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### *Adult Stem Cell Therapy: Social Risks*

**Abstract:** *Adult stem cell therapy is also recommended because it doesn't present the risk of rejection due to immunological incompatibility. But such therapy meets risks and limits in the concept of human nature we assume behind the concept of sick person. There is in fact a map of concepts of human nature. The most important are: the Aristotelian-Thomistic concept which considers man in all his dimensions; the utilitarian concept (Hume); the instinctual concept (Nietzsche); the concept of sexual urges (Freud). Only the first catches the truth around human nature. Stem cell therapy meets therefore, along the anthropological line of research, the limit of knowledge as manifestation of the vision of all the dimensions of human nature. As a consequence, it happens that stem therapy, without knowledge to guide its practice, is forced to serve science that, in turn, supports individualism deprived of its power and/or its sexual urges. Hence the risk that such therapy, wrongly used, ends up violating the classical precepts of justice as a result: honeste vivere, alterum non laedere, suum cuique tribuere.*

**Keywords:** Adult stem cells; Society; Paradigms of human nature.

#### PART ONE

**Summary:** 1 – *Stem cell therapy with adult stem cells: introductory remarks*; 2 – *Legitimacy and limits of therapy with adult stem cells*; 3 – *Legitimacy and limits of stem cell therapy with umbilical cord cells*; 4 – *Limits of stem cell therapy with embryonic stem cells*.

##### *1. Stem cell therapy with adult stem cells: introductory remarks*

Stem cell therapy with adult stem cells is preferable to stem cell therapy with embryonic stem cells because

- a – it does not involve the risk of immunological rejection
- b – it is likely to be therapeutically successful
- c – stem cell therapy with embryonic stem cells is not advisable

Adult stem cells in fact have already been satisfactorily employed for various therapeutic procedures and it seems that they are the basis of future regenerative therapies.

However, before deciding to use adult stem cell therapy it is necessary to know the reason for the cells being used. And even before specifying the reason for their use it is essential that their natural function be remembered. And while the reason can be

inferred from their properties, their natural function should be explained. Their function can be defined as their capacity to replicate themselves indefinitely and as their ability to differentiate, that is to give life to specific cells through a process of differentiation. It should also be remembered that their presence in various tissue is different; in some it is higher and in others it is lower, it is higher in tissue in which during the lifetime of the individual a certain renewal of cells has been necessary, while it is lower in tissue in which renewal of cells has been less frequent.

The function of stem cell therapy then, is to generate human body tissue, to keep it working, unaltered and healthy, and eventually to intervene and repair the cells around it. In this case, if these are damaged by a pathological condition of the tissue, they will be substituted through a transplant of healthy cells, prepared for the purpose *in vitro*.

It follows from this that stem cell therapy, if not used for the ends indicated above, but for other ends, in the present state of things, is not fulfilling its natural function.

In order to make the point on the function of stem cells used in relative therapies, it is necessary to make a fundamental distinction. It is a necessary distinction on their origin in that it qualifies their legitimacy for use in such therapies or indicates a limit to their use. The plan shown below, to indicate legitimacy and limits in stem cell treatment, prescribes a quadruple fundamental distinction which regards the different types of stem cells:

- a - autologous or endogenous adult stem cells
- b - heterologous or exogenous adult stem cells
- c - umbilical cord stem cells
- d - embryonic stem cells

Those under a) come from the person for whom the stem therapy is intended; those under b) come from another person, who can be defined as a compatible donor; those under c) come from the umbilical cord of a new mother, and can be preserved and used by herself or can be donated to a third party; those under d) come from embryos.

## *2. Legitimacy and limits of stem cell therapy with adult stem cells*

The legitimacy and/or limits of stem cell therapy are seen in relation to the health of the person and are realized in therapeutic activity and experimental therapeutic activity. The question then, turns around the notion of “person”, and therefore the rights of the person; the most relative ones here are the right to life and the right to health.

Certain conditions therefore need to be respected for stem cell therapy to be appropriate; the benefits should outweigh the risks, health facilities should be fit to practise such treatment, the patient should give his or her informed consent, the cells should be freely given, the continuing function of the body.

