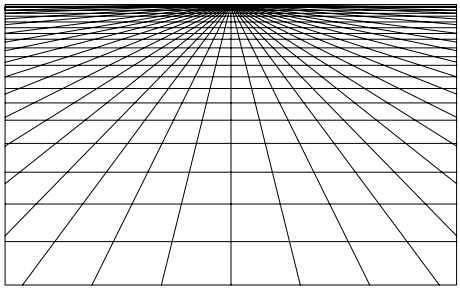
U N I V E R S I T Y O F O S L O

FACULTY OF SOCIAL SCIENCES

TIK

Centre for technology,
innovation and culture

P.O. BOX 1108 Blindern
N-0317 OSLO
Norway
http://www.tik.uio.no



ESST
The European Inter-University
Association on Society, Science and
Technology
http://www.esst.uio.no

The ESST MA

CLONING, POLITICS AND VALUES

- THE NORWEGIAN LEGISLATIVE DEBATE ON CLONING IN A RISK PERSPECTIVE

ELSA ROLAND

University of Oslo/University of Oslo
Nature, Culture and Science and Technology

2001

22631 words

ABSTRACT

The political debate on gene technology, concerning the technology of cloning, has raised a lot of questions on ethics, political strategies and research programs. The debate raised new heights after the controversial news about the cloned sheep, Dolly. The political debate in Norway has been concerned about how to regulate and control the gene technology development. All the questions have in common that they are all mainly focusing on the eventual risks and threats to human life posed by gene technology. The debate is as such situated in a risk perspective, where the risks and threats are seen mainly as products of science and technology. The Norwegian legislative debate within the Norwegian Parliament (Storting) has resulted in a restrictive law, which forbid producing genetically identical individuals.

I have analysed the political arguments through a religious, a scientific and an aesthetic ideal-typical position. The three ideal-types represent differentiated ways of debating and understanding risk posed by gene technology. The paradox is that the debate has a shared base, a shared political platform, among the politicians, which overlaps the ideal-typical distinctions. This means that the arguments are partly blurring the traditional party-political boundaries. The shared political view is based on an agreement to put restriction and prohibition on the agenda.

KEYWORDS:
- Cloning and gene technology.
- Risk.
- Politics and values.
- The religious, the scientific ideal-type.

ACKNOWLEDGEMENT

Thanks to both of my very helpful supervisors,
for their support and constructive feedback.
Thanks to my good friend,
helping me with the language.
Thanks to my very good friends,
being there for me.
Thanks to my children,
patiently waiting for their mother.

Special thanks to my Supervisors:
Professor Thorben Hviid Nielsen.
Cand.Philol. and PhD-scholar ship holder Kristin Asdal.

Good friend helping with language: Gudfrid Vågslid.
Very good friends: You know who you are.
Children: Anemone and Andreas.

PREFACE – SITUATING THE AUTHOR OF THIS THESIS

I have been working as a bioengineer in a clinical chemistry laboratory, and studied sociology and theories about work-organizations. After dealing with technology and big machines in the laboratory I wanted study something that combined the technological and the social. I moved from a very practical work and a laboratory in which technologies and machines were playing an important role, to a theoretical work and a knowledge-based academic laboratory in which books, narratives and theoretical concepts are playing the important role. This laboratory is also filled with technology, but in another sense than my first chemistry lab. In my first lab I had to deal directly with the technology. The main technological purpose was to analyse and measure properly. At this laboratory I have to write a thesis about technology. It is different to deal directly with technology in a chemistry lab, and to be distanced and describe science, technology and society, and it has been a challenge to translate the technology to theory. It has been interesting to be enrolled in the university network and the ESST-program. But it has not been without anti-programs! There have been, and still are, actors who are interested to enrol me in a quite different network. In particular this concerns my children, and I do look forward to be enrolled in their network again.

READING GUIDE

The introduction states the reason for the starting point for my thesis and the chosen problem. I will further present an outline over the method and the selection of the material that I have done.

Chapter 1 has the purpose to situate the debate about cloning that has taken place in the Norwegian Parliament[1] (Storting). I will then situate the three ideal-types, which are applied in the analysis of the political cloning debate.

Chapter 2 is a theoretical part and an introduction of the three ideal-types. I have tried to put the ideal-types in a theoretical context in which I argue for the use of the ideal-types and discuss why they have been used. I will also present a critical discussion with respect to the three ideal-types.

Chapter 3 presents my analysis of the political cloning debate in the Storting. The analysis is divided under three headings according to the three ideal-typical positions: The religious, the scientific and the aesthetic.

Chapter 4 looks into the actual results and the concrete legislation that have been negotiated. The chapter also attempts to analyse and interpret the legislation; as a result of what I understand is a shared political ground.

[1] I will from now use the Norwegian name of the Parliament, Storting, in my thesis.

Chapter 5 presents a summary and a conclusion. I will in the conclusion argue for and discuss how and why I think it has been useful to analyse the debate through the three ideal-types. There are in particular three findings that I have found interesting.

INTRODUCTION

The biotechnological development, and especially the cloning technology, has brought up new ethical aspects of technology and science. It has also lead to a desire to take control and regulate the development in fields that are seen as problematic. Mapping and sequencing the human genome is unlike many of the new technologies in that it directly affects all of us at a very personal level (Glasner, 2000:109). Cloning is also an example of a technology that directly affects us, because it explicitly brings up the question about what it means to be a human being (Kolata, 1997:5). This makes the cloning technology being controversial.

On July 1996, the most famous lamb in history entered the world. Created in Edinburgh's Roslin Institute, Dolly was born not from the union of a sperm and an egg, but from the genetic material from another sheep (Ibid:4). Dolly was the first creature to be cloned from an adult cell in this way. The news that a sheep had been created by cloning adult non-reproductive tissue, has given rise to speculation that it may soon be feasible to create human beings in the same way. The news about the cloned sheep, Dolly, raised debates all over the world, also in the Norwegian Storting and it leaded to concrete results in the form of new legislation (Jølle Dahl, 1999:2).

PROBLEM AND METHOD

The aim with this thesis is to analyse the political debates about cloning that have taken place in the Storting. The analysis is here restricted to the political debates about cloning in the period 1997-2000. The analysis will be done through three different cultural and ideal-typical views concerning risks posed by gene technology. More specifically: I want to emphasize the politicians' different forms of arguments in the legislative process toward the formulation of a new law. This law is § 3a-1, and is about medical use of biotechnology.

I want to analyse the political debates about cloning through three ideal-types, or three cultural positions of risks related to bio- and gene technology. These are ideal-types applied from the book *The Risk Society and Beyond. Critical Issues for Social Theory* (Adam, B., Beck, U., Van Loom, J.). This book is a gathering of articles from different contributors. One of the contributors is Howard Caygill, who is Professor of Cultural History at University of London. His contribution is the book is *Liturgies of Fear: Biotechnology and Culture* (Adam et al., 2000). He illustrates the range of perspectives within contemporary culture by three ideal-typical responses to the threat of biotechnology. I will critically discuss the method I have chosen of using the ideal-types, in chapter 2.

The thesis is mainly concentrated around political debates in the Norwegian Parliament, Stortinget, which brings up different aspects connected to the question about cloning. The selected debates are found by search on 'cloning' on the Norwegian Parliament's web

site (http://www.stortinget.no). The debates I have included in the analysis are limited to the Norwegian political debates that have taken place in the Storting in the period 1997-2000. I found, by searching on the web site of the Storting and on actual links applied there, documents containing 'cloning' in various concerns. I found in particular two debates, which were in accordance to my purpose with this thesis. They were selected after reading the documents closely. There are in particular two debates I have found of interest with respect to the Norwegian political cloning debate in the Storting. Both are from 1997 and had their origin in reactions attached to the cloned sheep, Dolly. I have selected some debates from the Odelsting[2] in addition to the debates from the Storting, one from 1998 and the other one from 2000. Both debates are recommendations for amendments regarding the law on medical use of biotechnology. The bill[3] was an ensuing from the resolution in the Storting. The Storting made an appeal to the Government to place a motion on the need for legislative additions to the law, § 3a-1. The recommendations imply that the law (§ 3a-1) regarding medical use of biotechnology, should be changed. I have collectively denoted these debates, which have taken place in the Storting and in the Odelsting in the period 1997-2000, for the cloning debate. The main attention in the analysis is based on the debates in the Storting from 07.03.1997 and from 21.03.1997. The debates in the Odelsting and the votes are just functioning as support material, and are not analysed so deeply as the mentioned debates in the Storting.

[2] The Norwegian Odelsting: The larger division of the Norwegian Parliament, Storting.
[3] In Norwegian: Lovendring.

CHAPTER 1 – SITUATING THE CLONING DEBATE

Generally one can claim that new knowledge and technology not only represent possibilities in people's mind, but also risks (Hviid Nielsen et al., 2000:236). The reception of the gene technology has been characterized by hope and scepticism in Norway (Ibid:272, 273), which reflects the complexity that considerations of technological risks represent. The focus on the precautionary principle[4] has increased in treatment of technologies where the consequences are difficult to predict. The precautionary principle emerged internationally after the important Rio-conference about environment and development in 1992 (Ibid). The precautionary principle implies that one has to try to avoid the risk before one has precisely knowledge about it. In Norway the precautionary principle was put to use in 1993 in relation to the legislative process regarding the gene technology[5]. The considerations of Genetic Modified Organisms (GMO) were on the political agenda in this matter. Outspread of GMO became strictly regulated in Norway, before negative effects had been observed (Ibid:237). The risks for unpredicted and incidental results by producing and consuming GMO mobilized a restrictive political manner. And when the cloned sheep, Dolly, entered the world, the anxiety for the moral consequences, related to gene technology, was also mobilized (Ibid:256). Gene technology activates both hope and scepticism, and in the Storting the scepticism is explicitly expressed with respect to gene technology (Cf. The precautionary principle). This scepticism is connected to risks posed by gene technology, both the health- and environmental risks, but also the risk for moral and ethical erosion and disintegration. This is the point of departure for my thesis, and I have therefore situated

[4] In Norwegian: Føre-var prinsippet.
[5] The Norwegian Gene technology law. http://www.bion.no/html/genteknologiloven.html

the cloning debate within a risk perspective. More specifically I will emphasize how the politicians are debating and try to find the arguments they use in the legislative process, which means the political arguments that lie behind the legislation. Much has to be read between the lines in the political debates in the Storting[6]. The most interesting may as such be what the text not explicitly express, i.e. which arguments and alternatives that are not mentioned. I want to emphasize the political arguments with respect to three cultural and construed risk perspectives related to gene technology: a scientific, a religious and an aesthetic ideal-type.

I want to situate these three cultural terms, or ideal-types, in what Ulrich Beck calls the risk society. However, I do not intend to go closer into the interesting debates and challenges that Beck's work has initiated[7]. I just refer to the risk society, because it similarly to the three ideal-types, sees risk primary as a product of technology and science (Beck, 1997:27). The three ideal-types illustrate that the product of technology and science pose a risk to the future of human life, and that this risk may be understood within diverse cultural interpretations of risk.

1.1 – SITUATING THE IDEAL-TYPES

Ulrich Beck postulates with his concept about the risk society, that the new risks are primary a product of science and technology (Ibid). In the book *The risk society and beyond. Critical Issues for Social Theory* (Adam, Beck, Van Loon (Ed.)) the contributors

---

[6] Debates in the Norwegian Parliament (Storting).
[7] Cf. Hilary Rose in Adam et al., *Risk, Trust and Skepticism in the Age of the New Genetics.* Living with risk but not in a risk society. Pp 63-74.

are engaged with two examples of Big Science[8]: nuclear physics and genetics (Adam et al., 2000:17). The contributors are all engaged in risks related to Big Science. Big Science is characterized by large amounts of incoming economic capital, in the form of government funds and business sponsorship as well as high amounts of political, social and symbolic capital (Ibid). The contributors in the book are challenging Big Science in different ways. However, they are all taking a position that is to challenge taken-for-granted assumptions and established conventions, such as those ruling the rationalization, accreditation and legitimation of Big Science (Ibid:22). The contribution of Howard Caygill points towards the transformative aspects of risk embodiment. Caygill's concern is risks associated to biotechnology, and he illustrates the range of perspectives by three ideal-typical responses to the threat of gene- and biotechnology[9]. He presents the 1995 encyclical letter of Pope John Paul II[10], and a 1992 report by a working party of the British Medical Association (MBA)[11] and a work of the Australian performance artist, Stelarc[12] (Adam and van Loon in Adam et al., 2000:25).

Caygill is stating that the perceived risk to human life posed by biotechnology and the anxiety which surrounds it, are proving a central and productive feature of contemporary culture (Caygill, 2000:155). The range of perspectives contained within this emergent culture is illustrated by a religious, a scientific and an aesthetic work. These three genres can be understood as particular ways of translating the heterogeneous contingency of

[8] Gene technology is a good example of Big Science. However, the contributors are not taking the concept of Big Science as a fact, but attempt to challenge the concept in different ways.
[9] I do not make distinction between biotechnology and gene technology here, even though they have different connotations. However, it makes no differences in this sense.
[10] *Evangelium Vitae: the Value and Inviolability of Human Life.*
[11] *Our Genetic Future: The Science and Ethics of Genetic Technology.*
[12] *Performances since the late 1980s.*

genetic risks. Each of these texts and works attempt to frame the threat posed by gene technology in terms of an existing repertoire of cultural interpretation and resistance (Caygill, 2000:156). These three cultural strategies highlight that there is never simply a mediation of risk (Adam and van Loon in Adam et al., 2000:25). Caygill's work is to illustrate that mediation of risk is culturally dependent, and that each of the terms of existing cultural codes, in this case the religious, scientific and aesthetic, all attempt to frame the threat to human life posed by biotechnology. His attempt is to demonstrate that in each case the cultural codes are themselves challenged and transformed[13]. I do not intend to go deeply into the transformations and the challenges of the cultural codes, which could be a very interesting, but a more theoretical work. I intend to make a descriptive analysis of the political arguments. I will just use the three cultural codes as three ideal-typical frameworks in the analysis of the political debates concerning the technology of cloning.

[13] Cygill is not using ideal-types for claiming that ideal-types are complete for mediation of risk.

CHAPTER 2 – INTRODUCTION OF THE IDEAL-TYPES

Ideal-type is a concept introduced by the German sociologist, Max Weber[14]. An ideal-type is not necessarily an ethical ideal, but an analytical construction in which typical characters attached to a social phenomenon are emphasized. Ideal-types do not say everything about reality, and they have limitations in their function as models and concepts for explanation. On the other hand, ideal-types may be useful for analysing complexities. Ideal-types are functioning as analytical constructions and may structure a complex analysis where distinctive and characteristic comparisons are necessary. Weber stresses that knowledge[15] can never be unbiased or a simple reflection over state of affairs. The researcher must necessarily work due to theoretical constructions: exposed to the enormous, chaotic flow of events that runs through time, the researcher must work with ideal-types or 'pure' archetypes (Weber, 1971:199-200). Hence, the ideal-type is not a description of reality, but is used to give distinctive expressions to the description. The researcher constructs abstract ideal-types as a tool for research, not as a goal, but as a means. Thus, the ideal-type is not a classification system, but a theoretical construction and an analytical model, which serves as a resource for orientation (Fivelsdal, 1995:XIII). The challenge is to find out how close or how far the ideal-type is from reality. It is also a challenge not to mix ideal-type and reality. One might be tempted to commit violence upon reality to strengthen the construction's validity within the world of reality. I will not go closer into the entire methodological debate about use of ideal-types in general. I will later return to the question concerning why it has been useful to apply the ideal-types in my analysis.

