**UNIVERSITY OF JYVÄSKYLÄ**

# ALTERNATIVE DISCOURSES IN SCIENCE FICTION: HUMAN CLONING IN GLORY SEASON (1993) BY DAVID BRIN

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Alternative discourses in science fiction:
Human cloning in *Glory Season* (1993) by David Brin

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Tutkielman tarkoitus on tarkastella *Glory Season* -nimisessä science fiction -kirjassa rakennettua kloonaamisdiskurssia. Sitä tarkastellaan mediassa luotua hallitsevaa diskurssia vasten. Tutkielman hypoteesi on, että koska tieteiskirjallisuus nähdään uusia, vaihtoehtoisia näkökulmia tuottavana kirjallisuudenlajina, *Glory Season*issa luodaan ihmiskloonaamiseen erilaisia, vaihtoehtoisia perspektiivejä.

Diskurssi luo ja rakentaa, ei vain heijasta, sosiaalista todellisuutta. Diskurssianalyysissa teemat ja tulokset nousevat materiaalista käsin, ei ennakkoon suunniteltujen käsitteiden mukaisesti, vaan tarkan materiaalin lukemisen ja tulkitsemisen kautta. Materiaali tässä tapauksessa on tieteiskirjallisuutta, jota usein pidetään kaiken uuden, vaihtoehtoisen ja erilaisen edustajana, etenkin teknologian ja tieteen suhteen.

Hallitseva kloonaamisdiskurssi liikkuu huolen ja toivon väliä, joskin pääpaino on usein negatiivisten näkökulmien puolella. Tieteiskirjallisuus käytetään usein korostamaan huolestuttavien seurausten todennäköisyyttä ja luomaan hyvinkin värikkäitä ja negatiivisia mielikuvia klooniarmeijoista ja hulluista tiedemiehistä. Kuitenkin science fiction myös tarjoaa vaihtoehtoisia näkökulmia kloonaamisdiskurssiin.

Analyysissa nousi esiin kolme teemaa. Nämä teemat analysoitiin kolmella tavalla: tarkastelemalla käytettyjä sanoja ja metaforia, kertojaa, sekä intertekstuaalisuutta ja ideologiaa. *Glory Season*in kloonaamisdiskurssi yleisesti rakensi kohtalaisen positiivista suhtautumista teknologiaa ja geenimuuntelua kohtaan, keskittymällä lähinnä hyöty-haittakeskusteluun. Toinen teemoista taas toi näkökulmaa siihen, miten yhteiskuntamme ja kulttuurimme saattaisi muuttua ihmiskloonauksen yleistyttyä. Viimeinen teemoista rakensi geenit vastaan ympäristö- keskustelua identtisten kaksosten ja kloonien kautta, esittämällä että identtiset geenit omaavat ihmisetkään eivät missään nimessä ole/olisi toistensa kopioita, vaan omia yksilöitään.

*Glory Season* toi kloonaamisdiskurssiin uusia ja vaihtoehtoisia näkemyksiä, tutkielman hypoteesin mukaisesti, vaikkakaan ne eivät olleet ehkä niin erilaisia kuin science fiction kirjallisuudenalana saattaisi parhaimmillaan tarjota.

Asiasanat: discourse, discourse analysis, science fiction, alternative view, David Brin, human cloning

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## Introduction

"Playing God", *Frankenstein* and *Brave New World* are references often used in discourse on cloning. They are used to dramatize the subject in a negative way, which is the tone of many texts on human cloning in newspapers, books, television or internet sites. However, science fiction is not only about tales of a darker future in which clones are used for horrendous purposes, nor merely a source for catch phrases for cloning discourse.

Literature is, and has always been, a channel for new, alternative ideas and perspectives. Fowler (1981:22) says that in literature the artificiality of its presented world is made to point out our accepted assumptions about reality, and suggest that they are just as artificial and in need of scrutiny as that of the book. In science fiction, I have found that novel ideas, alternative views and radical perspectives on various issues and the world are often explored in science fiction. It is a genre for thought experiments, for the "what if?".

This thesis will explore one aspect of the discourse on human cloning. Cloning is the process of creating new organisms with the exact same genetic material of another organism. The discourse on cloning consists of various types of discourse, media and perspectives. This thesis is based on the idea that science fiction is one channel through which alternative discourses may be voiced. I will examine the cloning discourse in David Brin's science fiction novel *Glory Season* (1993) in this thesis, and briefly describe the cloning discourse of the mass media for background. They are both parts of the discourse on cloning, but it is my hypothesis that David Brin, as a writer of science fiction, brings new, alternative ideas and perspectives into the discussion. Mass media, on the other hand, often maintains the dominant discourse, and ignores such alternative views, integrating them into their discourse only when they become more mainstream and generally accepted. Thus the dominant discourse is provided for background against which the novel's cloning discourse is examine, to see whether it does indeed provide new insights and aspects of discourse.

Discourse analysis is the method used to examine the hypothesis outlined above. There are many different kinds of discourse analysis, ranging from conducting a detailed linguistic analysis of a piece of text

as an independent discourse, to using discourse analysis as a larger concept to examine the functions of discourse in a society. The discourse analysis used here is more a theoretical concept than an easily defined, normative tool. Discourse constructs society, and thus looking at discourse is at the same time looking at how social reality is constructed. Language is not something that reflects the world, something that can be separated from society and culture, but that with which we make meanings, construct reality, see Wood and Kroger (2000: 4), for instance. Talking about cloning constructs beliefs, values, knowledge as well as identities and social relations. This thesis concentrates on the systems of knowledge, value and belief constructed in the cloning discourse, as the goal is to examine whether those in *Glory Season* are different from the dominant cloning discourse.

Though discourse analysis is a theoretical concept, it is also a method for analysis. As Potter and Wetherell (1987:168) point out, discourse analysis looks at the details and nuances in texts, at "what is actually said or written, not some general idea that seems to be intended", though the level of detail that a Master's thesis can go into is quite limited. Discourse analysis is also always more or less subjective, which is why numerous quotes are provided in the analysis, so that the reader may be able to follow the writer's reasoning. Chapter 2 will further explore the question of discourse.

Chapter 3 begins by defining science fiction as a genre. Though that task may seem straight-forward enough, science fiction (SF) is in fact a more complex phenomenon than might be expected. The most simple, and perhaps descriptive, definition is saying that it is the genre of the thought experiment, of the "What if?". What if cloning was a normal way for humans to reproduce? What would that mean for society? What would it mean for women, or for men? Science fiction is, in fact, literature of change and of exploring the relationship between technology and culture, as chapter 3 will show. As the author of the novel examined here himself has said, science fiction is about realizing our children may have different problems than we do, even *be* different than we are ( Brin: The Matrix: Tomorrow May Be Different). A brief history of SF as a genre will also be provided, as well as information on David Brin and an outline of the novel *Glory Season* itself.