It is important for a framework of stem cell therapy to keep in mind the distinction between the donor and the recipient.

*a* – The donor should respect the principle that parts of the human body cannot be sources of profit. This principle is valid when an organ is removed unexpectedly, as well as when it is planned. In the first case the parts of the body removed, «naturally or out of therapeutic necessity, are goods, in as far as the interests of the subject in disposing of them are recognized, at least in the sense of deciding their destination».<sup>1</sup> In the second case «the person has the right to make a contract with which the donation is decided.[...]. A transaction involving something other than property should be subject to a judgement in merit of the interests pursued, a judgement which pertains to the function and character of the transaction, rather than to the legitimizing situation: wishing the part to be detached, determining its destination for altruistic reasons, for clinical or experimental medicine or for scientific research, is deserving of protection, as long as the transaction is free, freely given and informed».<sup>2</sup>

Obviously the notion of person assumes that the subject concerned has reached the age of majority considered according to «a principle of organic unification and dynamic organization that guides the uninterrupted development»<sup>3</sup> of a new being of the human species from the time of the fusion of all the stem cell chromosomes. If, on the other

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<sup>1</sup> P. D’ADDINO SERRAVALLE, word *Corpo (atti di disposizione del)*, in *Enciclopedia di Bioetica e Scienza Giuridica*, III, Napoli, ESI, 2010, p. 555.

<sup>2</sup> *Ibid.*, p. 556.

<sup>3</sup> L. PALAZZANI, word *Persona*, in *Enciclopedia di Bioetica e Scienza Giuridica*, X, Napoli, ESI, 2016, p. 310.

hand, he or she has not reached majority the subject is helped by a legal guardian, according to the degree of his or her development. Consequently, for people who have not reached majority the decision on whether stem cell therapy can be used can only be reached juridically.

*b* – The recipient. Stem cell treatment comes into the framework of the principle of the aim of any health treatment; the protection of the patient's life and the care of his health. Consequently, stem cell therapy must respect the requirements and the limits of legitimacy laid down for its practice and experimentation, which is why it is practicable if the benefits appear to be greater than the risks and if the facilities where the therapy takes place are fit. In addition, the patient, informed on the therapy, must have given his consent, which must also be informed. As for experimental therapy, finally, it should only be used as a last resort for treating the patient and if it is the only treatment capable of restoring the patient's health.

### *3. Legitimacy and limits of stem cell therapy with umbilical cord stem cells*

As for stem cell therapy with umbilical cord stem cells, the question centres around whether they are legally available. Or rather to answering the question of the most appropriate legal treatment of the detached part of the body. First of all it should be remembered that a part of the body's organism must be detached, and this could be unexpected or deliberate and planned.

*a* – If it is unexpected the part which is detached, naturally or out of therapeutic necessity, is defined as goods, in as much as the subject, from whose body the part was detached, has the right to dispose of it, «at least in the sense of deciding its destination (re-joining of the displaced organ, subjection of the part to clinical examination, conservation of the umbilical cord for her own child or alienation of the same for altruistic purposes, etc.; in any case, the person from whose body the part is detached must be informed and consent to its different use)».<sup>4</sup> However, parts detached from the body unexpectedly may not be used for profit.

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<sup>4</sup> P. D'ADDINO SERRAVALLE, word *Corpo (atti di disposizione del)*, cit., p. 555 e ss.

*b* – In the second case it does not represent the presence of a new asset but the person in question can put into place a legal transaction aimed at the regulation of personal and existential interests. This transaction should be characterized by freedom and awareness and will not be of a financial nature, it will not be the subject of a secret agreement for the use of the ‘goods’, even in the case of transplant *sex mortuo*.

In such a scenario the commodification of parts of the human body or its organs could lead to the attribution of a price to the human body and would compromise man’s identity and so his life.

The umbilical cord, once detached from the woman’s body, ceases to belong to her personal rights and assumes the figure of *res*, of which she immediately acquires ownership and can therefore use as she wishes. She can decide:

*a* – to keep it for herself so as to use its stem cells for her own benefit or for the benefit of the new-born or for other members of the family;

*b* – to donate it to others for the use of its stem cells;

*c* – to abandon it, with the consequence that others, becoming owners by possession, can use the stem cells from its blood.