[14] Max Weber (1864-1920) cf. The Spirit of Capitalism and the Protestant Ethic.
[15] Knowledge within the terms of epistemology.

I want to operate with three different ideal-types, which in each particular way is devoted to frame an ideal-typical view upon risk regarding the future of human life, posed by biotechnology. These three ideal-types are the religious, the scientific and the aesthetic and are all borrowed and inspired from the contribution of Howard Caygill in *Liturgies of Fear: Biotechnology and Culture* (Caygill, 2000:155-164).

The three ideal-types are not produced by Caygill with the purpose to describe a complete understanding of risk, but they are his interpretations over the three mentioned works regarding biotechnology. Hence, the ideal-types should be regarded as Caygill's interpretation of three particular works, and that each and one of these works can be understood respectively within a religious, a scientific and an aesthetic view. The three works, according to Caygill, are representing three different cultures, or cultural codes, in which risk and threat to human life are perceived. These three cultures are described as the religious, the scientific and the aesthetic, and each and one of the cultures are respectively representing an ideal-typical position regarding risk and threat. Caygill uses the encyclical letter from Pope John Paul II being representative for the religious ideal-type, the MBA-report being representative for the scientific ideal-type and the performances and interviews of the artist, Stelarc, being representative for the aesthetic ideal-type.

2.1 – THE RELIGIOUS IDEAL-TYPE

The religious ideal-typical position asserts the uniqueness of an individual human life. The threat to the human life posed by the evidence of genetics, is the risk of undermining the purity of the individual's position in the world.

Focus:

- The human being is inviolable and has a spiritual integrity as God's creation. The human being represents the life, and everyone has an inherent value and an important role to play in life.
- It is not given to the human being to decide what constitute a valuable life or an efficient society. This implies that human embryos should not be considered as just raw material (means), but as a goal in itself. This is close to a deontological view, inspired by the philosopher, Kant.
- The arguments are based on theological arguments and Christian belief.

Risks and threats posed by biotechnology:

- Biotechnology is a central feature of the 'culture of death', which in the wake of liberal individualism and moral relativism has made it difficult to maintain a grasp on the meaning of the human, its rights and obligations.
- Those engaged in genetic research and the development of techniques of artificial reproduction, are in the vanguard of the 'culture of death'. Especially in so far as they regard their object of research – human embryos – as raw material for research or technological manipulation.

Challenge to the religious cultural code:

- The fertilized cell, or the cloned cell, as conceived by genetics cannot accord to the traditional position of the Church regarding the integrity of human personality. The challenge is to fight for the human being in order to protect its value and uniqueness.
- The promotion of a ’culture of life’ entails a wide-ranging cultural politics entailing a general mobilization of conscience and a common ethical effort to promote a grand strategy in favour of life.

The religious message is that human beings represent the ’culture of life’, but the human dignity is attacked by those engaged in genetic research. The religious ideal-type attempt to frame the risk to the future of human life posed by biotechnology, within the frame of risk posed by the ’culture of death’. The ’culture of death’ is a threat to the human life, because it threatens the dignity, integrity and spirituality of the ’culture of life’.

2.2 – THE SCIENTIFIC IDEAL-TYPE

The scientific ideal-typical position asserts the importance of enlightenment. The threat to human life posed by genetics is the ignorance of scientific and professional knowledge.

Focus:

- The increased knowledge of genetics and a broader diffusion of its results will create a community capable of making informed assessments of the risks involved in a given genetic therapy.

- Biotechnology and genetic modification are in themselves morally neutral. It is the uses or abuses to which they are put that create ethical dilemmas[16].
- If the dilemmas remain the same, and are only magnified by the increase in knowledge and its application, then it may theoretically be possible in the future to gain sufficient knowledge to minimize the risks of its technological application.

Risks and threats posed by biotechnology:

- The human being will always be threatened by physical and genetic illnesses. However, the most significant threat to life is ignorance and lack of knowledge and information.
- This ignorance, or 'culture of ignorance', produces the typical effects of uncritical support and uncritical rejection of biotechnology. The threat to life is the 'culture of ignorance', which surrounds genetics, both among the lay public and in the medical professions. This is a risk in itself.
- The 'culture of ignorance' with its lack of critical judgment of the future, makes it difficult to achieve an optimal future: one which maximizes the benefits of genetic modification and minimizes the harms.
- The uses of the technology may give harmful results, and the threat to human life and future is insufficient knowledge about the effects of the technology.

[16] Ethical dilemmas in the meaning of unfavourable environmental and health consequences caused by using the technology.

Challenge to the scientific code:

- The challenge is how to achieve sufficient knowledge for making it possible to predict risks and to accumulate sufficient knowledge to minimize the risk produced by the same increase in knowledge.
- Ignorance should be countered by the creation of an informed culture. The mobilization of an informed culture has the aspiration of informing the public about science and genetics. The strategy involves remedying both the knowledge deficit of the lay public and the ethical deficiency of the medical profession.

By stating that technology is morally neutral in itself, the scientific ideal-type puts only the effects of the technology as ethical problematic. This in turn transcends the technology from norms and ethics.

2.3 – THE AESTHETIC IDEAL-TYPE

The aesthetic ideal-typical culture positions risk quite different from the religious and the scientific ideal-type. Risk and threat to human life is not, according to the aesthetic ideal-type, the technology or the use and results of the technology. Not exploiting the possibilities and the technological potentials are the risk-perspective in this aesthetic cultural position.

Focus:

- The human being is a potential for re-organizing the body and redefining the limits and character of human life. The human being is to be considered as raw material and

possibilities for technological enhancement. Hence, the human being is host for micro-technological mechanisms, which effectuate changes and improvements.

- The possibility of technologically manipulating atoms at a molecular level, which is nano-technology, promises to transform the human body. In this position there is an uncompromising faith in science and technology, opposed to the religious position.

Risks and threats posed by biotechnology:

- The threat to human life is, not being able to use the technological potentials, and the existence of resistance against technological development.
- The ‘culture of life’ and the ‘informative culture’ are therefore a threat to the ‘aesthetic culture’.

Challenge to the aesthetic code:

- The challenge is to blur the distinction between reproductive and non-reproductive cell therapies. This is because the ‘aesthetic culture’ makes no distinction between the purposes of the technology.
- The mobilization is to avoid technological scepticism and resistance against use of technology. Hence, the main challenge is to loosen the restrictive laws and directions, but rather accept that the technology should control and rule.

The aesthetic message and the biotechnological logic are here drawn to the extreme. The extreme naturalism combined with the ambition to use the human body as an object of

technological and artistic manipulation is, according to the 'culture of life' and the 'informative culture', making the human being more inhuman.

All the three ideal-typical positions attempt to frame the risk to the future of human life posed by biotechnology. Howard Caygill's contribution is to show that these three cultural strategies are themselves transformed in the process. Through his critical illumination of cultural strategies, he emphasizes that there are different cultural interpretations and constructions of risks. All of the three works[17] that Caygill gives attention to, is in each particular way black-boxing[18] technology: The religious in the name of the totality of theological knowledge. The scientific in claiming that biological research and biotechnology are in themselves ethically neutral. The aesthetic in the uncompromising faith in technology. I do not intend to go further into a debate of the limits and challenges of these specific ideal-typical positions[19]. My intention is to use the three ideal-typical positions as a tool in the analysis.

2.4 – CRITICAL DISCUSSION

The ideal-types give attention to risks and threat to the future of human life posed by biotechnology. The three ideal-types are devoted to illustrate three different cultural perspectives of risk posed by biotechnology. In this context risk is defined as the eventually harmful effects posed by bio- and gene technology. It is the diverse definitions

[17] *Evangelium Vitae*: the Value and Inviolability of Human Life, *Our Genetic Future*: The Science and Ethics of Genetic Technology and the work of an Australian performance artist.
[18] Black-boxing is to see the artefact, or technology, as taken-for-granted. In this matter the risk posed by biotechnology is based on some a priori assumptions, which one could say is sort of black-boxing the technology and its risk to human life, because the a priori assumptions are taken for granted.
[19] Caygill attempts to illustrate that these ideal-types are themselves transformed and challenged in the process of cultural interpretation.

of these eventually harmful effects and the implicit assumptions that lie behind the comprehension of these definitions, which may be understood as three cultural positions of risk. Hence, one may also understand the three ideal-types as three cultural and construed approaches. It is important, as Haraway says, to be aware: We are all Cyborgs[20] and parts of social technostories. Each technostory construe what it seems to disclose (Haraway, 1988). This is also the matter in this case. This technostory attempts to tell how one may disclose the political debates regarding cloning and its risk to human life. I want to interpret how the politicians understand risks and threats related to cloning technology, through three diverse cultural terms. I want through this story, to disclose the politicians' implicit assumptions and values in the debates about cloning.

There are some questions concerning to the use of such a three-divided division. These questions should be clarified before the analysis, because they are important to remember in the reading of the interpretation and conclusion. The first one is as I have mentioned before, to have in mind that risk and threat are conceptions that might be seen as constructions: Not in their existence, but in their cultural interpretation and perception. The religious, the scientific and the aesthetic position may thus be understood as three construed positions that become real because people believe in them.

The second question touches upon the incompleteness of the ideal-types. Arguments that might not be specific enough, according to the ideal-typical framework, might be consigned to the outside and hence ignored and abandoned. They might be treated as

[20] The Cyborg is a metaphor in describing that we are all hybrids of organism and technology, fiction and facts, myths and reality (Asdal et al., 1998:39).

insignificant in the interpretation and in the analysis. However, in a research paper in which the purpose is to disclose methodological insufficiency, these arguments might be quite appropriate in challenging the legitimation of the use. However, this paper has not the intention or the purpose to demonstrate that each and one of three ideal-types are complete. Nor do I assume that the three ideal-types are complete with respect to the analysis. I state as premises that ideal-types are construed frameworks, and I have not the intention to elaborate the transformative and challenging aspects of the ideal-types.

The scientific ideal-type considers the technology as morally neutral, but the moral neutrality is threatened by the use of it. It is the uses to which biotechnology and genetic modification are put that create dilemmas. This view is in opposition to the religious ideal-type, which considers biotechnology as morally reprehensible in itself. The religious ideal-typical view implies that norms, ethics and moral are inscribed within the technology, and the uses should be seen in relation to the technology itself. This view is close to the conception of the ‘seamless web’. The seamless web stresses that it is never clear a priori and independent of context whether a problem should be treated as technical or social (Bijker, 1995:273). The religious ideal-typical view is in this sense taking the seamless web into account, but it differs from the very concept of the seamless web: the religious view is taking religious ethics as a priori premises, which should be transcribed into the technology. The scientific ideal-typical view is taking the moral neutrality as an a priori premise, in which the technical is morally neutral, but the social is manufacturing the ethical dilemmas. The aesthetic ideal-typical view is taking technological fascination and possibilities as imperatives for technological enhancement. These distinctions

between the social and technical are not in accordance with the principle of symmetry[21]. The ideal-typical frameworks can thus be challenged by theories that take the principle of symmetry into account. The ideal-typical views are all relying on some a priori assumptions, and hence displaying some convergent features. Each presents risks posed by biotechnology and attempts to frame cultural responses, which will either counter or promote the feared or desired future (Caygill in Adam et al., 2000:156). I circumscribed before that I would not intend to go deeply into the transformations and the challenges to the cultural codes that lie behind the ideal-types. My intention here is just to point out that the ideal-typical cultural codes can be challenged. The challenges and the convergent feature may also be seen as a critique of the ideal-types as framework. But as mentioned before, ideal-types are not sufficient for describing the complexity of the world. I have not taken completeness as a premise in the analysis, and the challenges to the cultural codes display that these three are themselves transformative.

The third question I want to draw attention to is about the flexibility or rigidity of the ideal-typical concept. Ideal-types may be accused of being too strictly as an analytical framework, and hence for giving an enclosed or stiffened interpretation of social phenomena and how reality might be understood. Thus, it is important to be aware that this interpretation might not be the only one conceivable. Ideal-types are meant to structure, categorize and position understandings, which are necessary in attempts to differentiate and reflect over social contexts. Frameworks are necessarily needed in analysis and interpretations, even though they might be insufficient in their interpretation

[21]General symmetry (Callon on sociotechnology): Symmetrical with respect to explaining the social world and the technical world (Bijker, 1995:275).

and reflection of complexities. However, I want to argue for the usefulness of analysing by applying these ideal-types in this descriptive work. My purpose is to draw attention to the politicians' different forms of arguments in the legislative process toward the concretion of a law concerning medical use of biotechnology (Cf. Besl.O.nr.27 (1997-1998)). My analysis is dependent on an analytical framework in order to illuminate the political arguments. I will later return to why it has been useful to apply these ideal-types.

Implications

In the book, *The Risk Society and Beyond. Critical Issues for Social Theory*, are Barbara Adam, Ulrich Beck and Joost Van Loon and other contributors, as Howard Caygill, advocating a social theory that takes heed of the consequences of living in a risk society (Adam et al., 2000). In a risk society, they argue, even the most restrained and moderate-objectivist account of risk implications involves a hidden politics, ethics and morality (Adam and van Loon in Adam et al., 2000:1). To face a decision about whether to acknowledge or ignore the ethico-political implications is, would Beck say, the foundation of reflexive modernization and the inescapable self-confrontation that accompanies the contemporary industrial way of life (Beck et al.,1994:5). This reflexivity has implications for how to critically treat the constellation of risks, technologies and the relationship to the future. I will try to draw attention to some implications that follow this reflexivity.

The first implication I want to draw attention to is the necessary involvement of a sense of construction in the configuration of risk-perception. There is a need to understand risk

construction as a practice of manufacturing particular uncertainties that may have harmful consequences to life in the broadest sense of the term. *The essence of risk is not that it is happening, but it might be happening* (Adam et al., 2000:2). Risks are in this reflexive context to be understood as manufactured not only through the application of technologies, but also in the making of sense. The contributors that are advocating a social theory that takes heed for living in a risk society, claim that risks are necessarily constructed, however, they are not constructed on the basis of voluntary imagination. Risks are being revealed in their construction (Ibid). This constructivist argument sees that the perceived and defined risks associated with gene technology are cultural dependent. The three ideal-types whether those of religion, science or aesthetic, bear witness to the diverse ways in which contemporary culture positions the risks posed by biotechnology. The three ideal-types may thus be understood as three cultural codes, which are dependent on a cultural context, a religious, a scientific or an aesthetic one.

