

# **CREATING THE EMBRYO FOR STEM CELLS**

Three ethical viewpoints on research-embryos

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## Introduction

In an episode of the satirical cartoon show *South Park*, the now diseased wheelchair-bound actor Christopher Reeves finds a method to walk again. By sucking the stem cells out of unborn human fetuses, literally by cracking them open and drinking them dry like an orange-juice carton, he becomes both super strong and super evil (as a counterpart to his famous role as Superman).<sup>1</sup> Although over the top, it presents an image that many people identify with stem cells research. It is a marvelous cure but small unborn children are sacrificed to obtain it. Many feel that the use and research will lead us from what makes us good human beings.

Like all new technologies, stem cells give rise to discussions and regulatory issues. The contradiction that surrounds it is however more extreme. Some see it as the biggest scientific breakthrough of our time that will greatly improve the lifespan and ‘durability’ of people. Others fear it will lead to nightmare scenario’s full of cloned organs that are harvested from living people. These objections mostly revolve around suspicion of change and an emphasis on the virtue of things as they are,<sup>2</sup> but there is a truth to them. Human Embryonic Stem Cells (hESC) are extracted from human embryos that are destroyed in the process. Everyone can agree this should be done with careful evaluation.

In the Netherlands the technology is allowed under certain restrictions. However, there is still a controversy between what is scientifically possible and lawfully desirable. It is possible to create embryos and harvest hESC from them. At the moment this is not allowed, although it has been announced in the Embryolaw that it might be allowed in the future.<sup>3</sup>

The creation of embryos is another spectrum in the discussion on stem cells. Many of us have different feelings towards the creation of embryos for scientific purposes. These feelings can be attributed to different ethical lines of thought. In order to get a more coherent view on the subject, it is worthwhile to explore these and hopefully get more clarity on the following question:

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<sup>1</sup> Episode 98, Season 7 (Krazy Kripples).

<sup>2</sup> According to Harris 2008, p. 109.

<sup>3</sup> In chapter 2 this situation will be explained in more detail.

Should the use of human embryonic stem cells created for research be allowed by the (Dutch) government?

First, we have to see why embryonic stem cells have such potential. In chapter one a short explanation of the two different types of stem cells, some explanation of the technique itself and possible uses will be discussed. The next chapter will deal with aspects of the regulation in relation to the creation of hESC in the Dutch law. This will only go so far as is necessary to better understand the current legal boundaries. Together, this forms the first part that is used as a reference in the second part.

The second part of the thesis will discuss three viewpoints on the morality of the creation of embryos for research.

The first viewpoint is that of utilitarian thinkers. *It will refer back to the second chapter.* The second and third are the Human rights and dignitarian view on the creation of embryos. In chapter 6 the presented arguments will be mixed together. It will be seen if a form of compromise is possible between the different lines of thought, if one should prevail over the other or if everyone should be 'left alone'. The conclusion will deal with the substantive points to answer the main question.

While none of the parts will deal (be able to deal) with the issue of the use of hESC itself, the discussion will sometimes touch upon that point.

## **PART ONE: THE TECHNOLOGY**

### **1. Stem Cell Research**

This chapter is meant as a short overview of what stem cells, both embryonic and adult, actually entail. The difference between the two and the reason why the embryonic variant has more potential will be explained. The second paragraph is about some research in which stem cells are either already used or will be used in the future.

#### *1.1 What's the fuss?*

The average human has about 210 distinct cell types. These are all morphological or functional forms of certain cells; all specialized in different functions. Cells have a finite life span so their breakdown is inevitable. Before this happens, the mother cell divides into two daughter cells or copies itself. Many diseases or handicaps are the result of cells no longer dividing or dividing too rapidly; examples are MS and cancer. With age, cellular mistakes become more common.

At the beginning of our lives the cells bounce around with almost limitless energy. They would have to since all our cells originated from one small cluster we commonly refer to as the embryo. During the blastocyst stage, in the first few days when the embryo is about the size of a pinhead, embryonic stem cells can be obtained. A blastocyst consists of two different types of cells; the inner cell mass (ICM), which later becomes the fetus itself, and the trophoblast cells, which form the placental support system to develop the fetus. ICM-cells are pluripotent cells, cells that can diversify into practically any type.<sup>4</sup> From these ICM-cells the hESC are derived.<sup>5</sup> The embryo perishes in the process. The first successful derivation of a human embryonic stem cell line was achieved in 1998. This happened by using surplus IVF human embryos.<sup>6</sup> Ten years later, different stem cell lines have been created for further research in this field. However, the total number of stem cell lines is still small. This is due to the fact that it is a difficult and time-consuming procedure and many

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<sup>4</sup> They are not totipotent; they cannot develop into another embryo or a whole new individual without some added extreambyonic tissue.

<sup>5</sup> Harris 2008, p. 169.

<sup>6</sup> Thomson et all 1998.

countries are still set against the research. And in countries where it is allowed, the mood is set against the 'research-embryos'; embryos especially created to harvest stem cells from them.

Stem cell research is often confused or put in the same file with reproductive cloning; cloning to create an entire living copy of a human being. This is not illogical since there is a potential life created to harvest the stem cells. However, the outcome is different; no exact copy of the original is sought, only the impersonal stem cells that have not yet any traits of the 'original'. Therefore stem cell research should be referred to as research or therapeutic cloning. Fierce opponents of the research state that this is the first step towards the full-scale cloning of human beings; they fail to see or accept the difference between reproductive and therapeutic cloning.<sup>7</sup>

Apart from the embryonic variant, there is another group which is surrounded with less controversy. These are the adult stem cells (ASC). They are created throughout our entire life and have the ability to divide and create another cell like itself, or one that is more differentiated. Most groups that oppose the embryonic variant actively support the use of the adult variation, since no embryo is destroyed.<sup>8</sup> Sacrificing embryos, instead of massively using ASC, is at this time still necessary. The main reason is that the adult cells can only differentiate within a related group; they are not pluripotent. They can tell us less about cell division and the like. For instance, hESC can provide an in vitro model for developmental biologists to study cell fate during ontogenises.<sup>9</sup> This is impossible with the adult variation.<sup>10</sup>

The problem might already be partially solved. Recently adult human skin cells have been converted by scientists into cells that seem to have the properties of hESC, by activating four genes in the adult cell.<sup>11</sup> If this technique were to be perfected, the destruction of embryos might no longer be necessary to obtain hESC.

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<sup>7</sup> Even bizarre scenarios like that these clones will be harvested for their body parts or made into slaves of the human race (Herold 2006, page 49 and 105).

<sup>8</sup> See for instance the sites of The Family Council <<http://www.frc.org/get.cfm?i=PD02D5>> or different articles on the site of the CBHD; <<http://www.cbhd.org/>>.

<sup>9</sup> See Naveiras & Daley 2006.

<sup>10</sup> Further arguments are that ASC have their own problems. Somewhat exaggerated but still shocking; more than 3500 Americans have died because of complications with ASC, at least according to the National Centre for Health Statistics.

<[http://www.wired.com/medtech/stemcells/commentary/spinalcolumn/2007/04/spinalcolumn\\_0411](http://www.wired.com/medtech/stemcells/commentary/spinalcolumn/2007/04/spinalcolumn_0411)>

<sup>11</sup> Takahashi *et al.* 2007; Yu *et al.* 2007



At this moment it is unsure that these cells have the same potential or whether it is safe to transplant them. The costs add to the problem; the extra manipulation takes more time and money than the removal of existing stem cells from an embryo. For future research the use of embryos will have to continue. Other reasons why this is so are discussed in the second paragraph.

### *1.2 Possible Uses*

For years the use of bone marrow to cure Leukemia and other blood diseases has been a common practice.<sup>12</sup> Here, adult stem cells are won by extraction from the bone marrow and used to “re-create” the infected blood.

After ten years of research there are at this moment no approved treatments or human trials in which embryonic stem cells are used. With rats, broken spines have been healed using stem cells to regenerate the spine.<sup>13</sup> The regeneration potential of hESC creates possibilities with malfunctioning internal organs. Instead of replacing the entire organ in a risky operation, stem cells could be injected to “revive” the badly splitting cells. Auto-immune diseases like Crohn’s disease and reuma could be stopped by replacing the mischievous white blood cells with brand new flawless ones. hESC might also be used as a starting cell source for clinical hematopoietic reconstitution.<sup>14</sup>

At this moment the most likely candidates for the extraction of stem cells are left-over IVF-embryos. However, the hESCs obtained from these embryos are not genetically diverse enough to address the problem of immune rejection, by recipients of stem cell transplants. To combat this problem, some have suggested to create a public stem cell bank that represents a genetically diverse pool of stem cell lines. This bank would require the creation of embryos from gamete donors who share the same HLA-types (i.e., similar versions of the genes that mediate immune recognition and rejection).<sup>15</sup>

The problem of rejection might in the future also be solved by creating the patient-specific tissue. It is possible to create embryos to make patient-specific hESC. First, the nucleus of a certain donor cell is removed and placed in a donor egg, of

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<sup>12</sup> See for instance Gahrton & Björkstrand 2000.

<sup>13</sup> Herold 2006.

<sup>14</sup> Meaning a process that affects or promotes the formation of blood cells; see Martin & Kaufman 2005.

which the nucleus has also been removed. The somatic nucleus (the nucleus that does actually not belong there) in the reconstructed egg is reprogrammed by the egg, thereby making it possible to undergo embryogenesis. This is not a natural process, so it only happens with the help of artificial stimuli.<sup>16</sup>

With these, the somatic nucleus carries the nuclear genome of the donor of that cell. When the stem cells thus created are used in treatment of the donor, an adverse immunological reaction is unlikely. Two problems of organ donation could be solved this way; there would be enough (grown) organs available and the host's body will accept these.

Not all scientists agree that creation of medicines is the ultimate goal; the research on hESC can help us in fully understanding the developmental faze of the human body. Creating embryos through cloning technologies with cells that are known to have particular genetic mutations would allow researchers to study the underpinnings of genetic diseases *in vitro*. This can help us to save the lives of unborn children, or see how children's diseases develop and come to exist.<sup>17</sup>

These techniques can use ASC up to a certain point; it is quickly limited by the lack of pluripotency. To completely explore the possibilities, hESC will have to be used. The creation of embryos will be vital in that respect, since in order to create patient-specific cells or fully research *in vitro*, one must use a specially formed embryo.