The use of umbilical stem cells, then, qualifies as juridically legitimate if it is given for the common good, or if it is kept for the use of the woman from whose childbirth it derived. It can be destined then for a use which can be defined as heterologous or as autologous.

#### *4. Limits of stem cell therapy with embryonic stem cells*

The question becomes more complicated if, regarding the principles which guide the development of a new human being, it involves the embryo phase, that is therapy with embryonic stem cells. In fact, such cells are present only temporarily, at an early stage, during the development of the embryo *in utero* and there is no way of isolating them without causing its death, and would put it into the category of involuntary donors. We are reduced then to the sad expedient of producing embryos in the laboratory with the specific purpose of isolating and extracting the stem cells, in the knowledge that the

embryo will die as a consequence. Embryos produced in laboratories in such a way are sacrificed at the altar of a certain way of interpreting science.

Neither is it sufficient in order to justify such sacrifice to talk about *therapeutic cloning*, with the aim of providing embryonic stem cells for treating neurodegenerative diseases, in as much as the cure is not for the benefit of the embryo. It would not be out of place, then, to talk about a “holocaust” of embryos, sacrificed for the convenience of science. But, in such a case the illegitimacy of stem cell therapy with embryonic stem cells is clear to see.

Scientists who do not ideologically share the principle discussed above according to which a new human being’s existence begins at the moment of *singamia*, that is the moment that the fusion of all the chromosomes of the germinal cells is complete, are obviously of a different point of view

Anyway, *therapeutic cloning*, the production of embryonic stem cells to be used in neurodegenerative disease treatment, has been shown to be incapable of providing the intended therapeutic programmes. At the present stage of development, then, embryonic stem cell therapy would not be advisable for any disease, unlike what is happening with the reprogramming of adult stem cells. This is true to such an extent that it is accepted that the reprogramming of these cells «constitutes the future of regenerative therapy».<sup>5</sup>

## PART TWO

Summary: 1 – *Stem cell therapy and paradigms of the nature of man*; 2 – *A summa divisio of the paradigms of the nature of man*; 3 – *Two generations of partial paradigms of the nature of man*.

### 1. *Stem cell therapy and paradigms of the nature of man*

Recourse to stem cell therapy as a health treatment for man and the question of the legitimacy and limits of such therapy discussed in Part One is connected to the classical, traditional concept of the nature of man which represents it in all its dimensions known in their structural and existential reality.

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<sup>5</sup> F. MANTOVANI, *La terapia staminale: problemi e limiti giuridici*, in «Iustitia», LXVIII, 1, 2015, p. 8.

The problem now is to see whether such therapy is logically compatible with each paradigm of the nature of man, or if each paradigm, bearer of its own ontological structure and existential manifestation, requires stem cell therapy with different ends.

In short, the problem is anthropological and consists of knowing if it is necessary to use a stem cell therapy for each paradigm of the nature of man, or if a single therapy can be suitable for all paradigms.

Today, in fact, we are seeing two different concepts of the nature of man, one which represents it in all its known dimensions, and the other which does not represent it in all of those dimensions and, to go further, represents it in a different way.

So, in the present doctrine there are two concepts of the nature of man, which are different in that one represents all the dimensions of his nature including the metaphysical, while the other represents an idea of it which does not recognize the metaphysical side. What is more, in the latter concept some aspects are represented as having different functions, for example reason.

In particular, the traditional and classical concept which represents the nature of man in all its known dimensions is that of ontologically founded realism which has been constructed over history from the ideas of realism of Aristotle, of St. Thomas, of Maritain, and recently, in Bioethics, with the ontologically founded realism defined by E. Sgreccia.<sup>6</sup>

It can be said, therefore, that this concept of the nature of man is a complete concept, total, in as much as it represents the nature of man in all its known dimensions, in particular including the metaphysical dimension.