*Glory Season* tells the story of Maia, a young woman born on the planet

Stratos. The society there is based on a rather unusual reproductive system: women have both genetically ”normal” children (i.e. sharing genes from both mother and father), and daughter clones of themselves. Men have been genetically modified to be less sexual and aggressive, and are considered the weaker, rather harmless and even amusing sex on Stratos. The society is based on clan families of female clones, who occasionally also have genetically varied children, ”vars”, both female and male, who must leave the clan home at a young age and find their own way in the world. Maia, and her twin sister Leie, are vars, and the novel tells the story of Maia trying to find her ”niche”, something she is good at and can make a living at (eventually starting her own clone clan). She goes through many adventures and dangers, meets a *man* she can actually respect and admire, and has her most fundamental ideas of life, people, her world challenged.

Chapter 4 discusses cloning discourse, first defining terms and technologies used in the discourse. A clone may be defined as a genetic ”copy” of another plant, animal or person, having the exact same genes as the original. What is usually referred to in the media when cloning is discussed, is a process called somatic cell nuclear transfer, or nuclear transplantation cloning. Both terms refer to the same technique, during which the nucleus of a fertilized egg is removed and replaced with the nucleus of another cell (from another person), and triggered into developing normally (Pilnick 2002:144). A brief history of cloning is provided in this chapter, as context for cloning discourse. Finally the background (i.e. the dominant cloning discourse) against which *Glory Season* will be examined is provided.

The dominant human cloning discourse has been defined by both concern and hope, concern being stronger than hope, it would seem. Dolly is a good case study, showing how first reactions to cloning were horror and attempts to ban the technology all together, so no humans would be cloned. The importance of Dolly was, as Nerlich et al (*Fictions, fantasies and fears*) point out, in her suggesting the possibility of human cloning. Later some more reasonable discussion took place, but responses were still mainly negative, though using the technique to find cures for diseases was a more easily approved application of the technology. Science fiction has coloured the human cloning discourse from the very first. Classics such as *Frankenstein, Brave New World* and *The Boys from Brazil*, for instance, have been used to evoke negative

feelings and ideas about cloning. However, it is the hypothesis of this thesis that although (older) science fiction has sometimes become a part of the dominant discourse on human cloning, it is also a way to incorporate new, alternative discourses into social reality.

The next three chapters analyse the novel. The three themes arose from the novel itself, they were not predetermined, but rather the data seemed to arrange itself into the themes discussed in chapters 5, 6 and 7. Chapter 5 deals with issues regarding technology, genetic engineering and cloning as a reproductive method. The topics covered in this discourse are about issues like is scientific progress and technology a good thing, whether genetic engineering is acceptable or not, and the issue of sex versus cloning as methods of reproduction, including the aspect of who is cloned.

The next chapter is arranged under the title ”Cloning and society”. It deals with various issues, like family relationships, that have to do with cloning and its effects on Stratoian society. Other sub-themes covered in chapter 6 are those of what is considered normal, the division of Stratoian society based on genes, the status of people on Stratos, and clones' and vars' different views of time. Chapter 7 deals with issues relating to genes and whether they define who we are and what we become or not. It covers topics like how outsiders view clones, as copies or as individuals, twins, identicality versus individuality in clones, and the issue of predictability, of roughly knowing one's life cycle if one is a clone.

Chapter 8 discusses the findings and results of the three previous chapters. The purpose of the whole chapter is to clarify and summarize the analysis, as well as to draw the discourse of *Glory Season* in with the hegemonic human cloning discourse. The next chapter, conclusion, will briefly outline the results of the analysis, discuss the strengths and weaknesses of the analysis, and then go on to contemplate what further study could be made regarding human cloning discourse, or science fiction as a channel for new, alternative ideas and perspectives.

# 2. Discourse analysis

There are as many ways of doing discourse analysis as there are scholars doing this type of study. The concept of discourse can also be understood in many different ways, the central issue being whether researchers see language as something that reflects, or constructs, social reality. This chapter will deal with this issue, define the term discourse, and move on to discuss other terms and concepts.

The term discourse is used in two ways in this thesis. The first is a more theoretical concept, discussed below, while the second usage is what Fairclough (1992:128) refers to as topic or content. Here the word discourse is used rather than topic (second meaning), because the word discourse better describes the fact that media cloning discourse, for example, is a particular way of constructing a subject matter (i.e. topic). The word 'text' is used to refer to any piece of discourse, be it spoken, written, or nonverbal.

## *2.1 Discourse*

The field of discourse analysis is a very varied one. Differences between scholars begin with their definition of discourse. Fairclough (1999:54) states that his view of discourse is that it is spoken or written language use, and any other type of semiotic activity. By this he means meaning-making through visual images or nonverbal communication, for instance. Others define discourse in a more narrow manner, only including verbal language, spoken or written, like Potter and Wetherell (1987:7). In this thesis, discourse is understood to be everything with which we make meanings, be it verbal language, gestures, or even clothes.

Potter (1996:71) describes Barthes' concept of second level signification, which I think illustrates the more extensive view of discourse very well. First level signification is that of combining a sound with a concept to produce a meaningful sign, such as 'jeans'. Second level significations are culturally dependent meanings that are taken for granted, associations that go with the sign. As an example, Potter (1996:71) explains how jeans come to signify ruggedness, perhaps independence as well, by having been worn in tough work settings, thus signifying

rugged, open-air labour. People start to interpret that those wearing jeans are rugged, outdoor people, which is a form of meaning making. Naturally different types of discourse do not construct social reality in the same way, clothes are a different way of communicating than writing a scientific paper, for example, but nonetheless both are a way of constructing the world we live in and ourselves in it. For instance, if one were to analyse the discourse on punk, clothes might be a central part of that study.

Fairclough also views discourse as a mode of action, as something that is socially shaped but also shapes the social reality we live in (1999:54). Seeing discourse as action is central in discourse analysis. We do things through language, it doesn't just reflect our world but constructs it. However, Fairclough's view of language reflecting social reality while constructing it is not shared by all. Some emphasize the constructive nature of discourse, and argue that there is no *social* reality outside human discourse. For instance, Wood and Kroger (2000: 4) state that "Talk creates the social world in a continuous, ongoing way; it does not simply reflect what is assumed to be already there." This is the view adopted for this study. It does not mean that there is no physical world outside of discourse. Mountains exist even outside of discourse, but what they mean to us are constructed in discourse, for instance if a mountain is seen as a resource for extreme sports or an obstacle to get past on the way somewhere else. Seeing discourse as action implies more concrete effects as well. As Fairclough (2003:8) points out, texts can and do bring about changes. Social change, changes in our knowledge, beliefs, attitudes and values take place in discourse.