### 1.3 Problems

All the techniques mentioned so far are for the bigger part future prospects; the technique is still in its infancy. Most tests have been done on animals and it is unsure if these treatments are suitable for human tissue. The more we know about the human genome, the more questions start to arise.

One of the problems that has to be tackled is in the diversification; it is hard to control into which of the 210 cell-types a specific stem cell diversifies. Apart from finding the correct stimuli being a nuisance, it can also prove dangerous. If cells

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<sup>15</sup> Faden et al. 2003 and Lott & Savulescu 2007.

<sup>16</sup> Burley 2007, p. 72.

<sup>17</sup> New York Times, August 14<sup>th</sup>, 2006;

<[http://www.nytimes.com/2006/08/14/washington/14stem.html?\\_r=1&adxnnl=1&oref=slogin&adxnnl\\_x=1221819548-4D+4/G4510rvjimYBZ9I4w](http://www.nytimes.com/2006/08/14/washington/14stem.html?_r=1&adxnnl=1&oref=slogin&adxnnl_x=1221819548-4D+4/G4510rvjimYBZ9I4w)>.

receive the wrong stimuli they might start to “run rampant” in our bodies; creating clutches much like a tumor.<sup>18</sup>

The practical problem is the limited number of embryonic stem cell lines in the world today. So far the source of hESC has been left-over IVF-embryos. These have to be maintained and stored at huge costs, and treated with caution since they are hard to replace. It would make the research in Holland, and the often unclear situations surrounding the donor (see chapter 2), much easier if it was allowed to create the research-embryos.

Which brings us to the mayor problem; the critique and opposition against the technology. If there was unanimous support the technology could leap forward. There are groups that indeed seek to do this at any time, but others feel very uncomfortable with the whole issue. Many people state that all the proposed ‘miracle cures’ are the promise of a future medicine wonderland, which is a deliberate deception we should not accept. The point that can be safely taken from this argument is a caution not to have too much high hopes.

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<sup>18</sup> Scientists are trying to tackle that problem.  
<<http://afp.google.com/article/ALeqM5hA2tIpd1cGv2Y4H-21nArfgM98cA>>.

## 2. Dutch Regulation

In order to provide a practical handhold in the discussion about research-embryos, let us take a look at their current legal situation. According to Article 18(2) of the Convention on Human rights and Biomedicine, the creation of human embryos for research is categorically prohibited. While this Convention was signed by the Netherlands in April 1997, it has not yet been ratified.<sup>19</sup> The Dutch administration found that a reservation on this Convention concerning the creation of embryos was in order, mostly since the scientific progress and societal acceptance of the technology rapidly increase. At one time, the use of research-embryos might become acceptable (even necessary) and binding the Dutch administration to a (pretty) definite ‘no’ might be unwise.<sup>20</sup>

In order to have clear national guidelines in relation to scientific and other uses of the embryo, the Embryo Law<sup>21</sup> was created in 2002. In a part of it the research with embryos not used for reproduction is specified. Both the donation of left-over IVF-embryos and research-embryos are regulated.

### 2.1 *The Embryo Law*

A prerequisite (Article 3) for all research on embryos is writing and submitting a proposal describing the research to the Centrale Commissie Mensgebonden Onderzoek (CCMO).<sup>22</sup> The CCMO has to give permission and can make suggestions. The basic grounds for allowance are that a) it is foreseeable that the research will lead to new breakthroughs in medical science b) which cannot be gained with other, less radical methods. It must c) comply with the demands of the right methodology of scientific research d) which is guided by ample scientists. Also, e) the research must comply with other reasonable demands. These criteria are level with those of Article 3 of the WMO (Wet medisch-wetenschappelijk onderzoek met mensen).<sup>23</sup> Any

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<sup>19</sup> Sometimes referred to as the ‘Bioethics Convention’, it’s full title is Convention for the Protection of Human rights and Dignity of the Human Being with Regard to the Application of Biology and Medicine: Convention on Human rights and Biomedicine (Oviedo, April 4, 1997). Only 10 countries of the more than 25 participating countries both signed and ratified the Convention.

<sup>20</sup> See Memorie van Toelichting, p. 26. There is a possibility to deviate from the Bioethics Convention in Article 36; if the national laws state different on the moment of ratification, a reservation is possible.

<sup>21</sup> Embrywet of June 20<sup>th</sup>, 2002. Link: < <http://www.vsop.nl/pdf/embryowet.pdf>>.

<sup>22</sup> Translated: Central Committee on Human Research.

<sup>23</sup> Translated: Law on Medical or Scientific Research on Humans.

institute that wishes to conduct research must have or create a code of conduct which should answer to the standards of Article 2 WMO.

### *2.1.1 Donation*

The donation of embryos and reproductive cells is regulated in Articles 5 to 9. First, the donation of reproductive cells for scientific research is regulated in article 5. This is only possible by capable adults that are at all times informed about the scientific use and goal. Their consent must be acquired in writing and any payment for the deed is out of the question. The given consent may be withdrawn at any time if the cells have not yet been used or modified, without the need to give a motivation.

Article 8 allows the donation of left-over IVF-embryos by the ‘parents’ for research purposes with hESC. The biological parents must be of age and capable of reasonable evaluation of their standpoint in the matter. Only education or discoveries in healthcare or scientific areas is accepted as a goal of said research; Article 24(h). Under strict circumstances, a third party can donate the embryo as well; Article 12.

Finally, in Article 9 the donation of reproductive cells with the goal to create embryos is regulated. This is only permissible if the use of the embryonic cells is the only available way to perform a transplant or for research allowed in this Law (the research on infertility or genetic diseases; Article 11). The same rules as in Article 5 apply concerning the donor and his or her consent.

Article 6 is about the information the donor receives. It should be made understandable for him or her, and adequate time to think the decision over must be provided. Any other use of the cells other than what was originally agreed upon with the donor is not allowed. A change of scientific goal or term of use must be done in conclave with him or her. If the donor wishes, he or she can receive information about what happens with the material periodically.

When consent is retrieved, the cells are planned for different purposes, the term of use is over or the donor passes away and did not give permission of use until after his or her death, Article 7 demands the destruction of the reproductive cells. These two articles are viable on all three forms of donation.

The research on stem cell *lines* as such is understandably not regulated in the Embryo Law. Human cell lines deserve to be treated with a certain level of respect,

but no longer possess the same potential as when they form part of an embryo. One good example of this distinction is the so-called EU Tissue Directive, which regulates 'standards of quality and safety for the donation, procurement, testing, processing, preservation, storage and distribution of human tissues and cells' explicitly including hESC in the preambles.<sup>24</sup> Its main objective is not the protection of the material itself, but the correct storage and use to 'ensure a high level of protection of human health' (Article 1). The distinction between the embryo and its cells is clear; this is about the correct use of material, not potential human beings. So there is a legal distinction between the embryo and the cells that form this embryo once they have been removed.<sup>25</sup>

### *2.1.2 Still Forbidden*

Even though Article 9 regulates the donation of reproductive cells for the creation of embryos, it has so far been forbidden to create embryos for scientific research unless this is done in relation to infertility or genetic diseases (Article 11). The harvesting of stem cells from embryos created only for that purpose is explicitly forbidden (Article 24(a)). In that sense, the Dutch Law follows the Bioethics Convention. An important reason is the unfamiliarity of the public with the technique. The societal support is not yet big enough.<sup>26</sup>

However, the Embryo Law deviates from the Bioethics Convention. Article 33(2) stated that the ban of Article 24(a) could be lifted after 5 years, after careful political evaluation. If this happened, the donation of reproductive cells to create embryos for hESC is allowed, but only if it is for a transplant that is impossible without doing so; Article 9(1a). At the time, the opening for research-embryos was left there because it seemed that in the near future it might help people who need an organ- or other transplant. It was felt the 'breach on the respect for human life' could be justified by the relieved suffering of these patients.<sup>27</sup>

The lifting of the ban has so far not happened, even though after the 1st of September 2007 the ban had to be re-considered. Instead of this, the Dutch Parliament

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<sup>24</sup> See nr. 7 of the Preambles of the Tissue Directive.

<sup>25</sup> As stated on page 32 of the 'Memorie van toelichting'. A further explanation of this topic can be found in chapter 3.

<sup>26</sup> As stated in the 'Memorie van toelichting', page 31.

<sup>27</sup> Again page 31 of the 'Memorie van toelichting'.

decided to drop the 5 year term time since the high hopes that lived at that time of big scientific breakthroughs had all but faded. By leaving the term open, this left more room to respond to new scientific and social developments.<sup>28</sup> In other words, the creation of embryos for research is (legally speaking) in limbo. An interesting side-note is that the Christian party in the parliament also explained its wishes to further develop ASC-research instead of hESC-research, since it felt uncomfortable with the destruction of the embryo.<sup>29</sup>

That is not the only recent trouble the administration had with the subject of hESC. A few months ago a critique was published on a law that partly conflicts with the Embryo Law.<sup>30</sup> This law, the Wet Foetaal Weefsel (WFW),<sup>31</sup> regulates the use of foetal tissue that is left after an abortion. The code of conduct that was created based on the law is much stricter than the law itself. It forbids doctors to try and save foetal tissue to use it for research. A conclusion of the evaluation was that this leads to a lot of unclear situations; one of the suggestions was to re-evaluate the entire system surrounding embryos and, in relation to that, the part that hESC have to play in this.<sup>32</sup>

Steps were taken to make legal room for research-embryos. There even was a set date on which the subject would have to be debated; there were indications that the ban might be lifted. The reasons why this was changed to a vague term are brief and politically correct; it is hard to see what they really mean. Delving further into the issue on a political level could be a logical next step, but since the debate was more or less stopped in its tracks and simply moved to the future, other sources must be found. The next part will present three different moral views in the debate; their arguments will hopefully provide an answer.

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<sup>28</sup> The change of the law was made on June 18<sup>th</sup> 2007, under nr. 31.046.

<sup>29</sup> <<http://www.senat.nl/9324000/1f/j9vvgh5ihkk7kof/vhlpjdun0mwig>> under Documenten EK.