The second implication is the inevitability of the contested nature of these constructions as relations of risk-definition. Following the constructivist argument, all interpretation is inherently a matter of perspective and hence political (Ibid:4). This in turn puts those in a position to define and legitimate risks, the politicians in this case, in key positions. The inevitability of political involvement, the pervasiveness of mediation, the high level of indeterminacy mean that there is no one truth, that there are no facts outside the relativising influence of interpretations based on context, position, perspective, interests and the power to define and colour interpretation (Ibid). There can be no such thing as innocent knowledge as Haraway points out. Knowledge is inevitably tied to particular

locations we inhabit, we all engage in situated knowledge (Haraway, 1988). Following this argument, knowledge is principally embodied, contextual and positional, and taking up a position and to be positioned is inevitably a question of ethics. The politicians that are in a position to make sense of risk are thus, following the argument, are involved both in the engendering and manipulation of risks, as well as in their negotiation and displacement.

The modern thought has placed the traditional role of theory in creating structures in which knowledge could be developed (Adam et al., 2000:11). The use of the three ideal-typical perspectives in the analysis is in this sense a particular practice of ordering knowledge. Such a role may seem rather inadequate to deal with the challenges of making sense. This inadequacy concerns, on the one hand, the irreducibility of the concept, and the multiplicity and complexity of the concept that are inherent in any ordering-framework that tries to establish general laws. In other words, it is too undistinguishing. On the other hand, however, the logic of structuring is inappropriately limited to the ring-fencing of its own categorical imperatives which engender the objects and objectives of this ordering of knowledge (Ibid). This is a paradoxical role. The implications in order to overcome this double-flaw, is to be aware that the construction of risks and ethics must obey the discourse of theirs revelation, and that all knowledge about gene- and biotechnological threats is mediated and as such dependent on interpretation.

Discourses are says Haraway constituting and constructing practices (Asdal et al., 1998:40). Following her argument, the political discourse as a technoscientific discourse,

is productive and reflexive in the making of laws. The discourse is hence a part of the constitution and construction of definitions, understandings and interpretations of risks and threats posed by gene technology.

CHAPTER 3 – ANALYSIS OF THE CLONING DEBATE

In this part of the study I will try to point out the arguments used in the political debate on cloning. With respect to this debate the important thing is the politicians' way of arguing, that is what arguments they put forth. In the analysis of the debate on cloning the arguments have been limited to the three ideal type conceptions of the hazards of gene technology. The aim of this analytical procedure is to show how the arguments used in the debate can be understood within the categories of the religious, the scientific and the aesthetic ideal-type. Arguments that can be attributed to one of the three different cultural positions and their way of viewing the risks concerning gene technology and cloning, tell us something about the implicit values on which the politicians base their arguments.

3.1 – ISSUES ON THE AGENDA

I have tried to extract the main lines in the parliamentary discussion of 07.03.1997 and 21.03.1997. I will go on to discuss the issues on the agenda in relation to the three before mentioned ideal-types. The main concern of the political debate is how to maintain a sustainable society and find ways to secure a healthy development in biotechnology that serves mankind (Cf. The law on bio-technology and the law on gene technology). The Norwegian national assembly is opposed to unrestrained use and development of this technology. By questioning the possibilities of the technology, its use and its effects, the debate is focusing on aspects of the technology that seem dangerous and risky. It is the focus on risks that will serve as the basis of the analysis of the political debate on cloning. The three ideal types that I have mentioned represent three different ways of seeing the

risks connected to gene technology. They all touch upon the threat to human life that gene technology represents. How is this threat treated in political discussions?

As will be made clear later on in my analysis of the political debate, some arguments are easier to identify and are more easily attributed to one of the three ideal-types than others. The religious ideal type is apparently the category that has the most easily recognizable arguments. This is probably due to the fact that our political parties and our cultural legacy are based on Christian tradition. The scientific ideal-type has a more modern, rational foundation and is not as profound and philosophical in its ways of arguing. The rational arguments of the politicians lend themselves more easily to a scientific interpretation than the others. The aesthetic ideal-type is more extreme and its voice is usually not heard in the political discourse. The main part of the analysis will be concentrated on the religious and scientific ideal-types. One explanation of the apparent absence of the aesthetic ideal type in the political discussion, is that the other two have a less controversial outlook on human life, considering our general cultural understanding and Christian tradition.

3.2 – RELIGIOUS IDEAL TYPE ARGUMENTS

I will begin with the interpellation of 21.03.1997 made by the MP[22] Marit Arnstad (Centre Party) to the Minister of Health 21.03.1997, as this debate was started with the intention to have a broad exchange of opinions on the development in gene technology (Arnstad (Centre Party), Stortinget 21.03,1997:2). In this particular debate I have found arguments that lend themselves to a more specific religious interpretation, and I have

chosen to focus my attention on the objects of discussion that are closest to the religious ideal-type. The other objects of discussion are more general, but still give rise to religious arguments. These topics will not be entered upon in this study.

Stretching ethical boundaries

With the cloning of Dolly as her starting point, Arnstad bases her interpellation on the wish for a broader debate on the aspects of gene technology. Arnstad feels that with this controversial cloning of an adult sheep, an important ethical line was crossed (Arnstad, Stortinget 21.03, 1997:1), and she goes on to say that the cloning of humans might be possible in the near future (Ibid). Subsequently an exaggerated picture of the development is drawn, with chilling predictions of human clones. It is an extreme point of view, but Arnstad uses these science-fiction images to illustrate the worst case scenarios of the technological development. The most important ethical barrier has, as she puts it, already been crossed with the cloning of Dolly. Attempting to clone animals, we have crossed one important line. If we use the same technology on humans, it would mean yet another transgression.

In Arnstad's opinion therefore, what we need is a political debate on the ethical and environmental aspects of gene technology, in order to take the right legislative measures with respect to the technological development (Ibid). As to the question of human cloning, Arnstad feels it is a boundary we should not cross.

[22] MP: Member of Parliament.

> Facing the question of human cloning, we have reached the last frontier as far as ethics are concerned. If we do not maintain this last barrier, it will no longer be possible to check the development at all.
> (Marit Arnstad (Centre party), Stortinget 21.03, 1997:2)

Arnstad is backed on this point by several other politicians. Meltveit Kleppa (Centre Party) points out how difficult it is to draw lines, but she finds that only the prohibition of human cloning is compatible with Christian and humanist traditions (Stortinget 21.03,1997:7). Frafjord Johnson feels we need to get the legislation in order as soon as possible, a legislation that prohibits cloning of humans, considering the fast development in gene technology (Stortinget 21.03, 1997:6).

Anders Hornslien (Labour) continues the debate by asking where to draw the lines between what we can allow and what we cannot allow, which animals can be cloned and which not (Stortinget 21.03, 1997:6).

> Are we supposed to ban the cloning experiments that are carried out on bees at Ås[23]? Are we to draw the line at bees or at cows, mammals, other organisms, or cloning used in skin-transplants etc.?
> (Anders Hornslien (Labour), Stortinget 21.03, 1997:6)

This Labour MP does not on the other hand give any answers himself, but he touches upon some of the essential questions in the debate, that is where to draw the line. Therefore, he goes on to say, it is important to have a continuous debate on this subject in

[23] The Agricultural School in Norway.

the Storting. Magnhild Meltveit Kleppa (Centre Party) gives a more substantial answer to the question of where to draw the line. She wants to prohibit cloning of animals and humans (Meltveit Kleppa, Stortinget 21.03, 1997:7).

> We have every reason to take those scientists seriously who point out the unknown risks that cloning might represent, themselves want to outlaw cloning, because they know how difficult it is to draw lines. This is also the only conclusion that is compatible with the Christian and humanist traditions that so far have secured the basis for the inalienable rights of each individual in our society.
> (Magnhild Meltveit Kleppa (Centre Party), Stortinget 21.03, 1997:7)

To ban human cloning would in Kleppa's view be the only justifiable thing to do, if we want to protect the inalienable rights of the individual. Considering that the Christian tradition emphasizes the rights of the individual, the cloning of humans brought about by scientists is, according to Meltveit Kleppa, incompatible with this view. It would be contending with the Christian tradition with regard to the Christian view on human integrity and individuality.

Right-wing politician Annelise Høegh takes it further by saying that in addition to prohibiting cloning, we have a duty to make sure that ethical guidelines are followed when we decide to take new technology into use (Stortinget 21.03, 1997:7). Using the concept of duty, she is referring to ethics as well as to the technology.

> We have no obligation to allow anything that is technologically possible, but we have an obligation toward ethics (Høegh, Stortinget 21.03, 1997:7).

She gives no straight forward answer to the question of what system of ethics to follow in controlling the use of gene technology. But claiming as she does that we have an obligation to be ethical, she is committing herself to a system of deontological or Kantian ethics, that is based on the concept of duty, deontology. Deontological ethics is the core of the Christian tradition (Thommesen et al., 1996:195). Both Meltveit Kleppa and Høegh are committed to the Christian tradition and to humanist values, and thereby they are bringing the concept of duty into the debate. As humans we have an obligation, as is clear from their arguments, to protect our natural environment and humanity within ourselves. The prohibition of cloning would be the alternative most consistent with the concept of duty, the Christian tradition and the humanist values.

The question of ethical barriers being crossed is connected to the man's position in nature. The politicians want to draw the line at human cloning because of the unique position that humans have with regard to other mammals.

Man's position

Arnstad opposes the experimenting on animals to the experimenting on humans. The cloning of humans represents the last frontier, and this frontier needs to be protected through joint action. This is in line with the religious ideal type, according to which changes are made by people who stand united behind a consistent, wide-ranging ethical policy or strategy to protect life according to Christian and religious values (Caygill,

2000:157). Arnstad is implying that the strategy to protect the ultimate ethical barrier is based on religious values, but she is not explicit on this point. But the notion of consistent action to protect mankind is present.

> The motivation behind this is that there are things that mankind should defend itself against through joint action. Human cloning represents a threat to human integrity and identity. It is an example of something that civilized societies should not accept. (Arnstad (Center Party), Stortinget 21.03, 1997:2)

The religious ideal-type sees human life as something sacred and inviolable, and that every human is valuable and has an important role to fill in life. When Arnstad sees human cloning as a threat it is because human integrity and identity is in danger of being destroyed or abused if we do not control the development of cloning. This argument rests on the conception that man is inviolable, and that man's integrity and identity is tied to this inviolability, which we should be willing to protect. If we are not willing to protect the inviolability of man, we are jeopardizing the integrity and identity of civilized society. In this context, to protect human integrity and identity means to protect our genetic material. Our genetic material, our DNA or genes is consequently to be regarded as inviolable and sacred, it is what constitutes man's integrity and identity. According to the religious ideal-type humans cannot decide what constitutes an efficient life and what does not. Human beings have unqualified value, but in an efficient society, the religious message claims, values are subordinated to economical and political efficiency (Caygill, 2000:156). This on the other hand is not consistent with a religious position according to which humans have inherent value. Consequently one cannot allow humans to be used in

research and experiments only as a means to an end, i.e. to make humans more efficient. Cloning of animals is being accepted and defended because scientific and vested interests (the medical industry) is hand in hand, says Arnstad. She mentions the Roslin institute in Scotland where Dolly was created as an example of this. The next-door neighbor of the institute is the medical company PPL Therapeutics, which is eager to put the technology used on Dolly into use (Stortinget 21.03, 1997:2). Arnstad finds this very disturbing from an ethical point of view, because it is not just a question of science, but also a question of money. She is concerned that making a profit will outweigh ethical considerations and the effects on society at large. The ideal of the 'culture of life' is man's inherent and inalienable value, as opposed to man's value being measured in money. She compares the cloning of animals to human cloning and finds many reasons to prohibit the cloning of animals as well. But her arguments are still different when it comes to her proposition to prohibit the cloning of animals.

First of all she doesn't claim that we have to protect the integrity and identity of animals, in other words, animals are not as inviolable and sacred as humans. But she emphasizes that we have to protect our natural environment. There is, according to this view, an important difference between animals and humans, and the superiority of man is taken as a given. This is consistent with theological arguments, which places man at the head of creation. In the book of Genesis God makes man the master of nature and puts him in charge of naming animals and plants. Man was created in God's image.

And God said, Let us make man in our image, after our likeness: and let them have dominion over the fish of the sea, and over the fowl in the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth
(1. Book of Genesis 1:26).

The religious ideal-type conception of man relates the sanctity of man to his responsibility towards the rest of creation. The sacredness of man is related to the fact that he is created in God's image. Man's superiority over all other creatures is consequently a sacred responsibility to protect the environment and ourselves. Man has an obligation to act according to this responsibility, because of our prerogative with regard to the rest of creation and because we are created in God's image. When Arnstad opposes the cloning of animals it is because she sees that nature and the environment and man needs protection. And she sees it as mankind's job to stand united in the fight to secure the ethical barriers.

Hernes' reply to Arnstad is of an open character, and his arguments are not as dependent on implicit values when it comes to ethical barriers and the question of what is sacred and what is not. But at one point he agrees with the religious argument about man's unique position in nature. Before he gets to this point he treats the issue of possible environmental problems that might arise from the use of cloning. One of these problems is the possible loss of bio-diversity. Hernes bases his argument on information from the Ministry of Agriculture and the Ministry of Environmental matters. But this problem is not necessarily a sufficient reason to ban the cloning of animals (Hernes, Stortinget

21.03, 1997:4). Speaking of man's position in nature, he too underlines the unique position of man with regard to other mammals.

> Finally I reach the question of cloning of the most advanced mammal we know, i.e. Homo sapiens. At the outset it seams easy to turn it down, but I think it is necessary to paint a more nuanced picture of the situation. (Gudmund Hernes (Minister of Health), Stortinget 21.03, 1997:4)

Man's position at the top of other creatures makes it easier to justify the prohibition of human cloning. But he still thinks we have to be less categorically negative towards the possible cloning of humans. Never the less, by granting man superiority over other mammals, he recognizes that human cloning needs a different and better justification than the cloning of other mammals.

The superior position of man with respect to other animals is consistent Arnstad's argument to the point that man has a special role in nature. But the conclusions that Hernes draws are not as drastic as those drawn by Arnstad. He says that even if the Ministry of environmental matters is concerned about the loss of bio-diversity, which might turn out to be a serious problem connected to cloning, he doesn't see this as a sufficient reason to prohibit the cloning of animals (Hernes, Stortinget 21.03, 1997: 4). As a matter of principle, Arnstad would like to prohibit both human cloning and the cloning of animals (Arnstad, Stortinget 21.03, 1997:2), while Hernes would like a more nuanced and open-minded discussion of this matter. But as he places man above other mammals, he is still implying that a prohibition of human cannot be justified on the same

basis as a prohibition of animal cloning. Humans and animals should be treated separately. The legislation should be different with respect to human and animal cloning. By saying that a prohibition of cloning should not apply to animals, he is drawing an important line between humans and animals. The minister of health uses the term 'developed mammals' to designate humans. As to ethical guidelines, he draws the line between the lower and higher animals. But he still finds it difficult to draw an exact line and asks if we should ban the production of genetically identical individuals all together, whether they be two-legged or four-legged (Hernes, Stortinget 21.03, 1997:3)

I have placed Hernes' conception of man as the most developed mammal in the same category as the religious arguments, because Hernes not only grants man[24] with a unique position in nature, but also sees man's inherent value. The rejection of human cloning and animal cloning cannot be grounded on the same principles. This implies that man has an important responsibility, not just toward nature, but also toward himself and toward other people. This answers the religious description of man as having inherent value and purpose.