Another important aspect of discourse is that it is a social phenomenon. Potter and Wetherell (1987:33-34) point out that discourse is used by people to construct versions of the social world. Or as Fairclough (2001:19) says, people use language in socially determined ways, and speaking or writing has social effects. According to him, language is one strand of the social. Here discourse is seen as a part of all social reality - we cannot have relations with others without some type of discourse. Culture, or members's resources as Fairclough calls this type of knowledge (2001:20), is an essential part of discourse. We produce and interpret texts by drawing upon our members' resources, our knowledge of language, representations of the world, values, beliefs etc.

Fairclough (1995:55) also points out that discourse constructs social reality in three ways: it constructs social identities, social relations, and systems of knowledge and belief. According to him, one of these aspects may be more important than others in any given text, but they are all always present in discourse. Although cloning discourse naturally constructs social relations and identities as well as knowledge and belief systems, those systems are seen to be more important in this thesis. Thus the focus for analysis here is how knowledge and beliefs about cloning are constructed in this particular science fiction novel.

To further clarify how discourse is seen in this thesis, Minna-Riitta Luukka's (in Sajavaara 2000:145-153) four basic approaches to discourse are used. Luukka explains that in the *textual* view of discourse, discourse is seen as an independent whole, made of sentences and clauses. Interest is in examining how texts are constructed. The *cognitive* view of discourse, on the other hand, is interested in how texts are produced, constructed and understood, and what kind of cognitive processes are involved in moving from thoughts to text. In the *interactional* view, real, interactional situations are the focus, and it is believed that meaning-making and understanding are dependent on interaction. For instance, in literature, writers participate in a conversation with a presumed reader and thus need to create a common background in order for the reader to be able to participate in this "conversation". (Luukka 2000:145-153)

According to Luukka, the *constructionist* view sees communities as the context for discourse. Constructionists are interested in how language is used in different situations or cultures, how it is a tool for communication and meaning-making, what it is that language constructs. Social communities that share values, beliefs and knowledge, and their effect on members's discourse are important in this view. Critical discourse analysis is a type of constructionist thinking. In the critical view discourse is shaped by larger social structures, thus making intertextuality and context of discourse important. Critical discourse analysts are more interested in the why than in the how. (Luukka 2000:145-153) The view in this thesis is more constructionist than any of the other three outlined above. This thesis examines how discourse on cloning is constructed in *Glory Season*, what that discourse is, and is interested in cloning discourse because it is a part of larger social structures, ideologies and social reality.

For a (constructionist) discourse analyst, the intentions of the producer of the text or how those might have been better achieved, are not relevant. In discourse analysis, the analyst does not go beyond the text, into what the author intended (in his/her mind), or how s/he succeeds in doing what s/he was trying to do. Potter and Wetherell (1987:160) say it well:

> Participants' discourse or social text are approached *in their own right* and not as a secondary route to things 'beyond' the text like attitudes, events or cognitive processes. Discourse is treated as a potent, action-oriented medium, not a transparent information channel. (emphasis original)

Thus discourse is not a tool for getting at something else, it *is* that something else, be it attitudes, identities, beliefs or social relations. There is no concept of cloning outside of discourse, it is always constructed in discourse, which is what this thesis is all about. (For further discussion on different views of discourse see Luukka in Sajavaara 2000:145-153)

### *2.2 Discourse analysis*

Section 2.1 touched on what discourse analysis is about. Discourse analysis is, as its name suggests, about examining discourse as an action and a social practise. As Wood and Kroger (2000:13) say, because talk is action, a change in talk is a change in practise. Thus analysing cloning discourse is about social practise too.

The purpose of doing discourse analysis depends on the analyst's viewpoint. Going back to Luukka's (2000:154) four views of discourse, the textual view means looking at how a text is built out of sentences. An analyst with a cognitive view of discourse will be interested in the schematic structure behind the discourse and how it is communicated to the reader, while the interactional analysts are interested in issues such as how the writer takes his/her readers into consideration, and how the readers make meanings in the text. In the constructionist view, on the other hand, the focus is on what community and situation the discourse is a part of, how the text constructs social reality, creates meanings and what kind of effects it has. (Luukka 2000:154) The stand adopted in this study is more or less constructionist. Fairclough defines

the critical discourse analyst's viewpoint:

> Critical approaches differ from non-critical approaches not just describing discursive practices, but also showing how discourse is shaped by relations of power and ideologies, and the constructive effects discourse has upon social identities, social relations and systems of knowledge and belief, neither of which is normally apparent to discourse participants.

It is the construction of systems of knowledge and belief that this thesis is interested in.

As we can see from above, there are many ways of doing discourse analysis. Some analysts emphasize the meaning of linguistic features and their social functions, as Fairclough does, while others argue that nonlinguistic features like the implications of particular words are most important. In this thesis, the focus is more on the non-grammatical features, such as wording. What is looked at in this thesis depends on what turns out to be relevant in helping us understand the text, to answer the questions Potter and Wetherell (1987:168) set for the discourse analyst: "why am I reading the passage in this way? what features produce this reading?" Those questions define the goal of discourse analysis in this thesis well.

Another important aspect of discourse analysis is that it is, or is supposed to be, inductive, moving from the concrete to the abstract, from the particular to the general, as Wood and Kroger (2000:34) emphasize. Such demands challenge all those doing discourse analysis, and are not easily met. Potter and Wetherell (1987:168) express it well: "Academic training teaches people to read for gist - which is precisely the wrong spirit for discourse analysis." They emphasize that discourse analysis is about looking at details, nuances, contradictions and vagueness, at "what is actually said or written, not some general idea that seems to be intended."

According to Fairclough (2001:21-22), discourse analysis should always have three levels. The analyst should begin with describing the formal properties of the text, move on to interpretation (what is in the text and what member's resources are drawn on), and finish with explanation, where s/he goes on to explain the relationship between interaction and social context. The levels in other words correspond to text, discourse practise and sociocultural practice (Fairclough 1995:57). His aims for

discourse analysis are very ambitious, but nonetheless this thesis will attempt to not just describe, but interpret and explain the cloning discourse as well.