<sup>30</sup> See page 31/32 of the Evaluation of the WFW.

<sup>31</sup> Translated: Law on Fetal Tissue.

<sup>32</sup> As is also stated in NRC Handelsblad, Wednesday 6<sup>th</sup> august 2008.

## **PART TWO: THE ETHICS**

Research-embryos remain illegal. Although it is acknowledged that this could change one day, the administration seems not too eager to burn its fingers on the issue. It is a difficult subject to tackle, certainly when ethics get involved. Most people, when discussing this subject, will use arguments that are discussed in an intuitive manner, and these usually resolve around the question whether the embryo should be considered as a human being.

In the next chapters three different schools of thought with their own view and input will be discussed. The most important points of these views will be compared in part three.

### **3. Utilitarian calculus**

In this chapter, we will see some objections but more arguments pro the creation of embryos. First, an overall common denominator of the utilitarian standpoint is explained. We then explore what preference utilitarians have against or pro the destruction of the embryo. The following paragraph contains the main critique against utilitarianism and tries to soften that. At the end of the chapter we first explore why utilitarians might feel an obligation to pursue the technology and a utilitarian viewpoint on why we should abandon it.

In classic hedonistic utilitarianism<sup>33</sup> the goal is maximizing the total sum of happiness in the world; the worth of an action like the destruction of an embryo is solely determined by its contribution to the overall utility. Utility is here meant as either happiness or pleasure against sadness or pain, or as the satisfaction of preferences for a preference utilitarian. This does no longer automatically mean ‘the greatest good for the greatest number’ since ‘the greatest number’ is regarded as being too problematic.<sup>34</sup>

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<sup>33</sup> See for instance Bentham 1789 and Mill 1861.

<sup>34</sup> This was done because it conflicted with the ‘Mere addition paradox’ as developed by Derek Parfit in his 1986s book *Reasons and Persons* (Oxford University Press).



When applying this line of thought to the use (and destruction) of embryos for their hESC, the most logical outcome is that this increases utility. The utilitarian viewpoint is that pain or a handicap is a burden; the need to minimize that burden is a logical next step. This seems in concurrence with society's view. Human beings have for centuries tried to relieve people of the limitations that both pain and handicaps present; not just with medicines but also things like reading glasses. We even try to prevent diseases before they actually happen; it is now common practice to give children shots against polio and such diseases. Some go so far as to suggest that in this there lies a duty to enhance ourselves.<sup>35</sup> This outcome remains the same if only 50% of what is now promised becomes true.

The destruction itself would hold no strong principled reasons for most utilitarians to protest, except maybe a preferentialist utilitarian; see below. What would render the decision in favor of the technique is that the use and research of hESC could help many people. The question whether the embryo is a person that has human rights or feelings is irrelevant to most utilitarians. If the needs of sick people can be fulfilled, he or she should not hesitate to sacrifice an embryo, be it a person or not. The saving of existing life takes a priority over the creation of new life.<sup>36</sup> Up to a point we all can agree on that; if the choice is to either save an island with a hundred ship-wrecked and starving people or an island full of embryos that need a womb to develop, the choice is not so hard.

### *3.1 The Preference of the Embryo*

There is a form of utilitarianism where the question of having a personality does make a difference. The preference utilitarian acknowledges that the (intrinsic) preference of a person must be satisfied to achieve maximum utility. The individual's wish not to be killed, even if this is for the greater good, is taken into account in the utilitarian calculus. What does not change is that the death, even if it is against the will of the individual, could be justified if the dissatisfaction of said person is sincerely outweighed by the greater (future) satisfaction.<sup>37</sup> A preferentialist utilitarian

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<sup>35</sup> See Harris 2008, p. 19.

<sup>36</sup> Imagine a doctor refusing to help a sick person because he is trying to procreate. Harris 2008, p. 176.

<sup>37</sup> Tannsjo 2007, p. 332.

would therefore have no strong inclination to help the embryo, even if he or she sees the embryo as a full person with its preferences sorted out.

Another form of this argumentation is that of future of value. If it is totally clear the embryo will become a person who leads a good life and with that life can increase the utility, it must be saved.<sup>38</sup> The preferences of parents could be taken into account as well; if they are deeply harmed by the destruction of their embryo their utility will decrease. Both these arguments would have some standing against left-over IVF-embryos, but do not count for embryos created for research only, since they have (effectively) zero chance of ever becoming a human being with preferences. And there are less problems with 'parental' feelings (see also chapter 3 on this), since the donor does not donate a potential living thing but reproductive cells. So interestingly enough, where the use of IVF-embryos in stem cell research has been legally accepted and that of research-embryos has not, the preferentialist utilitarians has less problems with them than with the IVF-embryos.

### 3.2 Critique

An argument often used to criticize the utilitarianist viewpoint is that for the maximization of the overall utility individuals can be sacrificed. To put this to the extreme; when looking at the true nature of utilitarianism, sometimes *not* killing a person would be morally unjust.<sup>39</sup> This does not mean that utilitarians endorse murder. Yes, sometimes this theory would allow for killing an individual, but only if it maximizes the total wellbeing of society; like the killing of a tyrant by the mob. Most legal characterizations of murder are in agreement with the utilitarian view. Part of the reason is that, by killing someone, you deprive them of a future life worth experiencing. Another reason is that everyone should have an equal legal right to life, because otherwise we would not feel safe and this would decrease our utility.

For that reason, if the law still prohibits the creation of embryos for research because society is not yet ready for it, utilitarians could partially agree with that. Provided other methods are being sought to help increase the utility; for instance the use of IVF-embryos. This is another reason utilitarianism is often criticized; the (utility of) the reference group pretty much determines the outcome of the question, not the morality of the action itself.

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<sup>38</sup> See for instance Marquis 2005.

The destruction of the IVF-embryo for research would, even if the law forbade it, not present the same problem. One could argue there is a utilitarian obligation to extract hESC from left-over IVF embryos. The other options with such embryos (once they exist) are discarding or storing them at enormous costs, which does nothing for the overall utility but puts a burden on it in terms of time and money.

The whole discussion around the use of IVF-embryos is a case in point. The Bush administration in the US said that the approximately 400.000 embryos in IVF-clinics should all be 'adopted' by the public, rather than using them for stem cell research or discarding them. This was done without recognizing that already there are hundreds of thousand young children who have little or no family; they were for the moment forgotten because some embryos needed to be saved.<sup>40</sup>

So does this mean that utilitarians would have a problem with the creation of embryos because the law forbids it? Up to a certain point. There is still legal room for the allowance of research-embryos, and the current legal limbo does little for the utility. That everyone should have equal right to life does not count for an embryo that is more or less created to be donated to the greater good.

### *3.3 An Obligation*

So from a utilitarian viewpoint, the not pursuing of hESC-research could be morally wrong. In other words, it finds a need to pursue the technology. What has become clear from chapter 1 is that if we want a full understanding and use of this technology, not just some treatments on specific groups of cells, the use of research-embryos is necessary. No-one denies that the research is in its infancy and it may take years to fully realize its potential, but the creation of embryos could help to speed up the process.

This brings us to an interesting question; if we do not allow the creation of embryos for the extraction of hESC, would that be morally unjust from a utilitarian viewpoint? It has been argued that enhancing ourselves is morally good; it makes us better people, less slaves to illness or premature death, less fearful and dependent.<sup>41</sup> So we should all participate in new technologies that seek to help us further, like the research with hESC. This means the entire society should be willing to not only

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<sup>39</sup> Tannsjo 2007, p. 335.

<sup>40</sup> Further explained in Herold 2006.

<sup>41</sup> Harris 2008, page 185.

support but also participate when necessary. It can be said that at the moment we are not really stimulated to do so; when looking at The Declaration of Helsinki<sup>42</sup> and the CCMO Guidelines or even at the Embryo Law and the Tissue Directive,<sup>43</sup> one can see they are more about protecting individuals from science than about participation.

There seem to be two reasons why we should feel obligated to participate in research. The first is the obligation not to harm others in its weaker form; the duty of beneficence, also referred to as the ‘rule of rescue’. Medical research can clearly relieve sick people from the needs created by their disease.<sup>44</sup> Or, to put it in a more utilitarian way, in order to relieve the group that supports the sick, their family, friends but ultimately also society (in taxes etc.) we have a moral obligation to help the sick.

The second obligation is the appeal to basic fairness. All of us have had benefits from medical science; many would have suffered more if for instance antibiotics had not been created. We accept these benefits and therefore are in debt to them; in other words we have an obligation in justice to contribute to the social practice which produced them. Otherwise we would be simple free riders who morally do not deserve any extras. This does not mean that everyone should be enforced to give all the blood and sperm and organs they can, nor that people should take disproportional risks towards their own life and health. But when one can help, the appeal to basic fairness gives him or her a strong reason to feel compelled to do so.<sup>45</sup> Also in this argument traces of a utilitarian thought can be found; the individuals that can, should help to increase the utility.

In the case of the research-embryo, the matter becomes again more complicated. This is about potential human material which, as most regulation agrees, deserves a certain level of respect. There may be no life at stake<sup>46</sup> and the donation of reproductive cells seems a relatively small sacrifice to make, if one can help people

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<sup>42</sup> World Medical Association 1964.

<sup>43</sup> For instance the fact that every pain is taken to inform the patient or that the patient can withdraw any time he or she wants without reason. See also the critique on the WFW mentioned in paragraph 2.1. Or think about the difficulties surrounding organ donation and the correct regulation of that.

<sup>44</sup> This argument is explained more elaborate by Harris 2008, page 188/189.

<sup>45</sup> Nor does it mean that the ones who participate have a stronger *right* to better healthcare than those who don't. Harris 2008, page 190.

<sup>46</sup> That is, if one accepts as most utilitarians do that the embryo is not a living thing.

with it. But it would be wrong to despise all people who do not wish the research-embryo to be created or refuse to help in that respect. A distinction can be made; there are those who support the use of IVF-embryos and those that are against all use of hESC. The first group are not really free riders and do follow the rule of rescue to a certain degree. They may not live up to the utilitarian view on things but could be excused since they provide a reasonable alternative and seem to agree on the utilitarian standpoint towards the destruction of the embryo. The second group would have to stand more critique; they mostly promote the use of ASC but as we have seen this is at the moment just not good enough. They could be blamed for being free riders who also do not respect the rule of rescue.