Man's position in creation is essential to the religious ideal-type conception of the risks connected to gene technology. The religious ideal-type position puts man at the head of creation, which makes it natural to ask whether the technology used on animals should be transferred to humans.

The risks involved in transferring animal experiments to humans

According to Arnstad it is not the sanctity of animals that precludes animal cloning, but rather the concern for negative effects that this technology might inflict on the environment. As to the arguments in favour of a prohibition of animal cloning, the concern is about the possible transfer of this technology from animals to humans. To accept this technology would raise ethical dilemmas because it would mean an extension of its use. In Arnstad's opinion there are plenty of reason to ban animal as well as human cloning.

One reason is that the method used is the same whether it is being used on animals or on humans. The general acceptance of cloning would lead to increased pressure to allow human cloning as well. Another issue is that increased use of a certain method leads to greater risk of the same method being abused (Arnstad (Centre party) Stortinget 21.03, 1997:2).

The use of this technology represents a threat to mankind, but what Arnstad is saying can be taken to mean that the technology itself is inherently unethical. Accordingly, this technology is not ethically neutral, and this makes it impossible to separate the technology from its use[25]. This technology has ethics, which the religious ideal-type also suggests. Man represents life, claims the religious view, while gene technology and those engaged in genetic science and in developing new techniques of artificial reproduction and cloning represent 'the culture of death' (Caygill, 2000:156). This culture is,

[24] Cf. Being superior to all other animals.
[25] Cf Haraway and Latour and their conception of what counts as human and non-human of this technology. These definitions are not universal, self-evident truths. They change according to circumstances (Asdal et al., 1998:32).

according to the religious ideal- type, destructive in its nature and works against life through its scientific work. Given the sanctity and inviolability of life, the ’opponents’ of life are demonised. They represent the opposite of life; destructive forces and that which can be violated. The challenge for mankind, as representatives of ’the culture of life’ is to maintain a clear conception of what it means to be human and of human rights and duties. Human cloning represents a threat to human integrity and identity because this technology challenges our preconceived opinions of what it means to be human.

Arnstad points to the fact that scientists do not operate in a vacuum. They are a part of society. She questions the use of public money (Stortinget 21.03, 1997:2). Science should answer the ethical expectations of the rest of society, and consequently not be carried out in a vacuum, without regard for ethics and the effects on society at large (Ibid).

> (…) the lack of ethical intuition that is evident in certain scientific communities is cause for concern. (…) Even scientists should be able to say that we don’t need to know everything. Regardless of the personal attitudes of science, society has a right to check the expenditure of public money.
> (Arnstad (Centre party), Stortinget 21.03, 1997:2)

Arnstad’s approach to the ethical standards of scientists is typical of the religious ideal-type, which looks upon scientists and scientific institutions as representatives of ’the culture of death.’ Scientists who want no restraints on their work are a challenge to the ethical standards of society. And, as Arnstad points out, there are scientists who warn us

against limiting their freedom. She goes on to say that this argument has always been used to stop attempts to check the methods used in gene technology (Ibid). The religious ideal-type labels gene technology as the 'culture of death'. This culture is characterized as supporting individual liberty and moral relativism (Caygill, 2000:156). The arguments against scrutinizing gene technology and the arguments in favour of free research that are a challenge to Arnstad's views, in that they represent the before mentioned liberal attitude among scientists. This liberal attitude is a challenge to society, the way she sees it. The challenge consists in protecting society and man against cloning, which is something society rejects on ethical grounds, whereas scientists often have a more relativist attitude towards it. That is why she wants a broad exchange of opinions on the subject, which, ideally, will secure the basis of a very stringent attitude towards cloning (Stortinget 21.03, 1997:2). This goes against the liberal and relativist attitude, but backs the ideal-typical religious view of what in means to be human, and of human rights and duties.

Gudmund Hernes, the Minister of Health, shares Arnstad's concern about the methods used on the sheep Dolly. The application of this technique on humans will most likely be an option in the near future. With regard to this Hernes asks the question of whether the production of genetically identical individuals (be they quadrupeds or bipeds) should be prohibited all together. He also asks whether we should limit the freedom of the scientists.

> Is realizing every possibility we might have, now or in the future, ethically sound? What should we, on moral or other grounds, abstain from doing?

> Where are we to draw the line between Sacred and expendable life? The possibilities are many.
> (Gudmund Hernes (Minister of Health), Stortinget 21.03, 1997:3)

He too describes the worst case scenarios and gives disturbing predictions of the future. He emphasizes the point he is making by asking if a cloned person would have a soul (Ibid). In spite of the naive phrasing of this question, it is never the less important. It is a question that interests the general public. And the implications of this question also secure the basis on which to decide which species it is ethical to clone. Asking the question of how to delineate the sanctity of life, he is adding a question about body and soul. Even if Hernes on the whole shares Arnstad's concern, he does not presuppose as a self-evident truth the sanctity of man's integrity and identity. He encourages a debate on what we see as necessary truths concerning what is sacred and what is not.

Arnstad treats the assumption that human cloning is a threat to mankind as an a priori truth. Consequently, to ban human cloning would be the only ethically sound thing to do. Hernes does not preclude that exceptions from the general prohibition of animal cloning should be made, when it is useful to society to do so (Stortinget, 21.03.,1997:4). Arnstad on the other side asks if this is to the good of society or to the good of the vested interests.

> The question remains; is this about the medicine or about the profit made from selling it? The medicines produced with the help of cloning can actually be made without cloning, only it would be more expensive.
> (Marit Arnstad (Centre party), Stortinget 21.03, 1997:2)

The MP from the Centre Party doubts the intentions of the scientists. She questions their motives with regard to science, development and industry. The common good cannot be their over all concern. Consequently, the consideration of the common good is not enough to justify animal cloning, in Arnstad's opinion.

Hernes does not automatically draw the conclusion that extended use and testing of a technique, in this case cloning, is in itself ethically unsound, because extended use increases the risk of the technique being abused, and it increases the pressure to extend the use to humans as well. This conclusion is not valid in Hernes' opinion, nor is it a sufficient reason to prohibit animal cloning. He goes on to point out that:

> For centuries man has bred other animals – it is a well-known, commonly used technique in agriculture, but still it has not been transferred to humans. So I am not sure that the concern that animal cloning will eventually lead to human cloning is a valid argument in this context. (Gudmund Hernes, Stortinget 21.03, 1997:5)

At this point, Arnstad is backed by Frafjord Johnson (Christian Democrats), who disagrees with the Minister of Health. Frafjord Johnson thinks that the scientific break-through, which the cloning of Dolly represents, is very easily transferred to humans (Frafjord Johnson (Christian Democrats), Stortinget 21.03, 1997:8). Both the two MP's use the risk of the technology being transferred to humans as an argument against cloning in general. Solheim (Socialist Party) shares their view and doubts the validity of Hernes' argument. The MP from the Socialist Party turns to history to find explanations, and says

that history teaches us that technological development makes the technology more accessible and easier to use.

> Many different techniques have been greatly simplified, and consequently they are more commonly used. Against this background, it is important to ask the question of how to check the development.
> (Erik Solheim (Socialist Party), Stortinget 21.03., 1997:7)

The reason he gives for wanting to prohibit animal cloning, is that the technique, if legalized, will inevitably be made easier to use and more accessible, and consequently very easily transferable to humans. As Arnstad he wants Norway to work to have cloning banned on an international level. (Stortinget 21.03., 1997:2,8). With view to the perspective of change through joint action of the religious ideal type, this is a way for the nation to join in a shared political strategy in favour of ’the culture of life’.

The purpose of cloning

This debate includes the issues concerning the different methods used in cloning, such as cloning on cells, by splitting a fertilized egg and somatic cell nuclear transfer. In Hernes’ opinion cloning of cells to help individual is fundamentally different from cloning used as a means to produce genetically identical individuals (Hernes, Stortinget 21.03., 1997:4).

> Cloning of human cells as a means to produce new skin for skin-transplants on fire victims might be an option in the future. The same technique might also be an option in bone marrow transplants. In my view

> there is a fundamental difference between cloning of cells destined to be put back, either in the individual they came from or in closely related individual at one hand and cloning used merely to multiply certain individuals.
> (Gudmund Hernes, Stortinget 21.03, 1997:4)

Hernes speaks in favour of prohibiting animal cloning, considering the implications it might have on the environment and the rest of society. But he still thinks that exceptions should be made in cases where cloning would be in the interests of society (Hernes, Stortinget 21.03, 1997:3). In the case of human cloning the exceptions should be made in cases that are principally important, and not just with regard to the common good of society. Cloning of human cells should always be in the best interests of the person whose cells are being cloned. The consideration of the common good rests on utilitarian thinking. In a utilitarian perspective, cloning should be used if the over-all result is to the good of society. According to Thomas Achen, who has conducted a study on the relationship between ethics, politics and law in the legislative work concerning biological technology and gene technology in Denmark, Norway and Sweden, the concept of the common good of society is embraced by all the political parties in Norway. It is also being used by politicians who want exceptions to be made from general prohibition (Achen, 1997:131-132). This is also the case when ethical problems and risks implied by gene technology are discussed. For the most part, exceptions to the general prohibition of cloning are justified on the grounds of what is in the best interests of society. In this respect Hernes is a spokesman for the widely accepted concept of the common good[26].

[26] The concept of the common good will not be discussed in this study. I have extracted this notion from the work of Thomas Achen.

But with respect to human cloning, he takes a different stand. Human cloning is a matter of principal importance, and the consideration of what is useful to society is not enough to justify it. The fundamental difference between cloning used as a means to treat illnesses and cloning used to make exact copies of existing individuals, lies in the fundamentally different intentions with which these two types of cloning are being done. The first type of cloning is being done to improve the health of the individual or a close relative of that individual. This is not just in the best interests of society, but also in the best interests of the person concerned. Man is not to be seen as a merely a means to produce cells and organs or in as something to be used for scientific or industrial purposes. Man is an end in itself with inherent value. And when the line is drawn at cloning used to the benefit of the person whose cells are being cloned, the purpose of cloning is that specific person. As the most sophisticated mammal, man has inherent value regardless of its utility. When cloning of lower animals is accepted on the basis of utility, it shows that rather than granting them with inherent value, their value is based on considerations of utility. As I understand what Hernes is saying, the definition of man as the highest mammal is due to man's ability to reach goals that he sets for himself. Man is the only creature who possesses free will, and man can decide for himself whether man wants this autonomy to be a means to an end or an end in itself. The concept of autonomy is therefore inextricably linked to the concept of man's inherent value. These to notions are at the core of the religious ideal-type position. Man is not just a means to an end or supplier of raw material, but also an end in itself. This view is often related to Kant and the categorical imperative (Kemp, 1991:32), which tells us never to treat people merely as means, but always as ends. This answers well with the golden rule of the Bible:

Therefore all things whatsoever ye would that men should do to you, do ye even so to them (…) (Mathew 7:12). This is a general principle. Making choices and reaching personal goals presupposes autonomy. But to maintain man's inherent value man has to act so as not to violate the autonomy and sanctity of other people. By regarding other people merely as a means, these people are deprived of their dignity and their possibility to make autonomous decisions. It would contradict the arguments of the religious ideal-type position, which the Minister of Health adheres to.

Natural and unnatural reproduction

Hilde Frafjord Johnsen (Christian Democrats) brings up another issue in the debate, as she speaks of the fundamental biological process. What is fundamentally new, she says, given the cloning of Dolly, is that the fundamental biological process of reproduction has been change, in so far as we can procreate without natural insemination and without the coalesce of egg and sperm.

> It no longer takes two, one is sufficient. The parentless mammal has become a reality, and maybe the parentless human will be one too, if we don't draw the line.
> (Hilde frafjord Johnson (Christian Democrats), Stortinget 21.03, 1997:8)

The Christian faith is based on the belief that man is created by God in God's image. Therefore man has an obligation to realize the purpose of god's creation. *So God created man in his own image, in the image of God created him; male and female created he them. And God blessed them, and God said unto them: Be fruitful and multiply, and*

replenish the earth, and subdue it (…) (1. Book of Genesis 1:27,28). According to Genesis the purpose of men and women as God's creation is to produce descendants and be fertile. The technique of cloning makes it possible to produce people independently of the fundament of procreation, namely the two sexes, and this goes against the divine purpose of creation. The religious argument against reproductive cloning also applies to the use of embryos for scientific purposes and the use of inseminated eggs for medical purposes. First of all, arguments in favour of the use of cloned embryos for research purposes would contend with the religious ideal-type, because one would also have to accept the production of inseminated eggs merely for scientific use. This would be against 'the culture of life' because human embryos would be treated as raw material to be used in research, i.e. only as a means and not as an end. Secondly one would have to accept artificial reproduction without the natural implications that is a coalesce between an egg and a sperm. This does not just imply that eggs and sperm meet intest-tubes. Given the possibility of cell nuclear transfer reproduction can happen in a way that, in Frafjord's view, defies natural reproduction in that eggs can be inseminated without sperm. The nucleus of one cell (taken from either a man or a woman) is simply placed in an egg cell that has no nucleus. At this point Hernes points to the fact that this technology makes it possible for women to have babies without a man, and he asks the question of whether this technology should be made available to lesbian women (Hernes, Stortinget 21.03, 1997:3). I will not go further into that matter, but I mention it to show some of the many implications of the issue of cloning. Anyway the question of natural versus artificial reproduction touches upon the issue of lesbian mothers. In their opinion lesbian mothers are against the natural, otherwise they would not question whether the

technology should be made available to lesbian women. Hernes and Frafjord Johnson bring up the issue of fatherless children, because this form of reproduction rocks the foundations of the Christian tradition.

Is knowledge always a blessing?

The religious ideal-type position is based on Christianity and the Bible. According to the book of Genesis man sinned as he defied God and ate the fruit from the tree of knowledge.

And the Lord God commanded the man, saying, Of every tree of the garden thou mayest freely eat: But of the tree of the knowledge of good and evil, thou shalt not eat of it: for in the day that thou eatest thereof thou shalt surely die (1. Book of Genesis 2:16-17). After the fall of man, telling right from wrong became man's lot in life.