### *2.3 Ideology and hegemony*

Ideology and hegemony are useful concepts for this kind of study. Fairclough (2003:9) defines ideology as representations of aspects of the world which can be shown to contribute to establishing, maintaining and changing social relations of power, domination and exploitation. He calls this the critical view, while the descriptive view defines ideology as positions, attitudes, beliefs and perspectives of social groups. The main difference between the two is power. The critical view argues that power is achieved through coercion or by consent, and ideologies are about getting power through consent (Fairclough 2001:3).

While this thesis accepts Fairclough's critical definition of ideology, power will not be a central theme for this study. All discourse is about power, since all discourse constructs social relations and identities, and ideology certainly involves them, but this thesis is not interested in how texts create power relations. The focus of this thesis is on the first part of his definition, on how it creates versions of the world. In other words, this thesis accepts the way Fowler (1981:26) defines ideology as "a system of beliefs which has come to be constructed as a way of comprehending the world." He goes on to state that ideology is always present, it can only be replaced by alternative ideology. Discourse is always more or less ideological. Fowler (1981:28) emphasizes that "Every time people speak or write, the form of their sentences necessarily articulates and so reproduces elements of ideology."

Fairclough (2001:73) points out that social and ideological struggle always take place in language. This somewhat clashes with his view that ideological work in discourse and persuasion are two different things. He argues (1999:45) that ideologies are taken for granted, while persuasion takes place when someone is trying to get others to adopt a particular point of view. This study makes no such division. It accepts that ideological work takes place in discourse, and that when there is struggle between different ideologies, those ideologies become visible.

Hegemony is a concept closely tied to that of ideology. Fairclough defines hegemony as some social groups having some success at projecting certain particulars (identities, interests, representations) as universals. For example, medical science is the dominant discourse in health care, in contrast to alternative discourses, such as homeopathy or folk medicine (Fairclough 1992:3). Fairclough (1992:92) states that hegemony is leadership as much as domination across the economic, political, cultural and ideological domains of a society, but that hegemony is never achieved more than partially and temporarily.

Pietikäinen (in Sajavaara 2000:201-202) explains that the critical discourse analyst's view of hegemony is getting power through consent, integration and cultural practises. Hegemony is about portraying a certain view of things and connecting it to certain groups of people and identities. As stated above, critical discourse analysis examines how identities, relations and knowledge are constructed in discourse, how ideological and hegemonic struggle takes place in language to construct power relations. Thus there is hegemonic struggle over ideologies in discourse, as is the case with cloning. There is a more dominant discourse of cloning (see chapter 4.3), but it is not completely hegemonic, so alternative discourses are also available, as we will see later in this thesis (chapters 5-7). Here the human cloning discourse expressed in mass media is referred to as the *dominant* discourse, rather than hegemonic, though the concept is more or less the same.

### *2.4 Intertextuality and context*

Intertextuality is a concept referring to the interconnectedness of texts and discourse. It is about texts and discursive practises at the same time. Texts always contain parts of other texts, or refer to them in some way. Fairclough (2003:41) points out that intertextuality brings other voices into a text, that a text is a dialogue between the voice of the author and other voices. Fairclough (1992:84) says that texts are always full of snatches of other texts, which the text may assimilate, contradict etc. Other texts may be referred to by denial followed by assertion ("The problem is not the morals of cloning, but the regulation"), for instance. Which texts are drawn upon and how they are articulated, according to Fairclough (1992:10), depends on how the discourse stands in relation

to hegemonies and hegemonic struggles. It may not always be clear what other texts are referred to, it may be that the reference is by including assumptions which connect this text to the ”world of texts”, as Fairclough (2003:40) calls it.

Wood and Kroger point out that intertextuality is not only about texts, but also about genres and forms of discourse. Politics, for instance, may draw on sports discourse of winners and losers, of fairness (Potter 1996:78-79). Fairclough argues that one of the changes taking place in today's society is about intertextuality, so that different discourse types are spreading. For instance, he thinks that the interview discourse, or therapeutic discourse, is spreading into other areas of social life than what those discursive practises used to be a part of.

Naturally the intertextuality of discourse also means that texts not only rely on other texts for their productions, but they also contribute to the context for future texts (Wood and Kroger 2000:128). Context is a question which divides discourse analysts. Some analyse a text as if it were an independent whole (cf Luukka's definition of the textual view of discourse above in 2.1), and others feel that varying degrees of context is necessary for the analysis of discourse. Fairclough (1995:62) discusses three levels of context. The first is the immediate situational context, second the wider institutional practises, and the widest is the level of society and culture. He says that many aspects of sociocultural practise may enter into discourse analysis, but that there are three main aspects of it: the economic, political and cultural. Political context is about power and ideology, while the cultural refers to values and identities.

It is beyond the scope of this thesis to go deep into the sociocultural context of the discourse examined here. A small history of science fiction is provided (see 3.2), as is a small overview of the dominant discourse of cloning. Both may be seen as contributing to the novel's immediate situational context, as well as perhaps the level of institutional practise, society and culture. Intertextuality is also a form of context, which is a central part of this thesis. Examining the cloning discourse of *Glory Season* against the background of (media) cloning discourse will perhaps reveal aspects of intertextuality in the discourse.

*2.5 Literature as discourse*

Fictional literature is not used as material for discourse analysis very often, it seems. Wood and Kroger (2000:58) state that though fiction is naturally occurring discourse (i.e. not instigated by researcher), its specialized nature and presentation as imaginary means it will be of limited interest in its own light. This thesis does not share their view. Fictional literature *is* a special case, because what is written is not meant to represent reality as such, but as discourse analysis maintains that social reality is constructed through any kind of discourse, fiction must be a part of that. In fact, this thesis would argue that fiction, and science fiction in particular are more relevant parts of constructing social issues than is often thought.

How exactly is literature a different type of discourse, then? As Hess-Lüttich (1985:199-200) suggests, the difference between interpersonal dialogue and literary communication (even dialogue) is the orientation of the message toward the addressee. In conversation there is a specific addressee, but in literature the audience is defined sociologically and statistically. Roger Fowler (1981: 24) claims that there is no special ”literary language” distinct from ”ordinary language”, though there are conventions about how readers are supposed to respond to the text.

Fictionality is what makes, after all, fictional literature special. Fowler (1981:22) says that literature is often structured to make the artificiality of its version of its presented world obvious in order to suggest that our accepted assumptions about reality are just as artificial and in need of scrutiny. Fowler (1981:22) also points out that as texts become old, many become parts of that time's hidden ideologies (cf Fairclough's view of ideology in 2.3 above and see chapter 3.3.4 on how ”old” science fiction has become an inseparable part of cloning discourse). He (Fowler 1981:35) states

> Rather, I want to say that a novel is a linguistically constructed system of beliefs which bears some interesting, usually critical and defamiliarizing, relationship to the numerous ideologies current at its time, in our time, and encoded in the earlier texts in the genre.