### *3.4 All in Favor?*

There are situations where, in order to maximize expected utility and happiness, one should not act at all. For instance one should not constantly ponder whether ones partner should be traded for a better one, or the care of one's children should be abandoned in favor of a life-long ambition to travel around the world. This would lead to the devastation of one's personal relations.<sup>47</sup> Could it be argued that the same applies to the creation of research-embryos?

The utilitarian view is so far in favor, even somewhat obligated to pursue the technique and to maximize the use, research-embryos will have to be created. Still, arguments against can be found. The technique cannot yet relieve people, still being in its developmental stage. And if we presume that society strongly disagrees with the creation of embryos, this could present a different view. In order to prevent a mayor decrease in the happiness and feelings of safety of people, or not to hurt the preferences, it would then be better to seek alternative ways of helping the sick. However, the utilitarian calculus would be quick to seek ways to undermine this line of thought since this is more about the method then the cure.

A big reasons stem cell research is a technique that could help in the future is the ageing of people. In the Netherlands, the percentage of elder people no longer working has increased steadily over the last century, while the percentage of young

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<sup>47</sup> Tannsjo 2007, p. 341.

people to balance that has hardly increased.<sup>48</sup> So it will be very hard to support the older people. They will sooner be sick and unable to contribute in a meaningful way in society. Stem cells might help to turn the “gray wave” into a “silver wave”; making sure that people are really able to work longer, and diminishing the effects of terrible diseases as Alzheimer and all kinds of brain- or organ failure.<sup>49</sup>

Another counter-argument comes from the reasoning that is referred to as utilitarian bioethics. It recommends the directing of medical resources where they will have the most long-term effect for good. This is based on the premise that the distribution of resources is a so-called zero-sum game<sup>50</sup> and that decisions of this kind should logically be made on the basis of each person's total future productive value and happiness, their chance of survival from the present, and the resources required for treatment.

Here, we find a utilitarian argument against the destruction of embryos who have a conceivable future as a human being. Rather than sacrificing a life full of potential (the embryo that will grow out to a human being that can contribute to the overall utility for many decades to come), the research should be stopped. The people who are disabled or terminally ill are in comparison no longer productive. Cost of medical treatment or maintenance of those people will most likely outweigh their economic value. The research on stem cells is not yet as far that it can really restore people or act as a medicine. And the research is not cheap. The people working on it could also be used in other medical fields. In order to maintain more economical efficiency, medical resources should be freed by not treating them. Patients with a high chance of survival and return to a productive (and happy) status should come first. This would lead to an overall net increase in wealth and happiness, in other words a greater utility.<sup>51</sup> The medical process is in this argument not as important as the direct treatment of people.

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<sup>48</sup> As is shown in the graph by the CBS (the central bureau for statistics) found on <<http://statline.cbs.nl/StatWeb/Table.asp?HDR=G1&LA=nl&DM=SLNL&PA=37556&D1=3-10&D2=1,11,21,31,41,51,61,71,81,91,101,l&STB=T>>.

Also, a nice thing to play around with can be found on <<http://www.cbs.nl/nl-NL/menu/themas/dossiers/vergrijzing/cijfers/extra/bevolkingsspiramide.htm>>.

<sup>49</sup> “Silver wave” is a term used by Prof. dr. D.H. Sipsma (NRC Handelsblad, 1 March 2008).

<sup>50</sup> Basically meaning that a participant’s gain or loss is balanced by the loss or gain of another.

<sup>51</sup> This is most commonly referred to as utilitarian bioethics. For more on this topic, see Singer 1993 (in favor) and Koontz 2002 (against).

A counter-argument to the last argument is quickly made. If embryos were created for research they would never have the chance to become a full human being. Furthermore, if we were to follow this path, all medical research, including the research on stem cells, would be banned and the sick would be discarded as ‘nonpersons’;

Not all utilitarian thinkers would automatically agree that the creation of embryos for their use in stem cell research would be a great idea. Others feel obligated to contribute to the research. The fact that a research-embryo has virtually no chance of becoming a person helps in this respect. The majority of utilitarians would agree with the creation of embryos, since this can help research a great deal (see chapter 1) and the utility will increase.

As stated before, the problem with utilitarian calculations is that they often outrage our sense of justice, partly by authorizing the pursuit of the larger benefit at the cost of individual human rights.<sup>52</sup> The next chapter will look at these rights, and see if they are indeed violated.

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<sup>52</sup> Brownsword 2005, p. 543.

## 4. Human Rights View

In the preamble of the Bioethics Convention it is stated that measures will be taken to ‘safeguard human dignity and the fundamental rights’ with regard to the application of biology and medicine.<sup>53</sup> Other texts share the thought that biotechnology and medicine should always respect both human dignity and human rights.<sup>54</sup> It is not easy to determine what ‘dignity’ and ‘rights’ mean in this respect but we intrinsically feel that this is something we should agree with. Stem cell research should only be allowed if no human rights are seriously harmed. When taking the human rights as a starting point, the question whether we should create research-embryos boils down to the question if this violates any of those rights. To answer this we will look at the two main players: the embryos and the donors of the material.

### 4.1 *The Rights of the Embryo*

Most legal systems and human rights laws find no reason to give embryos or foetuses the right to life. In two recent cases, the European Court for Human Rights (ECHR) confirmed (adding to substantive precedents) that embryos lack both moral and legal personality and therefore have no special rights for protection as far as the law of most jurisdictions is concerned.<sup>55</sup>

In the Netherlands there is the Embryo Law which states how far we may go with embryos in research, plus other laws that regulate different aspects. These mostly protect against wrongful use of the embryo; their destruction is in principle allowed.

The reasoning here is pretty simple; people are considered as autonomous persons, so they should have human rights (and obligations towards those rights and the rights of others). Foetuses are not autonomous, nor are they persons. In order to qualify as a person, an organism must be capable of having experiences, interests and wishes. The embryo has none of these, and cannot be seen as having any human rights.<sup>56</sup>

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<sup>53</sup> Convention on Human rights and Biomedicine.

<sup>54</sup> For instance the *Universal Declaration on the Human Genome and Human rights*, UNESCO, 29<sup>th</sup> Sess., at 41, 29 C/Res. 16 (1997).

<sup>55</sup> ECHR *Vo v. France*, July 8 2004 (appl. No. 53924/00) and ECHR *Evans v. United Kingdom*, March 7, 2006 (appl. No. 6339/05).

<sup>56</sup> Deyleveld & Brownsword 1998.



This does not mean the embryo is entirely without protection. The Bioethics Convention does provide that, where the law permits research on human embryos (created for some other purpose as in an IVF program), ‘it shall ensure adequate protection of the embryo’. In the absence of any guidance as to the meaning of ‘adequate protection’, we might translate the Convention as requiring that human embryos should be treated with respect.<sup>57</sup> The same occurs with the Embryo Law, where the permissible use of embryos in research is limited to noble goals such as helping science forward.

With the creation of embryos the situation changes, supposing this was allowed in the law. When we create an embryo with the sole purpose to destroy it, surely we do not treat it with respect? The current instruments that are in place to show respect are more codes of conduct on how to correctly destroy and use the (cells of the) embryo; a regulation on human material. Still there would be no legal reason to condemn the use of research embryos, which is one of the problems with human rights; if a certain action has been legally allowed, the protest quickly falters.

But human rights are more than just laws. A basic feeling is that a practice which has benefits that outweigh the dangers still may outrage our sense of justice or rights or human decency; if so it should be prohibited.<sup>58</sup> This comes from the reason why we feel that everyone should have human rights; the stock answer is “Because we have human dignity.”<sup>59</sup> Now constructive use of this argument from a human rights view is a difficult thing to do, as can be seen in the next paragraph.

#### *4.1.1 Human Dignity*

In the context of creating embryos for research, the question for many people in a human rights context is whether this and other new technologies are an infringement on dignity. Just look at the preamble of the Universal Declaration of Human rights as adopted by the UN in 1948.<sup>60</sup>

The problem with this concept is that it is ultimately vague but widely used. In many documents, the concept of human dignity is used in the conventional legal and

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<sup>57</sup> Brownsword 2002, p. 570.

<sup>58</sup> Brownsword 2005, p. 543.

<sup>59</sup> Brownsword 2005, p. 546.

<sup>60</sup> United Nations General Assembly. *General Assembly Resolution 217A (III), UN Doc A/810*. New York: United Nations General Assembly Official Records; 1948. Universal declaration of human rights. It states that “recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice, and peace in the world”.

ethical manner to emphasize the right of individuals to make autonomous choices.<sup>61</sup> Here, human dignity is a means of empowerment. Some thinkers go so far as to suggest that this is the only appropriate normative use of the idea of dignity.<sup>62</sup> When talking about science policy, dignity is increasingly seen as a means of constraint; see f.i. the Costa Rica draft on human cloning, where the “respect for the dignity and basic rights of the human being” must be maintained in the face of the “threat posed by experiments in the cloning of human beings”<sup>63</sup> or the ‘ordre public’ restriction which has been used to deny patents on hESC-cells in Europe.<sup>64</sup>

In using it as such, it is meant to reflect the broad social or moral position that this particular activity is contrary to public morality; a justification of a policy response. Usually this policy is intended to limit or stop the given activity. Public debate could be silenced in this way, and what’s really at stake becomes blurred because the concept of the infringed dignity is still unclear. So this use of dignity will not necessarily represent a broadly accepted social value but a particular worldview.<sup>65</sup> As we will see in the following chapter, the dignitarians adopt this way of thinking.

From a human rights viewpoint, constructive use of dignity would be if it were used as a facilitator of policy debate, not a final argument to shut down discussions. So instead of using it as a slogan for possible harm, it should be specified more; as much as is possible. An interesting question would for instance be if the dignity concerns about stem cell research go beyond disputes about the moral status of the embryo.<sup>66</sup> If we accept that the embryo is not a bearer of rights but does deserve our respect to a certain extent, because otherwise this infringes our sense of justice, we may accept the destruction of them for research. The issue of research-embryos is one step further; here our sense of justice is somewhat alarmed. Still, if measures are taken to make sure these embryos are for instance destroyed after a certain period, it may become acceptable. Any protest on behalf of our sense of justice should be adequately described and explained.