Throughout the political debate on cloning the question of what we really want to know keeps repeating itself. The religious ideal-type position tends to focus on the negative aspects of knowledge about our genes. This is recognizable in Arnstad's concern that extended use of this technology will lead to extended abuse of the same technology (Stortinget 21.03., 1997:2), and in her view that even scientists should be able to say that there are certain types of information that we can do without (Ibid). Hernes touches upon the same issue, saying that what is theoretically doable is not always ethically sound (Stortinget 21.03., 1997:6). Meltveit Kleppa (Centre Party) refers to statements made by scientists, saying that there is information which had better remain unknown, if science is

to comply with Christian and humanist values (Stortinget 21.03., 1997:7). Høegh (Conservative Party) agrees with her and says that we should not allow anything that technology makes possible (Stortinget 21.03., 1997:7). Solheim (Socialist Party) is more explicit and supports the prohibition of animal cloning on the grounds that the technological development is way ahead of the ethical discussion on this matter (Stortinget 21.03., 1997:8). Frafjord Johnson sees the development as a threat to natural reproduction. The fatherless child might become a reality, if we don't draw the line (Ibid). What these statements have in common is that they warn us against knowing more than we can handle. Knowledge becomes a curse when it threatens our ethical barriers, the unique position of man or our natural reproduction, or when the development gets out of hand and the use of the technology becomes impossible to check. Knowledge also turns out to be a curse when the consideration of utility overshadows the notion of the sanctity of man (Cf. The purpose of cloning).

BRIEF SUMMARY

Before I continue my analysis, I would like to gather what I have found interesting so far. Arnstad, as the interpellant, is the most out-spoken adherent to the religious ideal-type position in the debate. But as I have shown all the parties (Labour, the Centre Party, the Christian Democrats, the Conservative Party and the Socialist Party) have MP's who give arguments that are partially in conformity with the religious ideal-type position. Arnstad's arguments lend themselves very easily to this interpretation, because she is so out-spoken about her negative attitudes towards cloning, and because she bases her arguments against cloning on assumptions about the value of humans that she takes to be

true a priori. In conformity with the religious ideal-type position, Arnstad presupposes the sanctity of man as an a priori truth. And she sees cloning as an obvious threat to mankind. The arguments of the different MP's differ in many ways, but still remain within the same ideal-type, irrespective of party differences. They have different approaches to the same issue. What is interesting to notice is that all the political parties present arguments that can be placed under the heading of the religious ideal-type. With view to this one can say that the arguments within the religious ideal-type position, crosses the traditional political party lines.

3.3 – ARGUMENTS OF THE SCIENTIFIC IDEAL TYPE POSITION

In this part of the study I will look at the parliamentary discussion of March 7, 1997. This interpellation was made by Magnhild Meltveit Kleppa (Centre Party) to the Minister of Environmental Matters, Torbjørn Berntsen. Arnstad asked him whether he would take measures to secure an independent genetic science that is in the best interests of society (Stortinget, 07.03., 1997:1). This interpellation is more specific and more scientific in its approach to the issues on the agenda, which are science, research and development, than the broad discussion on gene technology of 21.03, 1997.

Old or new technology?

Arguments that focus on the risk-aspect of gene technology keep recurring in the debate. The technology itself, its use and the consequences of that use are matter for concern. This insecurity and the fear of gene technology are an underlying force throughout the debate. This is due to the fact that the development in gene technology has moved

quicker than anyone had ever imagined (Meltveit Kleppa (Centre Party), Stortinget 07.03., 1997:1). The Storting has already pointed out that we need legislation on biological technology in specific. The Bio-technological Comity[27] stated this as a fact in 1992 (Achen, 1997:131, 132). In other words, it has already been stated that we are facing a new kind of technology that demands new legislation on the area. This debate was taken up again in 1997, and Meltveit Kleppa raised the question during the parliamentary legislative session of March 7 1997. She asks the question of whether the ethical issues connected to gene technology receive enough attention in the current legislation, and suggests that; in order to fulfil the intentions of the gene technology law the issue of cloning requires changes in the legislation (Meltveit Kleppa, Stortinget 07.03., 1997:1). She asks the question of whether our legislation on this area is adequate with view to the 'new' technology. She thinks that the law on gene- and biotechnology is too general in its phrasing, and that what is meant by in a way that is ethically sound and in the best interests of society' should be more clearly defined (Meltveit Kleppa (Centre Party), Stortinget 07.03., 1997:2). The concern about the legislation not being specific enough is due to the fact that the new technology might give rise to new ethical dilemmas and new problems for society and for the environment.

The minister of environmental issues agree with her on the point that this is a complicated issue and a complicated area of concern, but he still thinks that the politicians manage fairly well (Berntsen, Stortinget 07.03., 1997:5). Holte is explicit on the point that biological technology raises new issues, due to the fact that this technology

[27] The comity was put together on June 6, 1987. Its main purpose was looking into the environmental and security matters concerning the new biotechnology.

makes it possible to produce new organisms that might rock the ecological balance in nature (Holte (Centre Party), Stortinget 07.03., 1997:6). He goes on to ask:

> Do we really want this development? If the answer is yes: To what extent do we want it? And what will be the consequences of this production of organisms?
> (Holte (Centre Party), Stortinget 07.03., 1997:6)

He draws on consequence ethics, with respect to which, the fundamental issue is the consequences of gene technology. Whether the technology is ethical or not is based on the over-all effect on society. The scientific ideal-type sees science and technology as ethically neutral. Hence, the ethical dilemmas arise from the consequences of technology (Caygill, 2000:159). The scientific ideal-type position differentiates between the technology as such and its use. This view stands off from that of the religious ideal-type position, which finds it difficult to separate the technology from its use[28] (Ibid:156, 157).

Weberg, MP from the Conservative Party emphasizes the need to stay calm and not create fear of a science that can greatly serve man (Weberg, Stortinget 07.03., 1997:6,7). He wants state comities to take the decisions relating to scientific matters. He thinks this will prevent unnecessary anxiety concerning the question of cloning. He thinks that all the attention focused on these issues will create pressure to change the existing legislation (Ibid). Hence, one might minimize the ethical dilemmas of cloning by introducing new

---

[28] The argument is that machines con only be understood in terms of their use, and hence in terms of the context in which they are situated (Grint & Woolgar, 1997:13).

laws. And these changes should be made after a scientific assessment based on scientific knowledge.

The MP from the Socialist Party, Schaffey, is even more out-spoken concerning the new technology:

> We are facing an extremely rapid technological development in this area, which enables us to manipulate life itself in ever new ways.
> (Paul Schaffey (Socialist Party), Stortinget 07.03., 1997:7)

The new technology represents new areas of use, which, in Schaffey's view implies new ways of manipulating life. His statement answers the arguments of the religious ideal-type position, and hence it is no surprise that Schaffey supports the initiative of the Christian Democrats to prohibit experimental cloning, regardless of the practice in other countries (Ibid). Frafjord Johnson (Christian Democrats) thinks that the intentions of the Norwegian legislation should have more practical impact and result in specific guidelines for research (Frafjord Johnson (Christian Democrats), Stortinget 07.03., 1997:7). In spite of the fact that their arguments might as well be placed under a religious heading, they are included under the scientific ideal-type position: They believe that enforced legislation will make sure that the biotechnological activity will be consistent with the purpose of gene technology (Ibid). This shows that they respect the scientific judgements that will underlie the changes in legislation. And changes are necessary because we are dealing with a new technology with new ethical implications.

Gjul, the MP from Labour has this to say about the new technology:

> What the most of us have in common is that we know too little about gene technology to know the consequences and implications of it. In many cases not even the scientists are aware of the ecological and environmental consequences. In many cases they solve one problem, but produce new and unexpected problems in the process.
> (Gunn Karin Gjul (Labour), Stortinget 07.03., 1997:9)

In this respect, the threat to human life that gene technology represents is understood as the risk that new and unpredicted problems will arise in the wake of the new technology, because we have inadequate knowledge about the implications of this technology. This is what the scientific ideal-type position sees as the most dangerous aspect of the new technology.

A precautionary attitude

The debate is focused around a national strategy or a more international course of action in order to influence the outside world with respect to ethical guidelines. The politicians encourage reflection on the issue of ethical barriers, but they also encourage a cautious attitude, remembering the locution *better safe than sorry*, or the precautionary principle, towards the technology. This attitude is based on the possible unpredicted, negative effects of gene technology (Debate organized by Apollon, 20.04.01, UiO). In this respect, the '*better safe than sorry*-attitude' and the precautionary principle is linked to consequentialist thinking (Achen, 1997:138). In other words this means that ethical guidelines are to be made on the basis of the consequences a specific action might have.

The scientific ideal-type position finds the challenge of science to be finding a way of maximizing the advantages of gene technology while minimizing the damages. This implies that the good and bad effects of gene technology are to be weighed against each other. To be able to maximize the advantages while minimizing the damages, according to the scientific ideal-type, the assessment of advantages and damages has to be based on critical argumentation and the knowledge of the expertise (Caygill, 2000:159). In the view of the people of Europe, the negative impacts of gene technology are ecological imbalance, less biological diversity and the spreading of diseases (Nature, Vol 387:845-847,26.06.1997.

The debate is about whether Norway should approve products that are approved abroad, and whether the country should prohibit experiments involving cloning, regardless of what is done in other countries (Paul Chaffey (Socialist Party), Stortinget 07.03, 1997:). It will be a debate on the question of whether Norway should stick to the precautionary principle, '*better safe than sorry*-attitude', and not be influenced by the policies in other countries. A national strategy would marginalize Norway as an active part-taker in laying the premises for the use and scientific development of bio-technology (Hornslien (Labour), Stortinget 07.03., 1997:8). On the other hand voices are raised in favour of a national strategy on the grounds that a national strategy will put the need for ethical guidelines on the agenda. Our restrictive policy will set an example for other countries. (Inga Kvalbukt (Centre Party), Stortinget 07.03, 1997:9):

> In the context of the debate on cloning we will play the part warning bell. Our practice and our rules might be an example to others. With or without

> the support of international forum, it still makes a difference that at least someone is in the right here!
> (Ibid)

The subject of the political discourse is the question of whether, in the attempt to prevent guidelines that are too liberal, with the risks that would imply for our future. The debate goes in favour of a cautious attitude whether the effort to continue a stringent policy is on a national or international level. The precautionary principle is generally embraced by the politicians, because, as Gjul (Conservative Party) points out, we lack knowledge about this technology and its consequences (Stortinget 07.03., 1997:9).

The term ’the culture of ignorance’ is part of the terminology of the scientific ideal-type position. According to which the greatest threat to man is ignorance and insufficient information and knowledge (Caygill, 2000:158). Like the rest of the MP’s, Meltveit Kleppa focuses on the possible negative consequences that GMO and the development in gene technology might have on mankind and the environment. ’The culture of ignorance’ represents the extreme positions in the discussion, those who support gene technology and those who oppose gene technology. What they have in common is that both stands base their views on uncritical argumentation. This represents a risk in itself according to the scientific ideal-type. The focus on the negative consequences of gene technology is not necessarily caused by massive objection to biotechnology among politicians, but can also be seen as a sign of fear and insecurity about the consequences and development of gene technology. This insecurity is compensated for by asking, what will be the possible future consequences of gene technology. The perspective of risk and the focus on ethical

challenges represent critical argumentation, so a debate on those terms is not ignorant. The debate is inherently critical because it asks questions and is aware of the ethical problems, and it does not automatically approve of scientific practices. Meltveit Kleppa is asking whether we know enough to evaluate the risks implied by gene technology, and she is asking about the ethical standards that underlie biotechnology (Stortinget 07.03, 1997:1-2). These are critical questions.

Meltveit Kleppa refers to the respective statements of Blix Gundersen, a professor attached to the Bio-technological Comity and of another professor of the institute of medical biology in Tromsø (Stortinget 07.03, 1997:2). According to Meltveit Kleppa, the two experts have divergent views on the long-term effects of gene technology. In Meltveits argumentation, the first professor represents a person without reservations against the use of certain genetically modified products. Meltveit Kleppa refers to a statement made by Blix Gundersen in which supports the cultivation of gene raps[29]. She goes on to say that she is not worried about the development and use of these products will be detrimental to humans or to the environment.

> I am not reassured by Blix Gundersen who, like so many other scientists, uses the word 'believe', instead of the word 'know' in contests where it is imperative to know the probability of an event occurring, and then multiply that event by the consequences of the said event.
> (Magnhild Meltveit Kleppa (Centre Party), Stortinget 07.03, 1997:2)

[29] An oil-plant.

Meltveit Kleppa speaks in favour of a more restrictive legislation than what the scientist in the Bio-technological Comity wants. In Kleppa's opinion, believing is not enough, especially when the matter at hand is something very important, like gene technology. The challenge for the scientific ideal type strategy is to obtain the scientific knowledge that is necessary to be able to predict the consequences and future hazards of this technology. Meltveit hints to this solution, i.e. 'knowing,' in stead of 'believing.' According to the scientific arguments the fact that it is impossible to predict all the consequences of an event, represents a threat (Caygill, 2000:158-159). And she shows her doubt and lack of confidence in the scientists' ability to 'know'. Blix Gundersen is not the only scientist who 'believes', according to Meltveit Kleppa. The researcher has to believe, simply because absolute knowledge of the future is impossible. Since our knowledge is insufficient, this insufficiency should be compensated by stringent rules and concrete guidelines. She thinks the legislation should be a step a head of the development, and asks if there is more than can be done to comply with the cautiousness-principle within the existing legislation (Meltveit Kleppa, Stortinget 07.03, 1997:2). She is supported by Holte, another MP from the Centre Party, who thinks that the people who initiates this critical debate on the need for a more cautious science, should be applauded (Ibid:6).

According to the scientific ideal type, the goal of science is progress, in this case to maximize the advantages of genetic modification, and minimize the damages. Meltveit Kleppa clearly does not trust that the scientists know enough to 'know' about the negative consequences and risks implied by gene technology (Stortinget 07.03, 1997:2)

The scientific ideal-type sees insufficient knowledge as a major threat to mankind, and in this view her statement is clearly within the limits of the scientific ideal-type. The other MP's are also speaking in favour for the precautionary principle, because, as they say more or less clearly, we cannot achieve absolute knowledge about the results. This argument is within the scientific ideal-type.

Dependent and independent research

The other expert opinion that Meltveit Kleppa refers to is typical, in her opinion, of a more sceptical attitude towards gene technology and genetically modified products. For the most part, Meltveit Kleppa shares the views of the professor, i.e. that the people involved in the development and production of genetic material are incapable of assessing the damaging effects that their activity might have (Stortinget 07.03, 1997:2). Research units that do not rely on support from the vested interests or from various interest groups, would be better equipped to assess these damages, the professor says. So far Meltveit Kleppa agrees with him, and she adds a remark on the importance of encouraging critical voices and independent research (Ibid). She supports a political strategy and a research program, which by means of its critical attitude and independence will be a safeguard against ignorance and indifference. The alternative research units, or independent scientific communities, should have increased knowledge as their motivation: Because knowledge is an end in itself. In other words, the development of specific products or assignments given to them by private enterprise should not be the driving force behind their work. In stead their source of motivation should be obtaining knowledge and inn-sight that can serve the needs of society. This implies a wish for a

science that serves the interests of society, with the intention to accumulate information and conduct research that is neutral, objective and critical. According to the scientific ideal-type, biotechnology and genetic modification are ethically neutral entities. But even so, the challenge is to the scientific ideal-type that their neutrality is threatened by new ethical dilemmas that arise in the wake of the technological development and its practical implication (Caygill, 2000:158-159). What Meltveit Kleppa and the professor she refers to seam to be speaking in favour of is to restore the ethical neutrality of science by establishing independent, critical research that serves the long term interests of society. This research is supposed to be as neutral as possible, and to have no motivation, but what is in the best interests of society, namely better inn-sight and more knowledge.