He (Fowler 1981:34) says that constructedness refers to the fictionality

of reality. Whether a text refers to ”real entities” or not is besides the point.

Literature may also create new kind of discourse. As Fairclough (1989:137) points out, the producer may draw upon member's resources (culture) and combine those in creative ways, thus transforming them. If such creative use becomes systematic, it may bring about long-term changes in discourse or society. He also says that such creativity is characteristic of problematic situations or issues (Fairclough 1989:137). According to Fairclough (1992:187), creative texts are characterized by ambiguities and ambivalences of meaning, and that they play with the meaning potential of words, thus contributing to de- and restructuring them. Fictional literature, then, is a very potent tool for social change in discourse.

### *5.1 Methods of discourse analysis*

There are many linguistic and nonlinguistic features to examine when doing discourse analysis. In this thesis, the selection of features examined was decided on the basis of what was found to be interesting, relevant, and possible to examine within the limits of a Master's thesis

One very interesting feature is to look at the words used in a text. As Fairclough (1992:77) points out, wordings have political and ideological significance, and of course they also connect texts to other texts, i.e. intertextuality. One is taking a very different stand by referring to certain people by calling them 'freedom fighters' than by calling them 'terrorists'. Thus looking at how word meanings fit with wider ideological struggles can be very revealing. Metaphors are also important in constructing reality, the way we think and act (Fairclough 1992:194), and as such may be important in analysing discourse (see chapter 4.3.4 on how metaphors have been used in the dominant cloning discourse). All in all, the words chosen for a particular text reveal a lot about it, as different words construct different versions of reality.

Words seem to be important in cloning discourse, which is why words are central for the purpose of this thesis. Whether it is rewording, overwording, meaning relations (e.g. synonyms), euphemisms (a word

substituted for a more familiar word to avoid negative negative associations) or metaphors (see Fairclough 2001:92-93), they reveal much about the way in which cloning is constructed within the text. A high degree of near synonyms, according to Fairclough (2001:96), tells of a preoccupation with some aspect of reality, which may also be a focus of ideological struggle. When examining a creative text such as a science fiction novel, the invention of new words or making up new uses for familiar words may be a focus for analysis as well. Words, expressions and metaphors are the first aspect of discourse analysis for this thesis. The analysis shall examine what kinds of words characterize human cloning discourse in *Glory Season*, and what they tell us about it.

This thesis will also look at the novel's larger structures and meanings, in other words, the three voices, or narratives, of the novel will be discussed. The narratives of Lysos, Renna and Maia seem to cover different sub-themes within the human cloning discourse of *Glory Season.* The choice of voice for themes and sub-themes shall be examined, and seen whether it has some significance for the discourse they are used to express.

The third aspect of analysis used in this thesis is labeled 'intertextuality and ideology'. Fairclough (2001:69) connects hidden assumptions within a text, assumptions which are taken for granted, to ideology. In some texts, this may be accomplished by placing readers within a text so that they have to entertain some assumptions to make sense of it. For example, a newspaper article might read "The threat of cloning is more urgent by the minute", which assumes that cloning is a threat, this point of view is not questioned but taken for granted. Such direct ways of placing readers within a text are most likely different for a fictional novel than for articles or news reports, for instance, but the concept behind the actual linguistic features is the same, which is of interest here.

For instance, negative sentences are an important feature of intertextuality (Fairclough 2001:128). By using the negative sentence, the writer is assuming that the positive assertions are found in previous texts. So by writing "The possibility of finding cures for disease is not enough to justify human cloning", the writer is saying that someone has stated that finding cures for disease *is* enough to justify human cloning. Thought a fictional piece of text may not use exactly the same

kinds of intertextual references as mass media texts, for instance, intertextuality shall nevertheless be examined in the analysis.

Ideology and intertextuality will be central concepts for the analysis. Words used are an especially visible feature when considering the ideology (or parts thereof) within the text, or when considering what (type of) other texts the one at hand is referring to and incorporating. The length of the thesis limits the analysis to broader, more general observations about the words, voices, intertextuality and ideology of the novel's human cloning discourse, and as such detailed linguistic analysis will be left for other studies.

# 3. Science Fiction

In order to talk about a science fiction book and the human cloning discourse in it, it is necessary to first define what is meant by the term 'science fiction'. What kind of literature is science fiction? How does it differ, for instance, from fantasy? How does *Glory Season* fit into the genre of science fiction? In analysing a novel, a little information about the author and, naturally, of the book itself is also needed for context.

This thesis is based on the hypothesis that science fiction is a genre that gives voice to alternative views and discourses in society. This chapter attempts to determine if this is, in fact, the case with science fiction in general, and in doing so also sheds a little light on how and why science fiction is the channel for alternative discourses.

## *3.1 Science fiction as a genre*

Science fiction (SF) seems, at first glance, an easy enough genre to define. It is the stuff with space ships, aliens or planets on the (paper) cover. Editors, readers and book store owners seem usually to have no problems in deciding whether a book is science fiction or not. However, once one tries to find a simple, yet useful definition, the troubles start. There are as many views of science fiction as there are critics, writers and readers of it. Indeed, even the reading of science fiction requires some specific kind of knowledge or attitude in order to understand and enjoy it. Perhaps SF is not such a simple, obvious genre after all!

### 3.1.1 Definitions of SF

Science fiction is often referred to as the genre of "What if?", the literature of the thought experiment. As Sinisalo points out (lecture 2003), science fiction often creates a speculative world, which differs from reality in both time and place. Unlike fantasy, this difference is explained scientifically. According to Murphie and Potts (2003:98) SF often contains fantastic elements, projections into the future or a parallel world, but "these elements of fantasy are extrapolations from principles of science or existing technologies". Or, put more simply by David Hartwell (1996:83): "What makes the story SF is not the magic

but the explanation that suggests that the magic is actually possible." Robert Landon (2002:17) agrees that the *possibility* is what distinguishes SF from fantasy: SF is the literature of the possible, fantasy of the impossible.

Science fiction is defined by more, however, than just being an imaginative genre that gives the imaginary (pseudo)scientific explanations. Landon (2002:14-15) adds a few more flavours to this definition. He says that science fiction is, first of all and simply, a publishing phenomenon, that which is published, sold and marketed as SF. Landon (2002:18-19) also maintains that science fiction evokes a 'sense of wonder', an emotional response to the novelty of a story, which could be a dramatically new perspective, scale, or setting. Hartwell (1996:66) agrees that this sense of wonder is at the root of the excitement of the genre.