Such a dimension, I repeat, is not present in the dimensions of the concept of the nature of man presented by those philosophers who, in representing it conceptually, did not consider it as an aspect of man's nature, even though they recognized its existence, and at times did so with a sense of inconvenience. The doctrinal position of these philosophers is that, as well as not recognizing this dimension, they attribute different

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<sup>6</sup> E. SGRECCIA, *Manuale di bioetica. I: Fondamenti ed etica biomedica*, Milano, Vita e Pensiero, 2000, p. 63 e ss.

functions to some other dimensions from those recognized by the classical concept of the nature of man. Reason, for example, is reduced from a guide to freedom to an instrument of measuring, calculating and organizing; from a cognitive power which, ignoring the difference between intellect and reason, is reduced to a cognitive faculty formed only by reason as a tool which just measures, calculates and organizes.

## 2. A *summa divisio* of the paradigms of the nature of man

The brief picture of different paradigms of the nature of man, touched on in the preceding paragraph, allows me to make a *summa divisio* of them:

- a – views and conceptualizations of the nature of man in all its known dimensions,
- b – views and conceptualizations which do not represent the nature of man in all its known dimensions, and which in addition recognize different functions of some dimensions.

These two types of paradigms of the nature of man can be specified in this way:

- a – total paradigms of the nature of man
- b – partial paradigms of the nature of man.

The first find their greatest expression, as has been said, in the philosophical line of thought, Aristotle-Thomas-Maritain; while the second are found in various philosophical lines of thought which endorse one or other of the dimensions of the nature of man, but ignore the existence of the metaphysical dimension in the nature of man. This dimension has actually been defined by some philosophers as one which should be eliminated. I am referring, for example, to the well-known maxim *Praeterea censeo metaphysicam esse delendam* of the initiator of Scandinavian realism A. Hägeström. This maxim was used by him to justify his move from his initial Kantian position to the practice of realism as a collective psychic phenomena which accepts the existence of rights and duties as a different reality from that of the empiric, in which it would be possible to understand a right scientifically relying on facts.<sup>7</sup>

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<sup>7</sup> The maxim quoted in the text can be found in vol. VII of the series *Die Philosophie der Gegenwart in Selbstdarstellungen*, Lipsia, Feliz Meiner, 1929. It is a maxim which paraphrases the famous words of



This is a position which is shared today by those who, speaking of the nature of man, ask themselves rhetorically: but of which nature are we speaking? As if it and its definition were fruit of this or that culture, as if it were not true that the nature of man, considered in the harmony of its dimensions, was not one, and if multiple on the other hand, were not the views and conceptualisations which different philosophers have made of it.

Contrary to this philosophical fashion it needs to be emphasised that the dimensions of the nature of man are diverse, that of the biological, vital, that of the instincts, that of the senses, that of the affections, that of the interests, that of consciousness, the metaphysical dimension, etc. It should be remembered, in addition, that they should be considered as real, and not as something to be destroyed or not destroyed. Their practice can be accepted or denied, but in themselves they cannot be destroyed or considered inexistent.

Man, in this age of unchecked neoliberalism, cannot accept the sacrifice of his metaphysical side on the altar of unlimited freedom, lacking respect for one part of his nature and for others. Opting for such a choice means that man mutilates his nature. A human dimension cannot be destroyed. The existence of multiple dimensions of the nature of man should therefore be recognized.

### *3. Two generations of partial paradigms of the nature of man*

I will mention only those partial paradigmatic views which have been such since their presentation. They are views which, considering their dissimilarity from the classic view of the nature of man could propose stem cell therapy with a different aim from that considered in Part One, which would appear to assume as its basis, without stating it, a sharing of the total view of the nature of man.

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Cato the Censor: *Cartago delenda est*. On Hägeström's antimetaphysical realism, see S. CASTIGNONE, *La macchina del diritto. Il realismo giuridico in Svezia*, Milano, Comunità, 1974.