We have to keep in mind that Meltveit Kleppa does not claim that the technology as such is ethically neutral. But she sees the establishment of independent research as a means to focus on the consequences of the use and abuse of biotechnology. Speaking in favour of a neutral, but critical research, she directs our attention to the existing research which is not critical enough, and which is controlled by other interests, than the 'purely' scientific ones. The challenge for the scientific ideal type is to fight ignorance. And at this point Meltveit is clear as to what she wants: to establish a critical and independent research.

The main issue of this debate is how to secure a genetic science that is true to important ethical standards, and what measures to take to secure the fulfilment of the intentions of the law on gene technology. Dependent research is based on assignments from investors who in turn want to make a profit. Independent research should as a matter of principle

be independent of product-developing, and Norwegian bio-technological research is for the most part financed by the state. To a greater extent than what is the case in Norway, the research conducted USA, Japan, Canada and the European Union is directed by commercial interests, and is financed by the industry. Thorbjørn Berntsen, Minister of environmental matters, claims that these countries have set a standard for research and development in the rest of the world. But given the fact that Norwegian research, for the most part, depends on public funding, Norway has a unique possibility to control the commercial development based on gene technology (Stortinget 07.03, 1997:4). Norway is therefore in the position to control research and make sure that the products that are developed are useful and not damaging to the environment (Ibid). He goes on to say that in the case of basic research the practical utility is yet unknown, and hence it is up to the scientists themselves to decide what is ethically acceptable. This is a big responsibility for the scientists. When scientific discoveries are put the use, it raises ethical issues, and at this stage it is possible to demand that the scientists live up to ethical standards, and that their works are useful to the public (Torbjørn Berntsen, Stortinget 07.03, 1997:3). The existence of independent research communities with a special interest in ethical questions concerning biotechnology is therefore very important in Berntsen's opinion (Ibid).

Holte, MP from the Centre Party, agrees with him for the most part, but he explains the need for independent research by pointing to the needs of the consumers:

> The development clearly shows that we need expertise that can give a straight answer on the question of whether the genetically modified products are as harmless as the producer claim they are.
> (Holte (Centre Party), Stortinget 07.03., 1997:6)

His statement shows the great confidence he has in this independent expertise, which will give truthful answers about the products based on gene technology. Weberg (Conservative Party) is clearly very confident in expert opinions, and supports ethical quality testing in biotechnological research. But he stresses the point that advice and recommendations should be based on scientific assessments (Stortinget 07.03., 1997:7). The Christian Democrats take it even further and make the same as proposition as they did during the discussions on the law on gene technology. They are not satisfied by the establishment of an independent research unit concerned with ethical questions, they want this unit to be in charge of approving or rejecting scientific work (Frafjord Johnson (Christian Democrats), Ibid:8). The Labour MP is clear at this point:

> We need independent research oriented towards the needs of society. We need research institutions run by the state – i.e. independent of commercial interests – which conduct their work with view to the long term effects of genetic modification.
> (Gunn Marit Gjul (Labour), Stortinget 07.03., 1997:9)

According to the scientific ideal type position, the threat to human life that gene technology represents is related to the long term effects and side effects of the technology. This insecurity concerning the future is compensated for by putting independent research on the political agenda.

Use and abuse of the technology

The insecurity that is perceivable in the debate is due to the fact that the technological development has been greater than anyone could have imagined, but it is also due to the fact that the politicians are laymen and lack the qualifications of scientists. There is a concern that the scientists are too far ahead of the current, inadequate legislation. There maybe loop holes in the legislation, which the scientists can use to their own advantage, if they are more concerned about profit than about ethics. Another cause for concern is the fact that no matter how adequate our legislation becomes; the possibility of abuse will still exist. In March 1997 the Centre Party raised the issue of whether Norway has the necessary means to secure the fulfilment of the intentions of the paragraph concerning the law on gene- and biotechnology (Meltveit Kleppa (Centre Party), Stortinget 07.03, 1997:1). The Centre party thinks that the law is not specific enough and questions the utility of it. As the law says nothing about the use of naked DNA, a heavy burden is laid on the scientists, in that they themselves have to make sure that they stay within the boundaries of what is ethically acceptable (Ibid:2). The fact that the ethical responsibility is put on the individual scientists represents a possibility of abuse.

> The law on gene technology does not regulate the use of naked DNA.
> There do not exist any rules on how the laboratories are to deal with DNA.
> This is the case in Norway as well as abroad. It is of fundamental
> importance to be cautious in this matter.
> (Magnhild Meltveit Kleppa, Stortinget 07.03., 1997:2,3)

The ethical dilemmas that arise in the wake of gene technology are, according to the scientific ideal type perspective related to the eventual abuse of the technology. The legislators have to take the possibility of abuse into consideration. The question of use versus abuse arises many of the arguments raised in favour of the precautionary principle. The threat, the way the politicians see it, is that not even the scientists can predict the implications of the new technology on society and on the environment (Gjul (Labour), Stortinget 07.03., 1997:9). Berntsen is of the same opinion, and adds that the scientists have a personal responsibility to stay within the ethical boundaries (Berntsen, Stortinget 07.03., 1997:3). Technology can therefore no longer be considered ethically neutral, because the technology might be abused. The possibility of abuse is a challenge to the view of the scientific ideal type, i.e. that the technology is ethically neutral. The religious ideal-type position has the opposite view, that the technology, which cannot be separated from its use, can neither be separated from morals and values. Hence, the religious ideal-type is closer to the view that risks and ethical issues are inherent to the new technology.

Information, research and lay people

The arguments that belong in the category of the scientific ideal-type stress the importance of knowledge and expertise. The compensation for the insecurity regarding the technology is, according to the scientific ideal-type, trying to keep the technology ethically neutral. The benefits of scientific knowledge should be seen in terms of their ethical value rather than in terms of their commercial value. And information should inform rather than spread anxiety among the public (Stortinget 07.03., 1997:3,4). This

argument is based on that right information might compensate for the threat and anxiety among the public.

The ethical value referred to in the above is the benefit of protecting the environment and the ecological balance and of respecting ethical boundaries and the law. This is a great contrast to the commercial value. The patent directive of the EU is important in this context. This directive says Jørgen Holte from the Centre Party makes it possible to patent microorganisms. The directive gives a broad definition of the term 'micro-organisms'. This broad definition may result in a situation where nearly all bio-technological products are patented (Stortinget Friday 07.03, 1997:7). He is concerned about the position of the United States, and the trajectory of the Great Power may influence Europe and Japan with respect to the regulation of gene technology. What he seems to be most concerned about is that, with regard to science and technology that the normative boundaries are given less priority compared to the commercial interests.

The establishment of a body of independent experts is to give advice and recommendations with respect to legislation and ethical guidelines concerning the use and development of gene technology. This strategy, whether national or international, should put the problems related to cloning on the agenda. At the moment, the arguments that are prevalent throughout the debate are arguments characterized by scepticism and distrust with respect to cloning and lack of confidence in the scientists and their knowledge.

> I don’t think we can solve all these issues on a national scale. We need joint action on an international scale to counteract the powerful forces we are up against.
> (Hornslien (Labour), Stortinget 07.03, 1997:8)

Inga Kvalbukt from the Centre Party shares the scepticism of Labour MP, but the Centre Party is in favour of a national political strategy. She is explicit about her lack of confidence, and says that the politicians have a responsibility to inform the public and answer the questions that people might ask.

> Who are we to trust? It is obvious that the technological possibilities are much greater than the knowledge about the consequences of the technology. The scientists are like the little boy who sits on the floor dismantling a watch, without being capable of putting it together again (Kvalbukt (Centre Party), Stortinget 07.03, 1997:8).

The politicians emphasize the power of the researchers and the influential bio-technological companies, which, to the dislike of the politicians, receive financial support from the industry. The technological development of the future and the impact of the new technology on future generations depend on the scientists and the biotechnological institutions and their ethical and moral foundation. The advantage that Norway has, as compared to the USA and the EU, is that Norway has scientific units working with ethical and biotechnological problems, that are independent of the commercial interests for financial support (Breimo (Labour), Parliament 07.03., 1997:10). Breimo goes on to say that this gives Norway an advantage when it comes to orienting research towards sustainable products that serve the public. The politicians argue with view to public

opinion and the need for public support. Public opinion has a great influence on the market, and products that are supported by the lay public have a greater potential in the market. The objective of the parliamentary debate is to avoid consumer scepticism and to establish an independent and environmentally sustainable research in this field. These arguments are founded upon belief in the beneficent exchange of information between the lay public and the expertise. According to the scientific ideal type position, the 'culture of ignorance', which produces both uncritical support and uncritical rejection of biotechnology based on insufficient knowledge about gene technology, represents the greatest risk related to biotechnology. The politicians share this fear of ignorance. A public that lack knowledge about the biotechnological products is not able to support or reject biotechnology and its products on rational grounds (Berntsen, Stortinget 07.03., 1997:4). By providing the public with reliable and objective information, the bio-technological products would have a greater potential in the market place. The strategy consists in fighting ignorance and establishing a fruitful exchange of information between the professional expertise and the lay public. This is consistent with the scientific ideal-type position, which emphasizes the importance of giving the public information that is founded on scientific and professional facts (Caygill, 2000:159).

BRIEF SUMMARY

Interestingly enough, the politicians use arguments that belong to category of the scientific ideal-type in the parliamentary debate of 07.03. 1997. It may not come as a surprise, view to the fact science, research and development are on the agenda. But even so the argument might as well have been representative of the religious or aesthetic ideal-

type position. As the arguments of the scientific ideal type position are predominant in this context, I take it as a sign that the politicians have a conception of science that is in conformity with the scientific ideal-type position. It is also interesting to note that the scientific ideal-type, as well as the religious ideal-type, overlaps the traditional party lines. All the parties represented in the debate, the Centre Party, Labour, the Conservative Party, the Socialist Party and the Christian Democrats give arguments concerning science and the precautionary principle that are partially representative of the scientific ideal-type. The debate of 21.03.1997 produced arguments that were easily associated to the religious ideal-type position. The debate of 07.03 produced arguments in conformity with the scientific ideal-type position.

3.4 – AESTHETIC IDEAL TYPE ARGUMENTS

The extreme aesthetic ideal-type position is of course not clearly recognizable in the debate on cloning. This position is far too extreme, and it goes against the widespread belief that human beings have inherent value and dignity, and should not be reduced to objects of technological manipulation. In Norway the legislation[30] concerning gene technology has been based on the before mentioned precautionary principle (Hviid Nielsen, 2000:236) and the principle of Human Rights (Ibid:275). Hence, I do not expect to find arguments in the political debate that can be obviously placed under the heading of the aesthetic ideal-type position. From the point of view of the aesthetic ideal-type position, we run a greater risk if we pass up the opportunities that biotechnology gives us. The aesthetic ideal-type draws attention to threat as *not using the technological*

[30] http://www.bion.no/html/genteknologiloven.html
The gene technology law.

possibilities. I think the aesthetic view can be used to explain a kind of technicism. Technicism, or technological determinism, portrays technology with an exogenous and autonomous development, which coerces and determines social relationships (Grint et.al., 1997:11).

The aesthetic ideal-type position takes a very optimistic view of the opportunities that technological progress presents to us. Conversely, what we should be worried about, according to this view, is consequences of not using the technology will be. The deterministic view that we have no choice in the matter is based on the view I referred to as 'technicism' and secondly this optimistic view of technology. The determinism implies that we have to realize every technological possibility. The real reason for concern is the possibilities that pass us by if we abstain from exploiting the technology. This is a deterministic imperative in so far as it preaches the endless striving for knowledge and the realization every technological possibility. The technological development has to take its course. This deterministic view implies that man is controlled by the technology, which unlike man is autonomous (Law et al.). In this sense man has no real choice and has to be a part of the technological development whether the man likes it or not. In contrast to the religious position, which postulates man's autonomy as a given, the aesthetic deterministic places autonomy with the technology.

The aesthetic ideal type position is not easily recognizable in the Norwegian political debate on cloning. The prevalent view among all the politicians is, as I have pointed out in the analysis of the scientific and the religious ideal-type position, is that we need to

control and check the development. The political process that resulted in the law on biotechnology used for medical purposes (Cf. Innst.O.nr.25 (2000-2001) and Ot.prp.nr.93 (1998-1999)) indicated that the politicians are very much in favour of regulating gene technology in accordance to the principle of sustainable development and the principle of man's inherent value and human rights. The predominant desire among the politicians the desire to control the technology, rather than let the technology control us. With view to this I have chosen not to give an exhaustive analysis of the aesthetic ideal-type position.

There is of course a political desire to be a part of the technological development, but only on the condition that the development is in conformity with the Christian and humanist norms that our ethics are based on. Biotechnology represents great opportunities, but the politicians stress the point that this research field has to be regulated. According to Øyangen (Labour), the Liberal People's Party seem to have a strong faith in the scientists (Stortinget 30.11., 2000:3). This party, through the instrument of Jon Alvheim, was the only party that opposed the prohibition of cloning used as means to produce identical individuals (Stortinget 32.02., 1998:1). Their proposition goes in favour of a less stringent legislation that what the other parties want (Cf. Ibid).

Weberg (Concervative Party) recognizes the need to secure the quality of research (Stortinget 07.03., 1997.6), but adds that we have to:

> (…) prevent hysteria concerning a form of research that greatly serves man as it is today.

(Weberg (Conservative Party), Stortinget 07.03., 1997:6,7)

Meltveit Kleppa supports the conclusions that were drawn on the basis of the parliamentary report, i.e. St.meld.nr.36 (1990-1991), which says:

> The main view of the government is that we should stimulate the use of the new biotechnology as long as the use is in the best interests of society and based on the values that make up the foundation of our society, and does not represent a threat to people's health, the ecological balance or our environment.
> (Meltveit Kleppa (Centre Party), Stortinget 07.03., 1997:4)

This is not specific about human cloning, but shows the general tendency that the Storting also wants to stimulate the development of gene technology, with the reserve that it should be subordinated to overruling ethical standards.

The politicians are very much aware of the many positive aspects of gene technology. But the desire to control the technology, and to keep it within ethical boundaries, is still predominant in the debate. The issues on the agenda indicate that the politicians see the need for new laws on this area (Cf. The parliamentary debate of 21.03.1997) and the need for research that is beneficent to society (Cf. The parliamentary debate of 07.03.1997).