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<sup>61</sup> Caulfield & Chapman 2005.

<sup>62</sup> See for instance Macklin 2003.

<sup>63</sup> United Nations General Assembly. Annex I to the Letter dated 2 April 2003 from the Permanent Representative of Costa Rica to the United Nations addressed to the Secretary-General: Draft international convention on the prohibition of all forms of human cloning. UN Doc. A/58/73. 2003 April.

<sup>64</sup> European Group on Ethics in Science and New Technologies. Opinion of the European Group on Ethics in Science and New Technologies to the European Commission: Ethical aspects of patenting inventions involving human stem cells, 2002.

<sup>65</sup> Caulfield & Chapman 2005.

<sup>66</sup> Caulfield & Chapman 2005.

#### *4.2 The Protection of the Donor*

The second party that is important in the question if the creation of research-embryos violates human rights is the people whose contribution makes their creation possible: the donor. The discussion is not about them having human rights or not, but about if the obligations towards their rights are fulfilled.

We have seen already in the Embryo Law that all donors must be of age and capable of reasonable evaluation of their standpoint in the matter. When dealing with the donation of such material, only the consent of the donor him- or herself is allowed. So minors or people under care (not capable of making these decisions) are excluded. Another important thing is that payment is not allowed. This greatly diminishes the chance that people would be forced to donate their material, since there is no financial gain.<sup>67</sup> The Articles 6 and 7 of the Embryo Law further decrease disabuse of the material; wrongful use of donated material must lead to its destruction.

There are, however, points of critique. To contribute to the safety of the used tissues, the Tissue Directive requires that all cells and tissues used for clinical application in humans must be traceable from donor to recipient and vice versa (Art. 8). This may prove to be a problem in regard to stem cells. Couples might be less willing to donate embryos and, in a further extent their reproductive cells, if their connection to them as 'parents' cannot be severed.<sup>68</sup> Strangely enough this Directive does not deal with the compensation of parents or patients who have been injured by stem cell therapies. Another matter is whether the patient should be informed that his transplant or medicine was acquired by destroying embryos.<sup>69</sup> If this is not correctly regulated, it could lead to weird situations where patients and doctors may hold a donor responsible for his or her genetic material going haywire.

To prevent this to a certain extent, i.e. to safeguard the obtainment of 'correct' cells, it is required that donors provide a medical history and allow the donated material to be tested for certain infectious diseases and genetic traits. Questions of privacy arise; testing can produce sensitive information which should be kept confidential. If the donor wishes, he or she must be informed about this. But that's a hard choice to make when donating material.

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<sup>67</sup> Except maybe on the black market.

<sup>68</sup> As explained by Stewart 2005.

<sup>69</sup> Even though its main goal is the protection of human health; Article 1. See also Stewart 2005.

Another safeguard is that all the cell procurement is carried out by a person with appropriate training and experience (art. 5). Also, each tissue establishment should happen under a responsible person; this person should have certain credentials and at least two years of experience in the field (art. 17). The biggest task of the responsible person appears to be that he or she sees to it that the Directive is followed. This is in line with the rather strict guidelines that are provided and supervised by the CCMO in the Netherlands.

So the embryo can expect some protection from a human rights-thinker on behalf of the sense of justice; this would have to be made more concrete and not just used as a final argument. The donor, meanwhile, has different instruments in place that seek to protect him but still some questions on privacy and correct use of genetic material remain. All in all one can conclude that, also because in a legal sense there is room for the creation of research-embryos, when looking at human rights this creation is not in the safety zone but can be allowed.

## 5. The Embryo and the Dignitarian view

Dignitarians are broadly those who talk about human dignity, the human uniqueness and the soul of a human that can be harmed by wrong uses of the body. They find that every person has an intrinsic right to human dignity; regardless of stage of life. In the previous chapter, human dignity in relation to human rights was discussed. It was said that it is often used as a conversation stopper, and this is exactly how the so called ‘new-dignitarians’ prefer to use it. They do not see it as the underpinning of human rights or individual autonomy but draw upon a mixture of Kantian, Catholic and communitarian credos to condemn any practice, such as reproductive cloning or indeed hESC-research, which they judge to compromise human dignity.<sup>70</sup>

We start here with a short view of the Kantian school of thought; part of it is the sanctity-of-life theory. The feared ‘holistic view’ on humans will then be briefly mentioned. When talking about human dignity and the sanctity of life, the presumption is that the object is a human being (a person). So in this chapter a more detailed analysis of the question if the embryo is a living thing is inescapable. At a certain point we will accept that this is so and see if the defense of research-embryos is still possible.

The deontological and utilitarian viewpoints are often described as opposites of each other. The first takes the outcome of a certain action as the basis for right or wrong, the second looks at the action that leads to the outcome. In the deontological view, the actions of the ‘agent’ is at the center of morality and there are certain actions that must never be performed. One of those is that a human being should never be treated as a means but also as an end in itself.<sup>71</sup> This gives a first problem with the research embryos; these are seen as potential tools, not potential human beings. But there is another (and bigger) problem. Dignitarians would have little trouble in believing in the sanctity of life. The deliberate and active destruction of potential human life is intrinsically wrong, even if this would save many other lives.<sup>72</sup>

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<sup>70</sup> Brownsword 2005, p. 543/544.

<sup>71</sup> Kant 1785.

<sup>72</sup> Tannsjo 2007, p. 331.

In the case of embryos the question if the embryo is a human being becomes important. If so the deriving of hESC would for dignitarians qualify as murder; not per se because the embryo has certain human rights but because it is sacred, because it is a life. The view does not depend on or presuppose any particular rights or interests.<sup>73</sup>

A true deontologist will see the difference between the murder on an embryo and the murder of a person. Killing an embryo is a violation of the sanctity of life, as is killing a person. But in the killing of a person one violates also a moral right. Here, a deontologist could find a form to accept the use of embryos in research (or other issues like abortion).<sup>74</sup>

### *5.1 Man as a Machine*

The argument that the embryo is a living thing and should therefore be treated with as much dignity as possible forms an intrinsic part of the discussion about hESC. The embryos used are seen as a potential tool; used as a means by experimenting with them. This argument could be seen in a broader context; our current moral culture, how we think about and seek to resolve moral issues. Many people and certainly dignitarians fear a holistic view of the human race; that all the breakthroughs in science and biotechnology will reduce us to raw material, a cluster of cells and organs that can be used. No longer as beings who have a unique soul. In other words, man is no longer a man, but a machine that can be torn apart and re-assembled as scientists see fit. It is feared that the business side will prevail over ethical issues and scientific rigor. Especially in the moral discussion about hESCs the utilitarian calculus is often blamed; the well-being of human embryos takes a backseat to the greatest happiness of the whole.<sup>75</sup>

Human rights, laws and committees like the CCMO try to ensure a certain level of respect, but still the embryo in stem cell research is indeed seen more as a resource, a means, then as an end in itself. The acceptance of the creation of embryos just for their cells would make matters worse; here the embryo truly is a tool that, might experiments with one stem cell line fail, can just as easily be replaced by another.

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<sup>73</sup> Dworkin 1993.

<sup>74</sup> Tannsjo 2007, p. 334.

<sup>75</sup> See Hollinger 2001.

Partly this ‘doomsday’ view has an echo of the mad scientist who does whatever he or she wants in his secluded castle on the mountaintop, tempering with nature’s way in an unholy manner. It does clearly state that many people seem to emphasize mostly the “yuck” factor.<sup>76</sup>

The statement that many could be helped by the technology is not found convincing enough; it is seen as another reason to condemn the research. There are two reasons for this. One is that we have the possibility to change the contours of human existence, the natural ‘trajectory’, the ebb and flow from conception to death, of human life by greatly expanding it.<sup>77</sup> To do this we have to use an unnatural way of getting the cure, which is worse than not doing anything at all. In the spirit of enhancement we will lose what makes us human.<sup>78</sup>

The second is that compassion for the sick and disabled is used as the virtue above all virtues; if one waylays it with any other moral claim one is insensitive and has a lack of empathy for others. But it should not stand alone, since it mostly circumvents thought and prompts into immediate action. It presupposes that an answer has already been found to the question, ‘What needs to be done?’<sup>79</sup>, while this is far from clear. The compassion will lead further to a form of moral nihilism.

The second objection states that the claim of helping people is an empty one, a final argument. This can just as easily be reversed. The words ‘respect for the human dignity’ are by dignitarians used in exactly the same way; see also chapter 4.

## 5.2 *The Life of the Embryo*

The objection of many dignitarians is not against stem cell research as a whole. They have little or no problems with the use of ASC; this technique is one they encourage.<sup>80</sup> But the embryo, taking over from the Catholic view, is a living thing from the moment of its conception.<sup>81</sup> The logical outcome is that the deriving of the ICM for the creation of hESC is the murder of a human being for their cells. And

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<sup>76</sup> Harris 2008, p. 4

<sup>77</sup> Lauritzen 2005.

<sup>78</sup> For some rather strong counter arguments against this claim, I refer to Harris 2008, first and second chapter.

<sup>79</sup> O’Donovan 1984, p. 11.

<sup>80</sup> Some argue that the use of ASC is just as morally wrong; see Lauritzen 2005.

<sup>81</sup> The Bible is not clear on this, but since Pope Pius IX stated that life begins at conception in 1869, this has mostly been the view; Townsend 2004. For a more “modern” view which shares (mostly) the same idea, see Meilander 2005, p. 29.

what is absolutely unacceptable is the killing of one human to save another.<sup>82</sup> Life, even early life, is sacred and should always be protected. They feel we should focus on a technique that does not compromise the dignity of human beings; it is the wrong method to find a cure.

Some argue that ‘the debate (...) has focused on the enormously divisive issue of embryo status. It (...) seems almost choreographed, the steps all too familiar from the dance of abortion politics’.<sup>83</sup> This is, however, more a political than an ethical argument. It states we should ignore points made by strict dignitarians, since their arguments will not change. The question of whether or not an embryo should be considered a human being is enormously difficult; to answer it in a satisfactory manner for all parties involved is close to impossible.