But most of all, Landon (2002: 31) says, SF is "the literature that considers the impact of science and technology on humanity." As Hartwell (1996:45) points out, a new theory in almost any field (economics, biology, psychology etc.) gets very quickly turned into a science fiction story. According to him (Hartwell 1996:46), SF deals with ideas, while fantasy deals with morality and ethics, the inner life of characters. Hartwell (1996:135-136) also says that SF is about ideas, "about how things might be, might have been, or really are- although we don't know it yet."

Science fiction is also the literature of change (Landon 2002:xi). Quoting Frederik Pohl, Landon (2002:6) points out how writing SF consists of

> ...looking at the world around us, dissecting it into its component parts, throwing some of those parts away and replacing them with invented new ones- and then reassembling that new world and describing what might happen in it.

### 3.1.2 SF and society

Traditionally science fiction has been seen as a rather insignificant genre, "not really literature". That, however, has changed somewhat over the past few decades. Landon (2002:5) points out that in the 20th century science fiction became a multimedia genre involving movies, tv, comics, novels, music videos, computer games, commercial art and

advertising etc. SF has moved from the fringes to the center of modern consciousness (Landon 2002:4). As Disch (1998:11-12) says, science fiction permeates our culture in trivial and profound, obvious and insidious ways. Its effects can be seen anywhere – for instance, in our concept of sexual mores, military strategy, practical epistemology (our sense of what is real and what is not).

Bukatman (1993:6) agrees, saying that there is "simply no overstating the importance of science fiction to the present cultural moment." According to him (Bukatman 1993:8-9), SF is about narrating new ways of being in the world, especially regarding the new information era. Murphie and Potts (2003:99) are of the opinion that SF has assumed a more influential cultural position partly due to its ethical probing of the social consequences of new technologies, such as cloning.

The focus here is on this aspect of science fiction as a genre. Science fiction is often termed as the literature of change, or the literature of alternative ideas. As Hartwell (1996:150) says, perhaps SF's influence lies in giving voice to ideas that may become real. Hartwell (1996:151) also, perhaps rather flamboyantly, envisions that "Powerful ideas concerning great changes in humanity are waiting in accessible form, clothed in science fiction." He (Hartwell 1996:263) sees science fiction as the only genre that is well prepared to respond to change. The author whose novel is examined here, David Brin, has also said:

> Many people have tried to define science fiction. I like to call it the literature of exploration and **change**. While other genres obsess upon so-called eternal verities, SF deals with the possibility that our children may have different problems. They may, indeed, **be** different than we have been. (Brin: The Matrix: Tomorrow May Be Different)

Another aspect of SF is, as Roberts (2000:28) points out, the fact that science fiction provides means for exploring alterity. He also says (Roberts 2000:183) that at best, SF gives us a channel for exploring questions of diversity and difference, that it opens up new possibilities. Landon (2002:109) states that science fiction has always been an oppositional literature, that it relies on alternative or hypothetical propositions about reality, and that challenging the prevailing wisdom and received ideas is the modus operandi of most SF stories. Landon (2002:33) also says that SF challenges and overthrows established

paradigms, offering an often radically new way of thinking, which is at this thesis' center of interest.

### 3.1.3 The genre of Frankenstein

Cloning is technology. As this thesis is about analysing what a certain novel contributes to human cloning discourse, a few words about what the relationship between SF and technology is generally viewed as are in order. Murphie and Potts (2003:95), for instance, see science fiction's importance to lie in its being a cultural expression of attitudes to technology. They point out that a general trend in these attitudes in SF can be seen. At first, they say (Murphie and Potts 2003:95), SF had a very positive and optimistic attitude towards technology (when SF as a genre really emerged, long after *Frankenstein* and similar stories). A belief in its power of making life better for us all. Later a it adopted a more pessimistic view, particularly in SF cinema of the later decades of 20th century, which is the SF dominant cloning discourse often utilizes (see chapter 4.3.4 on SF in cloning discourse). In their words (Murphie and Potts 2003:95):

> Science fiction has oscillated between hope and despair, between celebration and warning, in its depiction of technological change; these dichotomous attitudes are often mingled in the one SF work.

Technology is, naturally, one of the central themes or issues in science fiction. It has been so from before the genre existed, as such. Mary Shelley's *Frankenstein*, as will be seen in later chapters on cloning discourse, is a hugely prominent cultural image of "science gone wrong". As Murphie and Potts (2003:98-99) say, the narrative of Frankenstein has become the most potent myth of technology – Frankenstein's monster stands for technology that goes out of control and destroys its human creator. It is a common pattern of SF, and such a compelling a narrative because it dramatizes the fear of going too far, which was as strong in Shelley's day as it is today (Murphie and Potts 2003:99).

*Frankenstein* has been a greatly influential story for science fiction, and for discourse on technology. Murphie and Potts (2003:99-100) present Patricia Warrick's views on the four main themes, stemming from Frankenstein, that flow through SF. The first theme is that of going

beyond what has been done before, "stealing knowledge from the gods", and being punished for it. Secondly, the ambiguity of technology: Frankenstein's monster goes from gentle and benevolent to destructive, like technology in many SF stories. The third theme is that of failing to see the consequences of technology or take responsibility for it- just as the doctor did with Frankenstein. Lastly, the theme of master becoming servant, Frankenstein is enslaved by the obsession to destroy the monster. A lot of SF deals with this type of situation: technology is created to serve humanity, but ends up becoming the master (e.g. *2001: Space Odyssey* and HAL, *Terminator* or *Matrix* films[2] ).

All of the themes above show how hugely influential Frankenstein has been to science fiction, and really, to all discourse on technology. It instigated the 'moral warning' tradition of SF (Murphie and Potts 2003:95-96). From then on, science fiction has channeled the society's fears of technological development, especially SF movies. There are dozens of examples. For instance, *Alien Resurrection* paints a haunting vision of genetic sciences' dark side as Ripley discovers the monstrous failed clone attempts (Murphie and Potts 2003:112). In *Multiplicity* (a comedy starring Michael Keaton and Andie McDowell) a man clones himself to help with daily life, and all naturally goes wrong. In *Butlerian Jihad* (by Brian Herbert and Kevin J. Anderson), a prequel to the classic Frank Herbert novel *Dune*, machines have broken out of human control and taken over the world (though humans are taking it back).

As Murphie and Potts (2003:96) point out, SF is the leading cultural forum for ideas (discourse) about technology's role in social change. Science fiction often deals with issues that are not yet a part of other discourses. As George Annas (*Why we should ban human cloning)* points out, "We normally do not look to novels for scientific knowledge, but they provide more: insights into life itself."