3.5 – SUMMARY – TECHNOLOGICAL DETERMINISM

To the extent that an approach to the issue of cloning based on technological determinism is traceable in the debate, this technological determinism is of another kind then the

unshakable faith in the technology. The technological determinism that appears in the political debate is on another level, and as the professor in political science, Langdon Winner, points out is tied to ability of the politicians to neutralize the technology[31]. Winner's contribution points out the existence of a policy relating specific to artefacts. It is not necessarily true that our choices are independent of the policies that are inscribed into the technology (Winner, 1986). The main purpose of this analysis has not been to find traces of technological determinism among politicians. I mention the concept of technological determinism simply because I want to avoid a conception of the political agenda that is too categorical at this point, i.e. that it is void of technological determinism. I will return to this point in chapter 4.

In terms of the technicism that is characteristic of the aesthetic ideal-type position man is predestined to follow up on every technological possibility, regardless of what the man ought to do and wants to do. This is a clear contrast to the scientific ideal point position, which focuses on control and regulation in order to minimize the damaging effects it may have. As I have tried to point out in my analysis the view that we should control technology is prevailing among the politicians. The religious ideal-type position is the one with the clearest stand against cloning, because the technique of cloning is a threat to the religious conception of man. The scientific ideal-type position, justify its opposition to cloning on the basis of the impossibility of predicting the effects that this technique will have. Both the religious and the scientific ideal-type position are opposed to cloning

[31] This is close to Winner's definition of the term 'autonomous technology': politics become inscribed in technology in such a way that the technology appears neutral (Grint & Woolgar, 1997:13). Winner's work makes us aware of the fact that technology is inextricably linked to politics. This goes, I think, against technological determinism, and is in my opinion an attention to open the black box of technology.

but they base their opposition on different grounds. But opposition to human cloning remains a shared platform for the religious and the scientific ideal-type position. I will return to this shared platform in chapter 4 under the heading: ’The political platform’.

CHAPTER 4 – THE RESULTS AND THE LEGISLATION

What was the actual outcome of the political debate on cloning, and what new laws did it result in? In this chapter I will try to analyse the results, as I try to indicate a common political platform crossing the ideal-types.

4.1 – PROHIBITING PRODUCTION OF GENETICALLY IDENTICAL INDIVIDUALS

The issue of the debate in the Odelsting of February 23, 1998 (after the interpellation of March 1997 which proposed changes in the law on biotechnology used for medical purposes (Innst.O.nr.22 (1997-1998), Cf.Ot.prp.nr.21) was whether techniques, which are used to produce genetically identical individuals should be prohibited. The debate was instigated by the Christian Democrats who made the proposition to ban all cloning of animals and higher organisms. The arguments that Frafjord Johnson (the Christian Democrat) uses to support the proposition are quite clear:

> It is not in our place, as people, to create new animals or to produce identical animals in laboratories.
> (Hilde frafjord Johnson (the Christian Democrats), Stortinget 07.03.1997)

The law, the vote and the result of the vote

The arguments of the religious ideal-type position manifest a strong wish for stringent laws that prohibit both human and animal cloning. Arnstad is more explicit about this than Hernes. But like Arnstad he is completely against cloning being used to manufacture genetically identical individuals (Hernes, Stortinget 21.03, 1997:9). The current

legislation is inadequate with respect to the technology development. It has not kept up with the technological development, he thinks, because it rests on the traditional definition of insemination. Cloning does not rest on the natural synthesis of egg and sperm, whereas the new technology makes it possible to produce a new individual using only one female cell nucleus, which is inserted into an egg, i.e. without the use of sperm cells. The law does not apply to this form of reproduction, and Hernes wants legislation that contains unambiguous prohibition of reproductive cloning. Frafjord Johnson wants our legislation on this area to be as stringent as possible, i.e. to prohibit both animal and human cloning. On March 7, 1997, the same proposition, which Frafjord Johnson made on behalf of her party, was subjected to parliamentary vote.

> Parliament asks the government to propose changes to the law on gene technology, in order to prohibit cloning of animals and higher organisms. (Vote on the first issue on the agenda[32], 07.03.1997).

With the exception of two votes, all the votes were in favour of the proposition (Ibid), and it was Anders Hornslien (Labour) who asked Frafjord Johnson to pass the proposition on to the Biotechnological Comity. Labour finds it difficult to deal with such a complicated issue in an off-hand way (Hornslien (Labour), Stortinget 07.03.1997, vote on the first issue on the agenda). The first issue was not passed on to the comity, so Hornslien recommended that the Labour MP's vote against it. The vote itself was based on party lines and political tactics rather than on principles of ethics. The vote is not necessarily representative of the moral foundation of the respective parties. February 23,

[32] Votering i sak nr.1, Stortinget 07.03.1997.

1998, the Storting continued the debate, with view to the eventual prohibition of reproductive cloning in the Odelsting, and the parliamentary comity on social issues recommended changes in the law on biotechnology used for medical purposes (Innst. O.nr.22 (1997-1998), Cf. Ot.prp.nr 21 (1997-1998)).

The proposed changes of 1998 were a continuation of the debate in 1997 on reproductive cloning. The bill containing the amendments to the said law, which was originally passed August 5, 1994 and said: *The use of specific techniques in the purpose of producing genetically identical individuals is prohibited* (cf. number 56, on biotechnology). The new law on biotechnology used for medical purposes was passed February 23, 1998. §3a-1 had been amended, and was now saying: *Prohibition against use of techniques with purpose of producing genetically identical individuals. The use of specific techniques in the purpose of producing genetically identical individuals is prohibited* (Besl.O.nr.27 (1997-1998)). In connection to this John I. Alvheim made a proposition on behalf of the Liberal People's Party, which only included the prohibition of reproductive cloning effected by cell nuclear transfer (Odelstinget 23.02, 1998:1). In other words, Alvheim wants to allow cloning brought about by splitting inseminated eggs, on the condition that the method is used only in connection to in vitro fertilization. He justifies his standpoint by pointing to the fact that artificial insemination is legal. And as long as it is legal, we should be allowed to use the methods that show the best results (Alvheim (the Liberal People's Party), Odelstinget 23.02, 1998:4). He acknowledges no fundamental difference between artificial and natural splitting of eggs, and says:

> The splitting of inseminated eggs in connection to in vitro fertilization is no different from what nature herself does when identical twins are being made.
> (John I Alvheim (the Liberal People's Party), Odelstinget 21,03, 1998:4)

The result of the two phenomena, i.e. natural or artificial egg splitting, is inevitably the same, i.e. genetically identical individuals. From Alvheim's point of view there is no difference between letting nature take its course and effectuate the same result in a laboratory. But he wants reproductive cloning to be limited to the cases where there is a medical justification for helping couples with a strong wish to have children that are theirs genetically. If artificial splitting of inseminated eggs is legalized, couples can have children that are genetically identical. But the Ministry of Health (which was instigated by the Comity on Social Issues to propose changes to the said law) could find no sufficient reason to allow the production of genetically identical individuals (Innst.O.nr.22 (1997-1998)). The Ministry of Health finds, as did Hernes, that there is a fundamental difference between the cloning of genes and cells taken from individuals with the intention to put the cells back in the same individuals or in a close relative of the individual whose cells are cloned, and cloning used as a means to produce individuals that are genetically identical. As to non-reproductive cloning, the Ministry of Health did not find sufficient reasons to regulate this sort of activity (Innst.O.nr.22 (1997-1998)). The Liberal People's Party was the only party to make an alternative proposition, which was not supported by the majority. Their proposition is not representative of the debate, and the Liberal People's Party did not participate in the debates previous to the proposition that Alvheim made.

4.2 – A SHARED POLITICAL PLATFORM

There are of course issues that the politicians discuss that I have not included in my analysis. Under the heading 'A shared political platform', I will focus on aspects of the debate that can be said to be characteristic of both the scientific and the religious way of argumentation, in as much as the shared political platform is opposition to cloning. The most commonly used method to analyse the political field might be to analyse it in terms of political party lines. I will try to show that the political laboratory[15], as the Storting might be in important ways, can represent a shared political platform. A platform of shared standpoints and shared opinions. The interesting thing about the debate on cloning is that in a political forum it turns into a debate on values. And what the politicians have in common might be just as interesting as their internal differences. The shared standpoint is evident from the fact that the politicians focus on the problems related to cloning. And all the politicians want ethical standards to overrule other considerations when regulating biotechnological activities. The shared political platform is also characterized by the absence the technicism (technological determinism) that is typical of the aesthetic ideal-type position, which is consistent with the focus on problems that is characteristic of the political agenda. Even if the arguments of the scientific ideal type are

[15] Cf. Karin Knorr-Cetina and laboratory studies. She says that the study of laboratories has brought to the fore the full spectrum of activities in the production of knowledge (Knorr-Cetina, 1995:143). Looking into the political debate on cloning is in this sense a sort of direct observation and analysis of the political discourse at its root, where directions and legislation are produced.

different from the arguments of the religious ideal type, the two positions still end up with the same unconditional ‘no’ to human cloning. (Cf. § 3a-1 in the law on biotechnology used for medical purposes, cf. Besl. O. Nr.27 (1997-1998)). Can the shared political platform explain the stringent legislation?

The optimistic faith in technology as a driving force, which can be of a more or less deterministic character, is linked to the unconditional faith in technology that is characteristic of the ideal-type position, according to which the development and exploitation of technology is the main concern. The perspective of technological determinism raises the question of whether we are really in control of the technology. Lack of control represents a threat, not just to the aesthetic culture, but also to the scientific and the religious culture. To the culture of the aesthetic ideal-type lack of control will mean a threat to that culture’s ambition to control and realize the full potential of the technology, the goal of this culture being a ’Gesamtkunstwerk’. To the scientific ideal-typical culture lack of control will mean insufficient knowledge and uncritical use of the technology. Uncritical and immature use of the technology represents a threat, because it is difficult to predict the consequences of such use. To the religious ideal-type lack of control implies that the technology controls us, and this means that we betray our ideals of human value and human autonomy. Man is no longer a free actor and does not fulfil the duty as a human being, as man is no longer in charge of the technology. The politicians on the other hand speak in favour of controlling the biotechnological development through stringent legislation and strategic research programs. In this respect the shared political platform, as opposed to the aesthetic ideal

type, has freed itself from this kind of technological determinism that deprives man of control. The politicians want the technological development to be consistent with the principle of sustainable development and our national Christian and humanist cultural legacy (Cf. The law of gene technology). The absence of technological determinism is what I refer to as the shared political platform, where the shared standpoint is the acknowledgement that we need to regulate the development and negotiate a legislation that prohibits human cloning. A shared political platform does not imply complete agreement (Cf. the alternative proposition made by the Liberal People's Party), but it is still shared in as much as it overlaps the traditional party lines.

The fear that gene technology arises is fear of the bad impact it can have on our health and on the environment, but it is also fear that we will end up lagging behind a development that can serve mankind. This last concern involves the fear that we will be unable to influence the big nations and the super-national legislation, and also the fear that scepticism among the consumers may damage the sales-potential of certain products. Another cause for concern is whether guidelines and legislation have any real power as tools to control research communities. If the ethical guidelines are to be effective, they have to be ahead of the scientific practice that goes on in the laboratories. If they are not ahead of the development, the scientists with their expertise might as well set the standard for the development (Stortinget, 07.03., 1997:8). This situation is not desirable from the point of view of the shared political platform. There is no absolute consensus in the Storting on the issue of whether the existing legislation is adequate and whether the legislation is ahead of the development. This is evident from a proposition to ban animal

cloning and cloning of higher organisms. As I have already said, the majority voted against human cloning, but as for animals the question remains undecided (Cf. Besl.O.nr.27 (1997-1998)). All in all, in spite of the fact that the different positions propose different strategies, there is still agreement on the point that the legislation should be used to prevent unwanted effects of the technological development. This is clear from the law that prohibits the production of genetically identical individuals, which was passed on February 23, 1998. In other words, the common political denominate is not based on technicism. The new technology is not seen as a technology with an inherent force and an autonomous character. The message of the politicians is that the technology will and must be controlled, and the politicians aspire to control the technology so that it is consistent with sustainable development and ethical standards.

CHAPTER 5 – CONCLUSION

Throughout my study I have tried to show the utility of analysing the political debate on cloning in terms of the three ideal types. A few findings are worth mentioning in this context. I will take a closer look on four points in particular here in the conclusion of my study to prove this utility. The first point I am going to make is related to the positioning of the debate within the framework of the three ideal-types. The arguments of the religious and scientific ideal-types are obviously present in the debate. My second point is related to the aesthetic ideal-type, which is hardly noticeable in the debate. My third point is that rather in three separate ways, the debate reveals a shared political platform that sometimes overlap the different ideal-types. I think there is a connection between stringent legislation and the shared political platform, and that the stringent legislation can be explained by the absence of the technisism and fascination for technology that is typical of the aesthetic ideal-type.

5.1 – POSITIONING THE DEBATE

I will start by explaining why the debate belongs within the framework of the three ideal-types. The religious and the scientific ideal-types are obviously present in the debate, whereas the aesthetic ideal-type is hardly present at all.

The ostentatious presence of the scientific ideal-type, especially in the debate on research, is worth our attention. In the interpellation the Minister of Environmental matters would take the necessary measure to establish an independent research unit with view to the best interests of society. This is analogous to the perspective of change through education to

escape the ’culture of ignorance’ that is typical of the scientific ideal-type. The question asked at the outset of the debate can therefore be seen in terms of the scientific ideal-type. That there is a need for an independent research institution, and that independent research is more useful to society are fundamental assumption in Meltveit Kleppa’s question to the Minister of Environmental Matters. The assumption that independent research is useful to society is related to the scientific ideal-type. Behind the political steps taken towards independent research one can sense the desire to maintain the neutrality of science and technology with respect to ethics. These steps are also seen as useful to society. Independent research can increase our knowledge and inform the public, and in this way maximize the benefits and minimize the negative effects of genetics. The proposition to establish an independent research institution is telling of a positivist attitude towards knowledge. It presupposes that science can be neutral and that we can under certain circumstances we can have objective knowledge of ethics. The independent research can have no ties to commercial interests, and conduct their work exclusively with view to the ethical, environmental and health-related consequences of their work. In addition we need an exchange of scientific information between ethical and practical research instances. This exchange of information might compensate for the insecurity concerning the technology and the technological development. This proposition also reveals a desire to control research to make sure it is conducted in a way that is ethically sound. This is on a par with the scientific ideal-type arguments according to which the ’culture of ignorance’ is the greatest threat. Ignorance should be countered by the creation of an informed culture. The political strategy in the area of research reveals the aspiration for an informed culture. From the perspective of the scientific ideal-type research is ethical if

its consequences are in the best interests of society. As I have pointed out in my analysis, this consequentialist attitude is related to the cautiousness principle, which prevails among the politicians. While analysing the political debate on cloning, I have tried to show that the arguments of the scientific ideal-type can explain the *better safe than sorry*-attitude among the politicians, their wish for independent research the way they look upon information and knowledge in general.