The Catholic Church has been mentioned above and this may give a wrong impression that all spiritual people follow the sanctity-of-life view; that all true religious people are against any kind of hESC-research and especially the creation of research-embryos. The next subparagraph will show that this is not true.

### 5.2.1 Different Views

What is interesting is that there are also purely religious arguments that counter the ‘life from conception’ view. For instance the view of St. Augustine, who stated that after 40 days of conception<sup>84</sup> the soul enters the body, thereby creating personhood at that moment. Or the “breath of life” (Genesis 2:7); personhood is established with a baby’s first breath. There are also those who make a distinction between embryos in the womb and embryos outside.<sup>85</sup> The embryos outside the womb, for instance left-over IVF-embryos or those created especially for research, should be treated differently than the embryos that are really meant to become human beings.

Other religions each have their own thoughts about the embryo and stem cells. In the Jewish faith the research on hESC is permitted as long as it is done for the healing of humans, not for enhancement.<sup>86</sup> Muslims find that life begins after 120

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<sup>82</sup> Bishop E. Sgreccia, on <<https://www.cwnews.com/news/viewstory.cfm?recnum=20502>>

<sup>83</sup> Lauritzer 2005; see also Chapter 4 of Herold 2006; *Hijacked by the Politics of Abortion* .

<sup>84</sup> The weak-minded women *naturally* needs twice as long (80 days).

<sup>85</sup> An argument of Schrotten in Trouw 10 June 2008

<sup>86</sup> See Jakobovits 2002.



days or four months, which can be derived from the Koran (39:6).<sup>87</sup> They do seem to have problems with the creation of human embryos just for research, but might make an exception in life-threatening situations.<sup>88</sup> Hindus adept a somewhat utilitarian line of thought. They state that life begins at conception, but the destruction of such a life can be measured against a greater good such as the healing of people. It is not too far-fetched to accept the creation of embryos for research, since utilitarians broadly do the same. And finally, the Buddhist position, which seems somewhat incoherent.

Abortion is bad since life begins at conception, but stem cell research is supported because men-made improvements or even enhancements are not an insult to God. Again, a utilitarian viewpoint arises; the maximization of the utility, like the relief of human suffering, is what prevails.<sup>89</sup>

This side-note shows that the view that embryos are human beings from the moment of conception seems not to be shared by all religious thinkers. These will however be unlikely to convince a dignitarian.

As stated before, the term embryo is somewhat misleading when talking about stem cells, since they are won at the blastocyst stage. A blastocyst has yet to develop the physical mechanisms to support a mind, and therefore adversaries of the 'holy embryo' view argue that it is wrong to conclude that a tiny clump of cells should be seen as a complete human being. If this is accepted, then what is it that makes the embryo human? A not unlogical thought would be that the presence of human DNA is taken as the definition of being human. No dignitarian thinker would find this acceptable; it effectively denies us a soul.<sup>90</sup> In a legal sense it is also not logical; there is a clear distinction between the embryo and the cells apart from the embryo; see chapter 2.

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<sup>87</sup> Weckerly 2002.

<sup>88</sup> Kamerstukken, bijlage 2.

<sup>89</sup> Keown 2004.

<sup>90</sup> Some even point to ridiculize it even further. We lose thousands of cells (and DNA) every day and we do not hold mass funerals every time we wash our hands. But this argument of Herold 2006, page 134/135 can be waylaid just as easily; it is not about the clumps of cells that become a life, it is about the soul that apparently inhabits those cells.

### 5.2.2 *It's Alive!*

As was said before, the question about the humanity of the embryo is always a difficult one. In order not to get carried away with it, let us accept that the embryo is a human being from the moment of conception. Is it then still possible to defend the destruction of embryos for research? Does it indeed compromise human dignity?

A first defense for the use of embryos is that natural reproduction isn't all that careful with the blastocysts. 'It is doubtful that natural sexual reproduction, with its risk of sexually transmitted disease, its high abnormality rate in the resulting children, and its gross inefficiency in terms of death and destruction of embryos, would ever have been approved by regulatory bodies if it had been invented as a reproductive technology rather than simply "found" as part of our evolved biology'.<sup>91</sup> Roughly three embryos are 'lost' for every birth, in the sense that only about a quarter of all embryos grow out to become a human being.<sup>92</sup> It would be strange to regard this as being against human dignity and the things that make us human. What adds to the defense is that interestingly enough, most of the embryo loss (and embryo 'death') happens in exactly the same stage as in which the stem cell are usually harvested, namely between five and eight days after initial development.<sup>93</sup>

This defense quickly runs against a hurdle; harvesting stem cells is not a natural process but one that is controlled and guided by humans. Here, human beings are actively killed only for their cells.<sup>94</sup>

### 5.1.3 *IVF-Embryos versus Research-Embryos*

In theory that counter-argument works; on the other hand, IVF-embryos are also created by humans, and the left-overs are often discarded in a totally human-controlled process. If embryos are human beings then the daily use of them in IVF clinics should be regarded as something resembling mass murder. And yet there is little to no objection on behalf of IVF-clinics.<sup>95</sup> So why allow the creation of embryos for reproductive purposes and not embryos for research and therapeutic purposes?

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<sup>91</sup> Quote from Harris 2008, p. 172.

<sup>92</sup> Boklage 1990 and Leridon 1977. Some state that this number is even higher; only one in five embryos ever becomes a human being. This is beside the fact that most people use contra perceptives and this prevents many embryos from forming. The Catholic Church does not approve of them either.

<sup>93</sup> Harris 2008, p. 173.

<sup>94</sup> Tannsjo 2007, p. 340.

<sup>95</sup> This does not mean that there never was. At the early stage of IVF-research there were massive protests, mostly from religious groups.

This can only be acceptable if there is a difference between the two. Morally speaking, two arguments that this is so can be used.

The first argument is that an embryo created for reproduction in the IVF-procedure is viewed as a potential child in the sense that each one is a candidate for implantation and may develop into a mature human. In contrast, embryos created for research or therapies are viewed as mere tools from the start and never have the chance to become a full human being.<sup>96</sup>

A response to this argument has been to suggest that we could, under certain conditions, view all research embryos as potential children in the relevant sense. If we include all these embryos in a lottery where the winners are donated to individuals for reproduction, we could be no less cruel than the natural selection of embryos where many of them die before becoming a human being.<sup>97</sup>

This highly theoretical solution is lacking both practical and legal sense. It would effectively mean that we willingly start to gamble with embryos. When making sure the entire process is carefully regulated and evaluated it is not difficult to imagine the difficulties. Who would want the responsibility over which lump of cells becomes a human being and which does not? How to inform the donors? According to the Tissue Directive, they should at almost all time be informed about what happens to their donated genetic material. How does one accomplish that the donor agrees with material that he or she donated for research suddenly becoming a living person, not necessarily their own legal child?<sup>98</sup>

Still, it is a viable argument in the sense that those who oppose creating embryos for research would probably maintain their opposition in the research embryo lottery case, so even if we no longer see the research embryos as just tools. This means it is arguably *irrelevant* whether embryos are viewed as potential children when they are created. Yes, research embryos in a lottery case are viewed as both potential children and potential research tools. But this is also true in the case of embryos created for reproductive purposes where patients are open to donating spare embryos to research.<sup>99</sup>

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<sup>96</sup> Annas et al 1996

<sup>97</sup> See both Devolder 2005 and Harris 2008, p. 173 for this argument.

<sup>98</sup> One can imagine an embryo being 'picked out' in the lottery and a donor that does not agree with that; it is ultimately the donor that decides what happens.

<sup>99</sup> Siegel 2008.

The second argument is that embryos created for research and therapy are produced with the intent to destroy them; the destruction of embryos created for reproduction is a foreseeable but unintended consequence of their creation.<sup>100</sup>

Doubt can be cast on this statement. The distinction between the intention to do harm and merely foreseeing it is in a legal (and moral) sense one that is very important. The policy in fertility clinics is that they actively offer their patients the option that their embryos are destroyed or donated to research. This option, also on behalf of the parents, manifests an intention. There is thus reason to doubt that a moral distinction between creating embryos for research and creating them for reproductive purposes is in place, at least given current fertility clinic practices.<sup>101</sup>

So the distinction between IVF-embryos and research-embryos is a hard one to make. Once one allows the use of embryos for IVF purposes, the creation of embryos for research and therapeutic purposes is also reasonably legit.

What becomes clear from this chapter is that a true dignitarian would have a hard time to make true it's claim that all stem cell research compromises human dignity without attacking other accepted forms of research. A 'life from the moment of conception' view is not ironclad; other religious texts with pretty much the same authority have totally different views on this.

The claim that we go towards a holistic view of the human race does have a strong emotional power and cannot be completely ignored. We should be careful when embarking on dangerous new technologies. But with stem cell research it lacks somewhat in its practical approach. Here we have a technology that makes use of a source that nature treats with so little respect it is almost scary; the human embryo.

Now all these arguments will not persuade the true dignitarian; whether we should consider this as a benefit or a mayor nuisance is the topic of the next chapter.

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<sup>100</sup> Fitzpatrick 2003

<sup>101</sup> Siegel 2008.

## **PART THREE: THE CLASH**

### **6. We can, but should we?**

Three different views plus some legal background have been presented. Each of them lays the emphasis on a different aspect; thereby, they each have their own objections and arguments pro. We have seen that research-embryos do not have a clear legal status. It is forbidden to create them but they appear to have no human or any other rights. The three moral views basically form a triangular structure, or contest. The dignitarians disagree with the utilitarians and the human rights constituency. With the former because the (beneficial) consequences of the action are their ultimate goal and the second because informed consent is not enough to really protect human dignity.<sup>102</sup> The utilitarians will want to maximize despite any claims of human rights or dignity, and the human rights constituency utters its discomfort with the creation of embryos but can find no strong reason to truly condemn it, apart from a rather vague notion of human dignity and sense of justice.

Now, there are different ways to get a coherent answer to the question if research embryos are acceptable. One of them is to see if it is possible to come to a compromise between the three. Another is to take each view and see if one opposing theory can overrule the other(s).