There are differences between SF cinema and literature, as mentioned

[2] In*2001: Space Odyssey* the extremely intelligent computer onboard the spaceship goes corrupt, it takes control of the whole ship, and starts eliminating the crew. In the *Terminator* movies machines tha t man created to serve him have taken over, annihilating humanity almost completely. Humanity, of course, fights against this, by trying to change the future. In the *Matrix* movies man-made machines have also taken over, but they have turned humans into a source for power, attaching them to machines and controlling them through a fake reality, the Matrix. Some humans are able to escape the Matrix and work hard to free all of humanity from the rule of the machine.

above. SF literature is more likely to be thoughtful and speculative, as well as to have a positive outlook on new technologies than a film. Films tend to be simpler, and since the coming of the big budget SF cinema- alarmist or Frankensteinian. (Murphie and Potts 2003:97) All in all, science fiction and technology are inseparable.

### 3.1.4 Reading SF

As can be seen from above, defining science fiction is by no means an easy task, especially as two people in the field hardly ever agree on the exact definitions or on what SF's function in society is. What is agreed on, however, is that in order to read science fiction, one must know it's "language". As Hartwell (1996:161, 174) points out, an adult confronting SF can't just read it, since it has a language of its own, and that without reading experience, through which to learn the protocols of the genre, you will have no idea of whether the SF you're reading is good or bad, or even if it's SF or fantasy.

According to Bukatman (1993:11-12), SF requires unique strategies of reading, as science fiction entails continual linguistic play, the reader needs to constantly revision and reorient themselves, meaning that SF demands a tremendous inferential activity from the reader. As Landon (2002:7) puts it, SF is "not just 'about' new ways of seeing, new perspectives, but actually demand new ways of seeing from its readers."

And what is this special way of reading SF? Landon (2002:9) describes it as the reader having to construct the book's imaginary world by considering what each sentence tells them about it. For instance, an SF reader would construct things like "I'm just not human till I've had my coffee" or "he was absorbed in the landscape" very differently from an average reader (Landon 2002:8). In science fiction, one must not take anything for granted. SF questions our ideas of reality. Like Hartwell (1996:35) says, "you just have to learn the trick of putting all your preconceptions aside every time you sit down to read", without losing one's critical ability in the process. Merely reading SF is a challenge in itself, it seems, and it can take a while to master the art, so to speak. Perhaps this explains why only some people become science fiction readers, it is an "acquired taste".

*3.2 From pulp fiction to cyberpunk and beyond*

This subchapter attempts to give a brief outline of the history of science fiction, how it developed from pulp magazines read mainly by 12-year-old boys into a genre that is taken seriously by Ph.D.'s, even, today[3]. To have a feel for a type of fiction, especially since SF is such an intertextual genre (e.g. see Landon 2002:xvi), it is important to have some idea of its history. There are four roughly distinguishable periods of (American) SF: the pulp/rocket ship stories period from the 1920s on, the golden age of science fiction from the 1950s, which partially overlaps with the New Wave period that starts from the 1960s, and finally the cyberpunk of the 1980s.

3.2.1 Continental differences and the beginnings of SF

Since the novel considered in this thesis is American science fiction, only a few words are said of the difference between American and European SF. To put it simply, traditionally American SF has been about threatening aliens and monstrous stories, while European SF has portrayed aliens in a more positive light (Landon 2002:75). Before the 1950s, most American SF was published in magazines, but European science fiction was published in books. The "Great War" left European SF less confident and adventurous when compared to the technological optimism of American science fiction. European science fiction also dealt with social issues much more than its American counterpart. For instance, the prevailing political conditions have largely dictated the nature of Russian SF. (Landon 2002:77-78,93)

Science fictional stories existed, of course, before the genre "officially" came into being in America in the 1920s, but till then such stories might have been called scientific romances, for instance. Shelley's *Frankenstein* or H.G.Wells' works might be counted among them. The first true SF magazine appeared in the USA in the late 1920s and was called *Amazing Stories*, edited by Hugo Gernsback, who can be said to have invented genre SF (Landon 2002:50-51). Gernsback was very influential in the genre, which at this point consisted indeed of amazing stories, read

[3] A quote from Hartwell (1996:31) jokingly clarifies the change in attitude:

In the seventies, the academic appraisal of SF moved from "It's trash" to "It's interesting trash" to "Some of it's important and worth attention, even study". Oh, sigh. Already there are dissertations written by Ph.D.'s on science fiction. In the eighties that "some of it" was reduced to "that part that can be called postmodern" (for which read cyberpunk) and most of the rest of SF was thrown back into the gutter or became "character-driven"...

mostly by adolescent boys (Disch 1998:2). In the late 1930s a magazine called *Astounding Stories* started coming out, editor of which was John W. Campbell, a figure perhaps even more central to SF than Gernsback was (Landon 2002:55). Campbell was behind such huge and influential SF names as Robert A. Heinlein or Arthur C. Clarke, whose works are considered absolute classics among SF today. Unlike Gernsback, who had focused on technological and scientific novelties, Campbell placed emphasis on the sociology and psychology of the future as well (Landon 2002:57-58). According to Landon (2002:58), it could be said that Gernsback was the father of science fiction, while Campbell was the father of social SF. Terminology aside, from the 1920s on, SF stories abounded.

### 3.2.2 New Wave

After the so called golden age of science fiction, a need for a different, new kind of SF seemed to rise in the 1960s. The so called New Wave of science fiction emerged, Clute and Nicholls (1993:865-866) say, because a crisis point was reached – too many writers were working on the same traditional SF themes, and the style and content of SF was becoming too predictable. Hartwell (1996:212) sees New Wave SF as a breakdown of the control dominating editors had on SF at the time. Though New Wave SF is rather difficult to define, according to Landon (2002:150) it changed the values and the focus of SF writing, its relationship to mainstream writing, its engagement with cultural issues, its attitude towards science and technology, its treatment of sex, and it brought on a growing concern with ”soft” sciences like psychology, sociology and anthropology.

In Landon’s (2002:150) view SF reflected the cultural turbulence of the 1960s. It shared a lot of the 1960s counterculture, such as interest in oriental religions, sex and pop art, a pessimism about the future, overpopulation and ecology, war as well as politics, among other things (Clute and Nicholls 1993:866). In New Wave science fiction reality was a dubious concept, and it was often thought that SF should be a means to explore our subjective perceptions of the world (Landon 2002:152). Landon (2002:152) points out that New Wave also created a new kind of science fiction that could be taken seriously as literature, so its impact on the genre in general was great.

