENS, Anthony 1999 *Modernidade e identidade Pessoal* Oeiras: Celta.
- Gregory Stock and John Campbell, 2000., *Engineering the human germline: an exploration of the science and ethics of altering the genes we pass to our children*. New York: Oxford University Press,
- HALL Stuart, Du GAY, P (ed. 1998. *Questions of cultural identity*. London: Sage.
- Heidegger M ., 1976, *Essere e Tempo*, Longanesi & C., Milano, pp.162-163.
- Henri Atlan, Marc Augé, Mirelle Delmas-Marty, Roger-Pol Droit, Nadine Fresco. 1999. *Human Cloning*. Edicions du Seuil PP.51.
- Herskovitz, M., 1924. *Culture Areas in Africa*. Pp. 173-184.

Jean Piaget. 1926. The Language and Thought of the Child. New York. Harcourt, Brace & Co.

Jaen Piaget. 1948. The Moral Judgment of the Child . Glencoe, III. The Free Press.

Justine Burley, 1999, The genetic revolution and human rights. Oxford, New York : Oxford University Press.

J. M. Baldwin, 1897. Social and Ethical Interpretations. New York: Macmiilam Co, chap. i.

Joel de Rosnay. 1988. L'aventure Du Vivant Ed. Seil. Paris Vie. Pp. 196-205,

J.P.Renard, S.Chastant, P.Chesné,[...]1999.Lymphoid Hypoplasia and Somatic Cloning.Lancet, 353.pp 1489-1491.

Julie Clauton and Carine Dennis. Nature. Publishing Group 2003. Essays in Chapter 9: pp.95.
Justine Burley, 1999, The genetic revolution and human rights. Oxford, New York : Oxford University Press

Kwame Nkruma, 1964 . Consciencism .

Leon R. Kass, M.D.,2002. Human Cloning and Human Dignity. PublicAffairs, New York

Leopold Sedar Sengor, (1974)Liberte Negritude et Civilization de L'universel. Paris. Armand colin.

Ligia Amancio. 1998. Masculino E Femenino.A Construcao Social da Diferenca.2ª Edicao. Afrontamento. Pp...179.

Linda Nicholson. 1995. Social Postmodernism. Cambridge University Press

Lisa J. Crockett & Rainer K. Silbereisen,(2000).Negotiating Adolescence in Times of Social change. Cambridge University Press.

Lorde 1982,pp. 226.

Marc Augé. 1999. Individuos sem Filiação. Al. C. Gulbenkian.

Marx Karl, 1976, Society and social change, Lisbon, editor.

Marx Karl, 1975. A Contribution to the Critique of Political Economy. Lisboa edition

Mondin B. Op.cit. .

Nadel S.F. 1957. The Theory of Social Structure. London: Cohen and West.

Nanette J. Davis, (1999).Youth Crisis. London .Praeger.

Norbert Elias. 1988. The Society of Individuals. Basil Blackwell. Oxford and Cambridge.

Parsons T, et AL, 1965 ed, Theories of Society. Foundations of modern sociological theory, the free Press, New York.

Paul Lauritzen, , 2002, Cloning and the future of human embryo research. Oxford University Press.

Parsons Talcott. 1988 The Social System. Madrid Alianza editorial.

Plato. 1906 . Republic. Cambridge University Press.

Radcliffe-Brown, A.R., 1976. Structure and Function in Primitive Society, London: Routledge and Kegan Paul. pp.193-4.

Ralph Linton. 1964. The Study of Man. Student's Edition. New York ,N.Y. pp.30

Sigmund Freud, 1933. The Anatomy of the Mental Personality. New York W.W. Norton.

Raymond Boudon. 1992, Traité de Sociologie. Press Universitaires de France.

Redfield Robert. 1961. Little Community and Peasant Society and Culture. Chicago: Press.

Ritzer George 1996. Sociological Theory. Lisboa. McGraw-Hill.

RUANO- BORBALAN, Jean- Claude (coord.) 1998. L' identite. L' individu Le group La societe. AUXERRE: Ed Science Humaines.

San Diego, 2003, Cloning Bruno Leone book editor. Greenhaven Press,

Sartre Jean-paul. 1958. Being and Nothingness: An Essay on Phenomenological Ontology. London: Methuen. pp 53.

Sigmund Freud, 1967 . Group Psychology and the Analysis of The Ego. London. Hogarth Press.

Spencer Herbert 1969 . Principles of Sociology. London: Macmillan.

T.A. Brown. 1995 Gene Cloning. An Introduction. Third Ed. UMIST, Manchester, U.K. Pp5-7, 153.

Talmud de Babylone Traité Sanhédrin. Pp 37a e 38a.

Weber Max 1978 . Economy and Society. London: University of California Press.

Young. 1990. Chp.2.

V.Y. Mudimbe, 1976 . True African Identity.

Ziauddin Sardar, 1998, *Postmodernism and the Other*, Pluto, London.