#### *6.1 Compromise*

Logically speaking consensus might be possible. This is constituted by a utilitarian stream of thinking, a rights-led human rights perspective (founded on respect for the intrinsic dignity of humans), and a duty-driven dignitarian view.<sup>103</sup> One must first accept that increasing the sum of the total well-being in the universe is a good thing to do. This is however only permitted if no violation of human rights or acts against human dignity occur. When adopting this view the creation of embryos for their hESC could be acceptable since a) one can quite safely state embryos have no human rights but deserve respect which can be provided by the law and b) one can

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<sup>102</sup> Brownsword 2005, p. 544.

<sup>103</sup> Brownsword 2005, p. 546.

make a distinction between a person and an embryo, one being a living thing and the other potential material not yet possessing personhood. Society should of course protect the life of all persons, but not necessarily the life of all human beings.<sup>104</sup>

This view about personhood comes from discussing the moral grounds for an abortion; even if people find that it is intrinsically wrong to end a human life, they should also agree that the decision to end that life in early pregnancy must be left by the pregnant woman. This is after all the person whose conscience is most directly connected to the choice, who has the greatest stake in it.<sup>105</sup> In the 'life' of an embryo, very little human effort is invested in comparison with an adult or even a child that has made several personal investments in his or her life. This would make it more logical to leave abortion, or the donation of reproductive cells for research-embryos, to private morality.<sup>106</sup>

There are difficulties with adapting this line of thought to the creation of embryos. Whose private morality is it to decide what happens with the donor material? The most likely candidate would be the donor; looking at the Tissue Directive and the Embryo Law there is a lawful obligation to inform, and the donor can withdraw consent which should lead to the destruction of the material. In this stage, it should indeed be the donor who decides if we accept this should be left to private morality.

Once the embryo has been created, the donor has no influence anymore. Here the private morality becomes problematic. The scientist that creates the embryo could be held morally responsible. Scientists that merely use the material and are not involved in the derivation of the material itself are not.<sup>107</sup> The law urges scientists to behave in a morally just way; they have their share of responsibility towards the human material. On the other hand, a scientist will see the embryo more like a tool after a certain time. He or she will certainly have less moral doubts about discarding then could-be parents. So leaving this stage in the hands of scientists would not be a prudent thing to do.

Quite apart from these questions, it is almost impossible to find someone that holds such a combined view.<sup>108</sup> Each party would find the private morality only

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<sup>104</sup> This liberal compromise is a view of Dworkin 1993.

<sup>105</sup> Dworkin 1993, p. 14-15.

<sup>106</sup> Dworkin 1993, p. 88.

<sup>107</sup> Roberson 1999.

<sup>108</sup> Tannsjo 2007, p. 334.

acceptable if the donor would accept their worldview and acts according to that. A true utilitarian would see the fact that the donor can still choose to say no as a limitation on the utility, while a true dignitarian would find the reasoning that the embryo has to 'evolve' or there has to be an 'investment' into its life a further attack on human dignity. Those of the human rights constituency would not really know what to decide, torn between the rights of patients and the possible lack of respect towards the embryo.

Should we then rather focus on the use of ASC in order to avoid people's morals being compromised? At this moment, the expected scientific and therapeutic value of hESC outweighs the expected value of a strategy where we only use ASC; see the first chapter. Another method then. It may be possible to extract hESC without destroying the embryo. Recently, it has been shown that adult stem cell lines can be manipulated to generate embryonic-like stem cell lines. This is done by using a single-cell biopsy similar to that used in preimplantation genetic diagnosis.<sup>109</sup> There are also problems with this technique; see chapter one. A moral problem is that it remains questionable whether this solution truly preserves human dignity. The embryo is left intact but some sort of embryo-like cell is created to spew out stem cell lines and be discarded as soon as its work is done. Here we really have a tool, created by humans with human proportions; a total means, not an end.

The biggest problem however is that these solutions are by no way a compromise; it only avoids the real subject and basically means that all parties agree with the dignitarians; all that is possible to save the embryo should be done.

It is not all gloom and doom. Some working consensus might be possible by taking this compromise, and one could state a working consensus is better than no consensus at all. Sleeping dogs on all three sides might better be left to lie; but these dogs are light and restless sleepers and it is inevitable that they will wake at one point.<sup>110</sup>

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<sup>109</sup> This procedure is better known as embryo screening. It basically means a single cell can be tested for genetic diseases and such like.  
For more on this topic, see <<http://www.emedicine.com/MED/topic3520.htm>>.

## 6.2 Overruled

The other way to settle the debate would be to wake the sleeping dogs and urge them to fight each other until one dog is left. The only way to come to a true solution might be to have people enforce their morality upon others. Each party in the triangle feels the need to maintain their own view, so why not convince the others of the correctness of their theory? This is of course not a liberal solution and therefore questionable in terms of correctness.<sup>111</sup> Still, let us see what an all out brawl might bring about.

### 6.2.1 *The Trouble with Human Dignity*

Crudely speaking all three theories condemn murder but two have difficulty in seeing the destruction of a created embryo as active killing. One condemns all forms of ending life as murder. Even stronger, dignitarian pro-lifers feel there are strong grounds to punish people who committed murder; they are retributivists.<sup>112</sup> In the strongest form this means that doctors who perform abortions or euthanasia should be punished as well. They would feel that a scientist is morally responsible not to act in the destruction of embryos.

Some have argued that as long as the embryos are donated for research after the decision is made to discard them, it is morally permissible to use them as a source of hESC in research. This remains the same if one maintains they have the moral status of a person. There are basically two argumentations in support of this. One is that it can be morally permissible to kill an individual, if he or she is about to be killed by someone else anyway where killing that individual will help others.<sup>113</sup> The other is that it is not the researchers who derive the ESCs from embryos that were meant for destruction who cause their death. It is the decision to discard the embryos causes it; research just causes the manner, the way in which they die.<sup>114</sup>

These arguments also have their own criticisms. The first objection is that the person who discards the embryos only does so because this is a precondition to donate them to research. The donor would be well aware of what happens with their embryo since there is a duty to inform them. If there was no option to donate the embryos for

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<sup>110</sup> Brownsword 2005, p. 546.

<sup>111</sup> Tannsjo 2007, p. 339.

<sup>112</sup> In other words, they feel there is such a thing as a well-deserved punishment; Tannsjo 2007, p. 338.

<sup>113</sup> Curzer 2004.

<sup>114</sup> Green 2002.



research, they might have been donated to other couples. Second, the researcher could always choose to rescue them by storing or donating them. This is a violation of the law but it shows that the researcher has the power to prevent the destruction.<sup>115</sup>

This second argument counts infinitely stronger when talking about the creation of embryos by scientists. Here, the first argument still counts since these research embryos are ‘doomed from the start’. But the second argument fails; it is the scientists who make the decision to destroy the potential human being here. As we have seen above, this may not be a desirable thing; only a true utilitarian would have little difficulty with it.

Back to the dignitarians. According to their view the creation of research-embryos should never be allowed, but the entire research also has to be banned in the law. Their first goal would be to stop the proposed creation of embryos in the future for as long as possible, and then try to revoke the Embryo Law in its allowance of the destruction of the embryo. This would for them be the only way to stay true to human dignity.

There is an analog that might be used to convince people that firmly believe embryos are human beings and everything should be done to preserve them. Most people know about flight United 93 on September 11<sup>th</sup>, 2001. The passengers are reliably believed to have overcome the hijackers, making it crash in a field instead of in a highly populated area or high-profile building. This action did kill all passengers and crew. Now not all passengers could have consented to this, so probably some passengers took the decision for them.

Even if their death was inevitable, the deliberate killing of must have offended against the human dignity. Killing innocents who pose no threat is always wrong, no matter how noble the justification. And killing someone earlier than their inevitable death is still killing; otherwise euthanasia would present no problems to sanctity-of-life thinkers. So this widely praised act should be condemned by a true dignitarian.<sup>116</sup>

This analog can also be used for IVF-embryos, abortion, euthanasia and the like. As chapter 5 has shown it is difficult to see the moral difference between the creation of IVF-embryos and research-embryos. If embryos are truly sacred and their destruction is always an infringement to human dignity, we should also stop all

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<sup>115</sup> Siegel 2008.

reproduction (because of the embryo-loss) and all actions that are based on saving people that may hazard the lives of others (like with United 93, or a soldier that is ordered to fight for his country) should be treated as terrible crimes against life. The true dignitarian would have to fight so many battles that the compromise of the first paragraph might be a better solution.

### *6.2.2 Calculus and Rights*

It seems a true dignitarian would have a lot of trouble maintaining its position. Does that mean the utilitarian calculus gets the upper hand? The human rights view is unclear in its acceptance of the creation because it has, as yet, no real meaning of human dignity on which to condemn the research-embryo. The thing that they would find unacceptable is if the human autonomy of the donor would be harmed.

The utilitarian might use a more legal solution to solve the position of the human rights constituency. Those who do not wish to contribute to the research are free to do so, but should not impose their morality upon the ones that do; pretty much the legal system as it is in place now. The obligation to contribute to research should potentially be there, but since people who refuse to co-operate offer reasonable alternatives to research-embryos (left-over IVF-embryos) they would better be left alone. The situation in which we are obligated to allow the creation of research-embryos simply because this will in the future increase our utility leaves a bad taste in the mouth; if no restraints are in place we can be sure that human rights will be violated and the dignity of humans will be overlooked. Also, people would not be allowed to have personal doubts about the technology; basically a form of dictatorship and censor would arise.

What should also be considered is the current state of the technology. It is not yet at a stage where it can make true what it promises. The excitement that was there at the start of this century has faded. If it was so that all the problems with the 'installment' of stem cells had been overcome and we could start the production of important cures straight away, the situation would be different. Then the utilitarian solution might make more sense. At this point in time it would be more about the future of value argument. The utilitarian would have to downsize its view in order to remain reasonable to the majority of people.

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<sup>116</sup> Harris 2008, p. 177

Which leaves the last group; that of the human rights constituency. In Holland the research itself is supported, since otherwise it would not be legally allowed. That the law has an opening for the creation of embryos can be seen as a definitive clue that there is (or was) a strong support. As soon as society seems ready to accept this method, we will. The interesting question here is when this will happen. The donor would need more protection and the respect mentioned in many bioethic treaties would have to be made more concrete before this was possible. In a true democratic society that respects human rights, the feelings of a minority should be taken as seriously as is realistically possible. So is there anything that the dignitarians can be offered? Yes. The political vagueness discussed earlier helps in this respect. The reason that society decides to act on one moral theory means it should not hold basic (theoretical) moral opinions. If the law that embryos can be created for research is adopted, this cannot be followed by a declaration that this is the only way to go, and people who do not agree with this have go get hold of a ‘better set’ of morals.<sup>117</sup>

The problem is that internationally, the creation is not allowed. Therefore it would be highly unlikely the ban would ever be lifted, also because unclear feelings of justice and half-baked arguments about human dignity and autonomy would prevent any progress.