Partial paradigmatic views of the nature of man I would define respectively as first generation partial paradigmatic views and as second generation partial paradigmatic views. I would identify as first generation partial paradigmatic views:

a – Hume’s view and conceptualisation of the nature of man, which sees it as a complex system composed of instincts and feelings, measured, calculated and organized by reason, seen as a cognitive faculty which through successive discursive step explains what it has seen, in other words reasons an instrument which just calculates, measures and organizes.

b – Nietzsche’s view and conceptualisation, which sees the nature of man characterized by the predominance of the biological-vital sphere over reason, which is reduced to a set of «unreasonable forces which are claimed to be its basis»;<sup>8</sup>

c – Freud’s view and conceptualisation, which points to the element which characterizes the nature of man as sexual impulse governed not by reason but by free will in all its manifestations, impulses which contribute to a person’s sublimation or to his total degradation.

All three of these paradigms continue to have at their base the written order of nature which together with culture program the life of the above described paradigms in the light of reason understood as an instrument.

The proponents of these three paradigmatic views could support, with consistency, stem cell therapy aimed in particular at treating and keeping intact and highly functioning the dimensions of the nature of man favoured by them, that is a strengthening of reason as an instrument, a strengthening of the will as the will to have power and a strengthening of *libido*. As for whether such therapies contribute to making humanity progress for the better only history will tell, and sometimes it has told, stimulated by extraordinary events determined by the need to not go beyond unsurmountable fixed points if we want human life to continue.

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<sup>8</sup> A. TARANTINO, *Natura dell’uomo e modelli di bioetica*, Milano, Giuffr , 2016, p. 62.

These paradigms, especially those of Nietzsche and Freud, have generated further paradigms, which are also reductive in terms of the nature of man. They are those of the second view.

In the second generation partial paradigmatic view I would specify:

a – the gender view

b – the trans-human view

c – the post human view

These new generation paradigmatic views are also characterized by the non-recognition of the metaphysical aspect present in the classic concept of the nature of man. These too then give a reduced view compared to what it is in its effective reality. This is a reduction which narrows the reality of the view of man to only a part of his actual activity.

Of these paradigms, generated by the first three, the first two have now become “accepted” in civil and juridical society; now we have the problem of the “acceptance” of the paradigm of the post human. This last is a view and conceptualisation of the nature of man, which, if translated in its entirety, at a juridical level, amounts to a material element of crimes against the human race, inasmuch as with its structure and its programmed capacity for reproduction, it would be an attack on the structure of the human race as it has been known from its first beginnings.

With the post-human, in fact, with continual recourse to artificial intelligence, etc., we are no longer dealing with experimental science which becoming technology is humanized, a fact which allows us to remain in the trans-human,<sup>9</sup> but we are looking at cyber organic interventions in the human organism, causing it to lose its identity as belonging to the human species. Not surprising, then, if the converging technologies (NBIC) which coming together in working for technological technical enhancement,<sup>10</sup> could end up making human individuals lose their identity. Now, faced with this danger

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<sup>9</sup> See J.M. GALVÁN, voce *Cyborg*, in *Enciclopedia di Bioetica e Scienza Giuridica*, III, Napoli, ESI, 2010, p. 786.

<sup>10</sup> See L. PALAZZANI, *Il potenziamento umano. Tecnoscienza, etica e diritto*, Torino, Giappichelli, 2015, p. 122 e ss. The acronym NBIC used in the text refers to nanotechnology, to Biotechnology, to information technology and to cognitive science.

it is justified that in order to protect the dignity of the human race and its individuals, such human life programmes should be considered a material element of crime against the human race, as has been the case for reproductive cloning and eugenics.<sup>11</sup>

These possibilities derive from the fact that, both in the case of first generation paradigms and in those of the second generation of the nature of man, things are no longer seen in their rational foundation, but as entities cut loose from their *substratum*.

In the second generation paradigms, moreover, the nature of man in itself can play no role in specifying an eventual stem cell therapy, but it would be culture that would decide each time what the aim of recourse to such a therapy could be.

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<sup>11</sup> Eugenics and reproductive cloning, in fact, are specified, in the second book (of crimes and offences against the person), under subtitle II of the French *Code Pénal* - 2005, as crimes against the human race; crimes which in this code are distinct from those against humanity, which are otherwise specified, under subtitle I of the same book.