JOURNALS

Anand, A., and Chandra, H.S. 1993. Flex, an X-linked female lethal mutation in *D. Melanogaster*. Poster in Seventeenth International Congress of Genetics, Birmingham, Poster No. b 38, pp B4.

Berta, P., Hawkins, J.R. Sinclair, A.H. Taylor, A., Griffiths, B.L., Goodfellow, P.N. and Fellous, M. 1990. Genetic evidence equating SRY and the testis-determining factor. *Nature* 348, 448-450

Cookie, H.J. Fantes, J. and Green, D. 1983. Structure and evolution of human Y chromosome DNA. *Differentiation* 23:S48-S55.

Coxon, A., Maundrell, K., and Kearsey, S.E. 1992. Fission yeast *cdc21* belongs to a family of proteins involved in an early step of chromosome replication. *Nucl. Acids Res.* 20:5571-5577.

Damjanovski, S., Liu, F., and Ringuette, M. 1992. Molecular Analysis of *Xenopus laevis* SPARC Secreted protein, Acidic, Rich in Cysteine. A highly conserved acidic calcium-binding extracellular-matrix protein. *Biochem J.* 281:513-517.

De-Falco, S. Russo, G., Angiolillo, A., and Pietropaolo, C. 1993. Human L7a ribosomal protein: sequence, structural organization and expression of a functional gene. *Gene* 126:227-235.

Fraser, N. Ballabio, A., Zollo, M., Perisco, G., and Craig, I. 1987. Identification of incomplete coding sequences for steroid sulphatase on the human Y chromosome: evidence for an ancestral pseudoautosomal gene. *Development* 101(Suppl.) :127-132.
George E. Pence; Who's Afraid of Human Cloning ?

Goodfellow, P.N., and Lovell-Badge, R. 1993. SRY and sex determination in mammals. *Ann. Rev. Genet.* 27:71-92.

Gough, N.M., Gearing, D.P., Nicola, N.A., Barker, E., Pritchard, M., Callen, D.F., and Sutherland, G.R. 1990. Localization of the human GM-CSF receptor gene to the D-Y pseudoautosomal region. *Nature* 345:734-736.

Gupta, S.K., and Singh, J.P. 1993. PCR cloning and sequence of two cDNAs encoding the alpha and beta subunits of casein kinase-II. *Gene* 124:287-290.

Hanahan, D. 1985. Techniques for transformation of *E.coli*. In: DNA cloning: a practical approach (ed.), Glover, D.M. Vol I IRC Press, Oxford. Pp 109-135.

Harker, RK 1984. On Reproduction, Habitus and Education in British Journal of Sociology of Education, vol. 5 N° 2:

Hodgkin, J. 1992. Genetic sex determination mechanisms and evolution. Bioessays 14:253-261.

Jean-Paul Sartre, Der Ekel. 1949. *Romance*. Hamburgo. Pp 123.

Jendrisak. J., R.A. Young, and Engel, J.D. 1987. Cloning cDNA into gt 10 and gt 11. Methods Enzymol. 152:359-371.

La afin du <<Tout Génétique>> Vers de Nouveaux Paradigmes en Biologie, Paris, INRA Editions 1999.

Lau, Y.F., and Chan, K. 1989. The putative testis-determining factor and related genes are expressed as discrete-sized transcripts in adult gonadal and somatic tissues. Am. J. Hum. Genet. 45:942-952.

Leon R. Kass ., Human Cloning and Human Dignity: The Report of the President's Council on Bioethics.

Martha C. Nussbaum and Cass R. Sunstein, Norton, c1998, Cloines and Clones : facts and fantasies about human cloning.

Messing, J. 1983. New M13 vector for cloning. Methods Enzymol. 101:20-78.

Miller, L.M., Plenefisch, J.D. Casson, L.P., and Meyor, B.J. 1988. Xol-1: A gene that controls the male modes of both sex determination and dosage compensation in C.elegans. Cell 55:167-183.

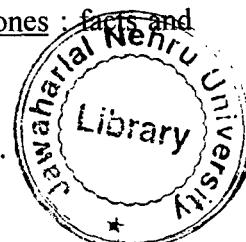
Mittwoch, U. 1990. One gene may not make a man. New Scientist 128:40-43.

M.L. Rantala and Arthur J. Milgram., c1999, Cloning. Chicago, III., Open Court.

Shapiro, L.J.1987. Cloning and expression of steroid sulfatase cDNA and the frequent and the frequent occurrence of deletions in STS deficiency: implications for D-Y interchange. Cell 49:443-445.

Tiranti, V., Rocchi, M. Didonato, S., and Zeviani, M. 1993. Cloning of human and rat cDNAs encoding the mitochondrial single-stranded DNA-binding protein (SSB) Gene 126:219-225.

Watson, J.D.& Crick, F.H.C. A structure for deoxyribose nucleic acid, Nature 171,737-738 (1953).



LISS

174.966

N3392 CI



Th11478