What to make of all this? Each view has its own points on which no giving in seems possible. A real compromise would mean that each party in the triangle has to add some water to the wine. The other option is an all out brawl out of which no real winner can emerge, since the prevalence of one party leads to a different doom scenario; the revoking of basically all life-ending acts for dignitarians, the sacrifice of individual rights and obligation to support all research despite one’s own feelings for utilitarians and if it is left to human rights, the legal limbo of the research-embryo might stay there indefinitely, without there ever being a final solution.

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<sup>117</sup> Tannsjo 342.

## 7. Conclusion

The issue of the research-embryo is a difficult one. To achieve the progress that is necessary to really develop stem cell technology, the use of human embryos for their hESC is at present unavoidable. In order to have enough diversity in stem cell lines and the possibility to have patient-specific tissue, the research embryo would have to be allowed in the Embryo Law. The Dutch administration apparently has no desire to debate the issue of lifting the ban, and looking at the moral triangle of utilitarianism, dignitarianism and human rights it becomes clear the issue is very complicated.

Where the majority of the utilitarian views urges us, sometimes even obligates us to lift the ban as soon as possible, the human rights constituency is doubtful because human rights of especially the donor could be strongly violated. The embryo deserves little to no protection according to both views. The demand for respect can be safeguarded by law up to a certain point, but never truly realized unless it is made more concrete. The true dignitarian will condemn stem cell technology as a whole, because here the status of the embryo is the centre of debate. But this fighting a lost battle if the hard-core view is not somewhat softened; all kinds of common practices would have to be abandoned if the true dignitarian had its way.

A compromise is therefore only possible to a certain extent, but the other alternative of letting one of the theories prevail over the others is impractical, since this brings about three unlikely scenarios. Some have suggested to let the differences be what they are, but a better solution would be to accept the bioethical triangle for what it is; three opposing views who each have their own important claim to make.

The solution could be a working consensus where we allow the creation of embryos, because this can help the technology forward and does not necessarily violate human rights and therefore human dignity in the sense of human autonomy. The view that this compromises human dignity has to be taken into account by better regulating how it should be improved, but not as a conversation stopper.

## **Bibliography**

### Books

- Burley, J., 2007, DBDD, in Somsen, H., *The Regulatory Challenge of Biotechnology*, Chichester, Edward Elgar.
- Dworkin, R., 1993, *Life's Dominion*; London: HarperCollins.
- Harris, J., 2008, *Enhancing Evolution, The Ethical Case for Making Better People*, Princeton Press.
- Herold, E., 2006, *Stem Cell Wars*, Palgrave Macmillan.
- Koontz, D.R., 2002, *One Door Away from Heaven*, Bantam Books.
- Meilander, G., 2005, *Bioethics: A Primer for Christians*, 2nd ed.; Grand Rapids: Eerdmans.
- O'Donovan, O., 1984, *Begotten or Made?*, Oxford University Press.
- Singer, P., 1993, *Practical Ethics*, Cambridge University Press (2<sup>nd</sup> edition).

### Articles

- Annas, G., Caplan, A., and Elias, S., 1996, *The Politics of Human-Embryo Research – Avoiding Ethical Gridlock*, *New England Journal of Medicine* 334: 1329-32.
- Bentham, J., 1789, *An introduction to the Principles of Morals and Legislation*, Dover Publications.
- Beyleveld, D. & Brownsword, R., 1998, *Human dignity, human rights and human genetics*, *Modern Law Review*, Vol. 61, no. 5: 661-680.
- Boklage, C., 1990, *Survival Probability of Human Conceptions from Fertilization to Term*, *International Journal of Fertility* 35:75-94.
- Brownsword, R., 2002, *Stem Cells, Superman, and the Report of the Select Committee*, *Modern Law Review*, Vol. 65, no. 4: 568-587.
- , 2005, *Where the Regulatory Consensus Fails*, *Modern Law Review*, Vol. 39, no. 3: 535-572.  
<<http://www.nesl.edu/lawrev/Vol39/3/Brownsword%20FINAL.pdf>>
- Caulfield, T. & Chapman, A., 2005, *Human Dignity as a Criterion for Science Policy*, *PLoS Med.* (online).  
< <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1181538>>
- Curzer, H., 2004, *The Ethics of Embryonic Stem Cell Research*, 29, no. 5: 533-562.

- Devolder, K., 2005, *Human Embryonic Stem Cell Research: Why the Discarded-Created Distinction Cannot Be Based on the Potentiality Argument*, *Bioethics* 19, no. 2:167-86.
- Gahrton, G. & Björkstrand B., 2000, *Progress in haematopoietic stem cell transplantation for multiple myeloma*, *J Intern Med* 248 (3): 185–201.
- Green, R., 2002, *Benefiting from ‘Evil’; An Incipient Moral Problem in Human Stem Cell Research*, *Bioethics* 16/6: 544-556.
- Faden, R.R., 2003, *Public Stem Cell Banks: Considerations of Justice in Stem Cell Therapy*, *Hastings Center Report* 33: 13-27.
- Fizpatrick, W., 2003, *Surplus Embryos, Nonreproductive Cloning, and the Intend/Foresee Distinction*, *Hastings Center Report* 33: 29-36.
- Hollinger, D.P., 2001, *Stem Cells & Our Moral Culture*  
<[http://www.cbhd.org/resources/stemcells/hollinger\\_2001-11-15.htm](http://www.cbhd.org/resources/stemcells/hollinger_2001-11-15.htm)>
- Jakobovits, Y., 2002, *Judaism and Stem Cell Research*  
<<http://www.torah.org/features/secondlook/stemcell.html?print>>
- Kant, I., 1785, *First Section: Transition from the Common Rational Knowledge of Morals to the Philosophical*, *Groundwork of the Metaphysic of Morals*.
- Keown, D., 2004, *No Clear Buddhist Stance on Stem Cell Work*, *Science and Technology News*, April 1, 2004.
- Lauritzen, P., 2005, *Stem Cells, Biotechnology, and Human rights*, *Hastings Center Report*, Mar.-Apr. 2005, at 25.
- Leridon, H., 1977, *Human Fertility: The Basic Components*, University of Chicago Press.
- Lott, J.P. & Savulescu, J., 2007, *Towards a Global Human Embryonic Stem Cell Bank*, *American Journal of Bioethics* 7(8): 37-44.
- Macklin, R., 2003, *Dignity is a useless concept*, *BMJ*. 2003;327:1419–1420.  
< <http://www.ncbi.nlm.nih.gov/pubmed/14684633>>
- Martin, C.H. & Kaufman, D.S., 2005, *Synergistic Use of Adult and Embryonic Stem Cells to Study Human Hematopoiesis*, *Current opinions in Biotechnology* 16: 510-15
- Marquis, D., 2005, *Savulescu’s objections to the future of value argument*, *Journal of Medical Ethics* 31:119-22.
- Mill, J.B., 1861, *Utilitarianism*, Hackett Publishing Co, Inc.

- Naveiras, O. & Daley, G.W., 2006, *Stem Cells and Their Niche: A Matter of Fate*, Cellular and Molecular Life Sciences 63:760-66.
- Robertson, J., 1999, *Ethics and Policy In Embryonic Stem Cell Research*, Kennedy Institute of Ethics Journal, vol. 2, no. 9: 109-36.
- Siegel, A., 2008, *Ethics of Stem Cell Research*, Stanford Encyclopedia of Philosophy.  
< <http://plato.stanford.edu/entries/stem-cells/#CasDooEmb>>
- Stewart, A., 2005, *Stem Cell ethics and regulation: thinking beyond the embryo*, Cambridge News, March 7, 2005.  
<<http://www.cambridgenetwork.co.uk/news/article/default.aspx?objid=10613>>
- Takahashi, K. *et al.*, 2007, *Induction of Pluripotent Stem Cells from Adult Human Fibroblasts by Defined Factors*, Cell 131: 861-872.
- Tannsjo, T., 2007, *Why No Compromise is Possible*, Metaphilosophy, vol. 38, No. 2-3, April.
- Thomson, J., Itskovitz-Eldor, J., Shapiro, J., Waknitz, M., Swiergiel, J., Marshall, V., and Jones, J., 1998, *Embryonic stem cell lines derived from human blastocysts*, Science 282 (5391): 1145-7.
- Weckerly, M., 2002, *The Islamic View on Stem Cell Research*, Rutgers Journal of Law and Religion, September 30.
- Yu, J., *et al.*, 2007, *Induced Pluripotent Stem Cell Lines Derived from Human Somatic Cells*, Science 318: 1917-1920.

#### Legislative documents

- The Embryo Law (Embryowet, 20<sup>th</sup> June 2002)  
< <http://www.vsop.nl/pdf/embryowet.pdf>>
- Memorie van Toelichting Embryowet  
< [http://www.minvws.nl/images/mvt\\_embryo\\_tcm19-103067.pdf](http://www.minvws.nl/images/mvt_embryo_tcm19-103067.pdf)>
- Modelreglement art. 2 Embryowet.  
<[http://www.ccmo-online.nl/hipe/uploads/downloads/Modelreglement-Embryowet\(1\).pdf](http://www.ccmo-online.nl/hipe/uploads/downloads/Modelreglement-Embryowet(1).pdf)>
- Tissue Directive  
DIRECTIVE OF THE EUROPEAN PARLIAMENT AND COUNCIL For the protection of human tissue materials  
<<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:102:0048:0058:EN:PDF>>
- Convention for the Protection of Human rights and Dignity of the Human Being with Regard to the Application of Biology and Medicine: Convention on Human rights and Biomedicine (Oviedo, April 4, 1997).  
<<http://conventions.coe.int/Treaty/Commun/QueVoulezVous.asp?NT=164&CL=ENG>>