The arguments of the scientific ideal type are very conspicuous in Arnstad's interpellation. She makes the need for stringent laws that prohibit human and animal cloning the premises of her argument. She bases her reasoning on the Christian conception of man. And in this context protecting human identity and integrity consists in protecting human genetic material. The debate puts the need for new laws on the agenda, and this need is based on the fundamental assumption that an ethical boundary was crossed with the cloning of Dolly. Some of the opposition against cloning springs from the fundamental assumption that man is an end in self, that cloning is inherently unethical and that this technology represents a threat irrespective of its use. The religious ideal-type makes the ethical unacceptability of cloning a premise in their arguments, because the dignity and position of man is threatened by the new technology. The new technology represents a threat, not just through its use and the extension of its use to new areas, but mainly because the technology itself is inscribed with ethics. This outlook on the technology of cloning is very different the view of the scientific ideal-type, according to which the technology is ethically neutral. The domineering presence of the religious ideal-type in the debate can be explained by the controversial experiment that resulted in

the cloning of Dolly. This experiment put the issue of ethical boundaries on the political agenda in Norway. And as I have indicated, several politicians base their arguments on the premise that our nations Christian and humanist legacy should be the basis on which to decide what is right and wrong with respect to biotechnology. The politicians are not of one mind as to the question of where to draw the line, i.e. if a prohibition should apply to animal as well as human cloning. Arnstad is clearly in favour of prohibiting both human and animal cloning. For this reason she is the politician who is most representative of the religious ideal- type position.

In my analysis I have tried to show that the arguments of the politicians, particularly the ones concerning the position of man and the question of where to draw the line, if we are not to ban cloning altogether, can be placed in the category of the religious ideal-type. These arguments bring up the question of what it means to be human, which is the basic question of the religious ideal-type. According to the religious ideal-type man is an end in self and has a fundamental an inviolable dignity. In this perspective, cloning and gene technology remains a threat to human life. And as I have shown in my analysis of the political debate, the religious ideal-type takes on the most restrictive and critical attitude towards gene technology. Both the religious and the scientific idea- type play an important part in the political debate on cloning. I have tried to show that the politicians' critical attitude towards cloning and their desire to regulate the technological development are phenomenon that can be explained in terms of the religious as well as the scientific ideal-type. The preponderance of the scientific and the religious ideal-type can be explained by the perspective of risk that the politicians share. It is the focus on

risks and threats to human life rather than the optimistic faith in technology typical of the aesthetic ideal-type position that is characteristic of the debate. The restrictive and critical attitude towards gene technology and the unanimous demand for regulation constitutes the shared political platform. I have tried to show this by pointing out the fact that the aesthetic ideal-type position, characterized as the unconditional faith in technology, is hardly noticeable in the political debate on cloning.

5.2 – THE ABSENCE OF THE AESTHETIC IDEAL TYPE

The Norwegian debate on cloning is characterized by a general reluctance to accept cloning, rather than by fascination for technology. The aesthetic ideal-type is defined as the unconditional faith in technology and the possibilities it gives us, and is ultimately, as opposed to the other two ideal-types, not concerned about ethical issues. It is not surprising therefore that the aesthetic ideal-type is absent from the Norwegian political debate on cloning, given the fact that our Christian and humanist cultural legacy is referred to throughout the debate (Cf. The law on biotechnology and genetics). The politicians are proud of the fact that our legislation on this area is among the stringent in the world, and they want to continue working to keep up the strict guidelines on research and cloning used for medical purposes. This has to do with the politicians' will to stay a head of the rest of the world when it comes to regulating the technological development, because they want to give other countries a wake-up call and make a good example to other countries. They want to put cloning on the political agenda internationally, and they want to influence the EU-authorities, but also secure the fulfilment of the intentions of our national guidelines. The fact that the aesthetic ideal-type is so unconscious in the

Norwegian legislative debate raises the question of whether this is something that is particular for Norway, or whether it is a general tendency in the rest of the world as well. Maybe the aesthetic ideal-type is inadequate as an analytical tool, or maybe this absence of the aesthetic ideal type is something that is characteristic only of the debate on biotechnology and genetics? As to the first question, UNESCO has written a declaration on the protection of human genes. The declaration mentions cloning and labels it as research that is incompatible with human dignity (Innst.O.nr.22 (1997-1998)). The director general of WHO, has condemned human cloning as ethically unacceptable and in violation of fundamental principles of reproductive technology (Ibid). And an advisory comity put together by the EU commission has recommended that EU condemn human cloning (Ibid). The recommendation of strict guidelines on human cloning is evidently not something that is peculiar to Norway. As to the second question, of whether the aesthetic ideal-type is an adequate analytical tool, I think the answer lies in the extreme position and unconditional faith in science and technology that is characteristic of this ideal-type. This extreme position is difficult to adjust to the restrictive, precautionary principle, *better safe than sorry*, that is so prevalent in the legislative process. The aesthetic ideal-type is overshadowed by the information of the scientific ideal-type and the moral concerns of the religious ideal-type. The third question is whether this is something that is particular to this debate (the debate on bio-technology and genetics) alone. What is particular to the technology of cloning is that it is new and controversial. The technology of cloning involves human life in a different way than for instance Information and Communication Technology, ICT. The fascination for technology is probably less controversial with regard to the ICT politics than what is the case with the

debate on cloning. The absence of the fascination for technology that is typical of the aesthetic ideal-type can in turn help to explain the stringent legislation, and the fact that the scientific and the religious ideal-types join their forces on a shared political platform.

5.3 – A SHARED POLITICAL PLATFORM

It is evident form my analysis of the debate in terms of the three ideal-types, that the debate is not marked by division, but reveals a shared political platform that partly overlaps the dividing lines between the ideal-types. One would expect that there were three types of arguments, given the fact that the analysis is based on three cultural ideal-types. As far as the political debate on cloning is concerned it is not evident that there are three different kinds of political arguments relating to the issue of cloning. There is a shared political platform that has a broader range than the three ideal-types. This is because the motivation behind the different arguments is more or less the same. This motivation is obviously to regulate and control the development within gene technology.

The religious and the scientific ideal type positions present different arguments, but they both contribute to the building of a political platform from which to work out a policy in the area of gene technology. The contribution of the scientific ideal-type consists in the precautionary principle (the *better safe than sorry*-attitude) and the consequentialist attitude. The religious ideal-type contributes with its presupposed values concerning humans and technology. These values are based on the thought that man has a right to be protected from technological interference because man is autonomous and has inherent worth as he is created in God's image, and the thought that the technology of cloning is

by nature ethically questionable because it represents a threat to the sanctity of man. Even if the arguments in favour of regulating and checking the development of gene technology of the two ideal type positions are justified on different grounds, they are still marked by the same motivation to lead a strict policy on this area. Both the religious and the scientific ideal type position are in favour of prohibiting animal as well as human cloning because they see cloning as a threat to human life and the future of mankind.

The debate on cloning will be remembered as a debate on values carried out from the basis of a shared political platform, where the discussion of ethics was a part of the legislative process. This process of turning ethics into politics takes place from the basis of a shared political platform where the arguments of the religious ideal-type position is most clearly representative of traditional ethics, while the scientific ideal-type position is more concerned about what is in the best interests of society. By the notion ' turning ethics into politics' I mean that ethics are negotiated. The Norwegian political debate on cloning is rooted in a Christian and humanist system of values, which serves as a basis for all the political parties. The debate in the Storting is based on a shared ethical platform. But there are still differences between the religious and the ideal-type position. It may not come as a surprise that the arguments of the religious ideal-type position draws on deontological ethics, whereas the arguments of the scientific ideal type position draws on consequentialist ethics. But the religious and the scientific ideal type position both take a stand with respect to ethics, which makes these two positions different from the aesthetic ideal-type position.

In other words, the way I see it, there exists a political platform with room for both the scientific and the religious ideal-type arguments. I have tried to show that the usefulness of analysing the debate on cloning with view to the three ideal-types, since the areas where they converge are just as interesting as the points where they diverge. I have not presupposed the existence of the party lines, but tried to show analyse the debate on cloning without taking party lines into consideration. The three ideal types have been useful in this respect, because, the way I interpret the arguments of the politicians, the arguments seem to arise from a shared political platform. This platform erases the traditional party lines in as much as some arguments overlap the party lines and compliment each other. An interesting aspect of analysing the debate in terms of the three ideal-types is that one might be more attentive to the fact that political arguments often overlap the traditional party lines when important issues are discussed. Rather than party lines, what comes to light in the discussion are the fundamental assumptions and implicit values of the politicians. With my study I have tried to disclose the political process, and thereby discover the underlying assumptions behind the different arguments of the debate on cloning.

BIBLIOGRAPHY

Adam, B., Beck, U., Van Loon, J. (ed.) (2000) *The Risk Society and Beyond. Critical Issues for Social Theory.* Sage Publications Ltd.

Achen, T. (1997) *Den bioetiske udfordring. Et retspolitisk studie av forholdet mellem etik, politik og ret i det lovforberedende arbejde vedrørende bio- og genteknologi i Danmark, Norge og Sverige.* LTAB Linkøpings Tryckeri AB. pp. 107-1980

Asdal, K., Brenna, B., Moser, I. (ed.) (2001) *Teknovitenskapelige kulturer.* Spartacus.

Asdal, K., Berg, A. J., Brenna, B., Moser, I., Rustad, L.M. (1998) *Betatt av viten. Bruksanvisninger til Donna Haraway.* Sparatcus Forlag A/S.

Beck, U. (1997) *Risiko og frihet.* Fagbokforlaget.

Bijker, W. (1995) *Of Bicycles, Bakelites, and Bulbs. Toward a Theory of Sociotechnical Change.* Massachusetts Institute of Technology.

Caygill, H. (2000) 'Liturgies of Fear: Biotechnology and Culture' in Adam et al. *The Risk Society and Beyond. Critical Issues for Social Theory.* Sage Publications Ltd.

Dahl, J. A. *Dolly i mediene. Norske mediers reaksjon på verdens første voksenkloning og deres påvirkning på beslutningstakerne.*

Fivesdal, E. (1995) 'Fra klosteret til fabrikken' in Weber, M. *Den protestantiske etikk og kapitalimsens ånd.* Gyldendal.

Glasner, P. (2000) 'Risks, the public and the human genome project' in Adam et al. *The Risk Society and Beyond. Critical Issues for Social Theory.* Sage Publications Ltd. Pp.109-112.

Grint, K., Woolgar S. (1997) *The machine at work. Technology, work and organization.* Polity Press.

Haraway, D. (1988) 'Situated Knowledges: The Sciences Question in Feminism and the Privilege of Partial Perspective', *Feminist Studies,* 14 (3):579-99.

Kemp, P. (1996) *Det uerstattelige.* Gyldendal.

Kolata, G. (1997) *Clone. The road to Dolly and the path ahead.* The Penguin Press.

Knorr-Cetina K. (1995) 'Laboratory Studies: The Cultural Approach to the Study of Science', in (Ed.) Jasanoff et al. *Handbook of science and technology studies.* Sage Publication Ltd. Pp. 140-166.

Nielsen, T.H., Monsen, A., Tennøe, T. (2000) *Livets tre og kodenes kode. Fra genetikk til bioteknologi Norge 1900-2000.* Gyldendal Akademisk.

Nielsen, T.H. (1996) *Risks – In technology, Society and the mind.* Radiation Protection Dosimetry. Vol. 68. No. 3. pp . 181-184. Nuclear Technology Publishing.

Rose, H. (2000) 'Risk, Trust and Scepticism in the Age of the New Genetics', 'Living with risk but not in a risk society' in Adam et al. *The Risk Society and beyond. Critical Issues for Social Theory.* Sage Publications Ltd. Pp. 63-74.

Thommesen, B., Wetlesen J. (1996) *Etisk tenkning. En historisk og systematisk innføring.* Ad Notam Gyldendal.

Weber, M. (1995) *Den protestantisk etikk og kapitalismens ånd.* Gyldendal Norsk Forlag.

Weber, M. (1971) *Makt og byråkrati.* Gyldendal Norsk Forlag.

Winner, L. (1977) *Autonomous Technology.* Cambridge, Mass: MIT Press.

Winner, L. (1986) *The Whale and the Reactor. A search for Limits in an Age of High Technology.* University of Chicago Press.

Holy Bible, Old and New Testaments. Genesis and the gospel according to St. Mathew. Conformable to the edition of 1611 commonly known as the authorised or King James version. Tophi books. Copyright 1994 Ramboro – London.

Nature, vol 387:845-847, 26.06.1997

Debates, votes and propositions in the Storting and the Odelsting:

Besl.Onr.27 (1997-1998). *Lov om endring i lov av 5. August 1994 nr. 56 om medisinsk bruk av bioteknologi (forbud mot bruk av teknikker for framstilling av arvemessig like individer).* Statens Forvaltningstjeneste.

Innst.O.nr.22 (1997-1998). SHD. Statens Forvaltningstjeneste.

Innst.O.nr.25 (2000-2001). SHD. Statens Forvaltningstjeneste.

Ot.prp.nr.21 (1997-1998). SHD. Statens Forvaltningstjeneste.

Ot.prp.nr.93 (1998-1999). SHD. Statens Forvaltningstjeneste.

Odelstinget. 23.02.1998. Sak nr. 1. *Innstilling fra sosialkomiteen om lov om endring i lov om medisinsk bruk av bioteknologi (forbud mot framstilling av arvemessig like individer).* Votering i sak nr. 1. Statens Forvaltningstjeneste.

Odelstinget. 30.11.00. Sak nr. 1. *Innstilling fra sosialkomiteen om lov om endringer i lov 5. August 1994 nr. 56 om medisinsk bruk av bioteknologi.* Statens Forvaltningstjeneste.

Stortinget. 07.03.1997. Sak nr. 1. *Interp. Fra repr. Meltveit Kleppa om uavhengig, samfunnsgavnlig forskning.*
Votering i sak nr.1. Statens Forvaltningstjeneste.
http://www.stortinget.no/stid/1996/si970307.html

Stortinget. 21.03.1997. Sak nr. 3. *Interp. Fra repr. Arnstad om de etiske og miljømessige sidene ved genteknologi.* Statens Forvaltningstjeneste.
http://www.stortinget.no/stid/1996/s970321-03.html

Bioteknologiloven. Vedtatt 05.08.1994 nr. 56. *Lov om medisinsk bruk av bioteknologi.* Grøndal Dreyer forlag 1995. ISBN 82-504-1596-5
http://www.bion.no/html/bioteknologiloven.html

Genteknologiloven. Vedtatt 02.04.1993 nr. 38. *Lov om framstilling og bruk av genmodifiserte organismer.* Grøndal Dreyer forlag 1996. ISBN 82-504-1589-2
http://www.bion.no/html/genteknologiloven.html