### 3.2.3 Cyberpunk

The ”era” of cyberpunk began with William Gibson’s novel *Neuromancer* in 1984 (Landon 2002:159). According to Landon (2002:159) science fiction oscillates between extrapolative (semblances the real world) and speculative (much more visionary) writing. Cyberpunk, in his view, is sharply extrapolative, while New Wave was speculative SF. He sees cyberpunk as a response to an obvious discrepancy between SF’s traditional visions of the future and an increasingly uncooperative reality that just didn’t fit to those visions. Cyberpunk, says Landon (2002:159-160), is an attempt to bring science fiction more into line with reality.

Landon (2002:160) defines the word cyber in cyberpunk as ”exploring the implications of a cybernetic world in which computer-generated and -manipulated information becomes the new foundation of reality.” The punk part, Clute and Nicholls (1993:288) say, means ”young, streetwise, aggressive, alienated and offensive to the Establishment.” As Landon (2002:160) points out, New Wave was disinterested in technology, while cyberpunk is intensely interested in new technological frontiers, though being wary of their implications. Cyberpunk was the first SF to see that ”velcro and videogames have changed our world much more than has spaceflight” (Landon 2002:164).

### 3.2.4 The future?

There are many visions about the future of science fiction, some more positive and hopeful than others. All agree on one thing – SF is not ”going anywhere” anytime soon, so better get used to it. Disch (1998:210-211) points out that SF has expanded hugely over the last five decades, SF movies are bigger and costlier now, books have diversified to fill all kinds of marketing niches (e.g. sword-and-sorcery, hard SF, militaristic space operas etc.), and he doesn’t see science fiction changing that much in the next few years. The future beyond that, in Disch’s (1998:224) view is rather bleak. Sales are already in decline, lists are shrinking, media tie-ins dominate paperback sales etc. But he also thinks SF will be the first to cross the technological gap from books to digital age in a big way.

Hartwell (1996:214) says that perhaps the future of science fiction is in scientists and engineers writing SF, to bring in new blood, as SF needs to keep growing as a genre. Women may also be important in science fiction's future, as women have only been a significant force in SF from the late 1960s on (Landon 2002:125). According to Hartwell (1996:104), most of the serious and fruitful intellectual inspiration and innovation in SF in recent years has become from women. He also points out (Hartwell 1996:105) that there is a strong SF gay community, who are contributing to a free and innovative discussion of future sex roles.

Hartwell (1996:242-247) sees the challenge of SF now as becoming more popular. The backbone of SF has been innovation, but now the issue is popularity and money (how to be a bestseller). He also sees that perhaps though till today the centre of SF has been in books, in the future it may not always be so. According to Hartwell (1996:264-267) the SF community is active and larger than it has been before (for instance, he says that the world wide web has been dominated by SF fans from the start- and it is the "single most potent force for communication in the world today"), and that there is more and better SF written now than ever before. Hartwell (1996:263) expects SF to grow and become more popular and influential for a while, and then vanish into the history of literature. That, perhaps, is an assessment most of us can agree on.

## *3.3 David Brin: Glory Season*

Although discourse analysis is not about what the author intends to say or has tried to do with their piece of discourse, some basic knowledge about the author and their ideas about their book may prove valuable as context. Thus a brief biography of David Brin, who he is as a writer, and some information about his novel *Glory Season* shall be provided below.

### 3.3.1 The author

David Brin was born in 1950 in LA Country, California, USA. He has a Master's degree in Electrical Engineering, and he completed his doctorate in Space Physics in 1981. (*Biography of David Brin*) He is a prolific writer of so-called hard science fiction, whose novels often deal

with various current and potentially controversial issues. He has tackled the issue of the environment and what we humans are doing to our planet (*Earth*), what would happen if there was a nuclear and biological war (*The Postman*), what would happen if suddenly we were faced with being treated and respected according to how well we have taken care of the 'intellectual potential' (i.e. other species) on our planet (the Uplift series), for instance.

According to Clute and Nicholls (1993:158-159), Brin's Uplift series[4], "...established DB as the most popular and ... the most important author of hard SF to appear in the 1980s." Hartwell (1996:107) says that Brin, as well as some other writers of the late 1980s and early 1990s, have combined "the new thematic concerns of life-style and sexual politics with the traditional SF play of crazy ideas".

As was mentioned in chapter 2.5 on literature as discourse, according to Fairclough (1989:137) writers may transform existing discourses by combining different types of discourses, like, for example, a documentary combines informing, educating and entertaining. David Brin's novel *Kiln People* (Brin 2002) combines the discourse styles of science fiction and detective novels. The book's main character is a private detective investigating a murder. He lives in an age in which people make clay copies of themselves for various types of errands and purposes each day, downloading the copies' memories into the original at the end of the day.

Potter (1996:95) also distinguishes another way of creating new approaches, by combining different discourses, as David Brin does with *Glory Season* (1993). Brin brings the discourses of cloning and naturalness together in the novel (the cloning is not done in a lab), while in the mass media cloning has been closely tied to the discourse of (medical) science. As was seen in the chapter on discourse and literature (2.5), Fairclough (1989:137) goes on to say that such creativity is characteristic of a problematic situation, and that if such creative uses of discourses become systematic, they may bring about long-term changes.

[4] The Uplift series comprises of 6 books so far. The basic premise is that humanity has come into contact with the society of seven galaxies, i.e. the society that *all* sentient species of the existing seven galaxies are a part of, and that has existed for millions of years. It provides rules and patterns for the uplift of new species into sentience, for the protection of planets and the conduct of older and younger races alike.

*Glory Season* is a novel that deals with issues of gender roles, reproduction and cloning. Bukatman (1993:32) remarks that it is extraordinary how many SF works are actually about issues of reproduction, while Landon (2002:110) claims that one of the assumed and not challenged ideas within SF is the relationship between the sexes and significantly different gender roles.

According to Brin himself (Glory Season: 764, afterword) the novel began with the contemplation of lizards. There are several species from the American Southwest that produce parthenogenetically (see chapter 4.1 on cloning), i.e. mothers give birth to daughter clones. Brin (Glory Season:764-765) says that though the idea of cloning had been explored in SF, he was intrigued with the idea that producing clones was just one of the "many startling capabilities of the human womb". As it can only be women to have these daughter clones, all the other aspects of the society on Stratos (the planet *Glory Season* deals with) developed from that idea. Brin makes the point of saying that he does not mean to say that genes are destiny, far from it (Glory Season:767). In his words (Glory Season:768): "This author claims only to present a *gedankenexperiment*- a thought experiment about one conceivable world of "What If"."

### 3.3.2 Glory Season

*Glory Season*, published in 1993, is a science fiction novel dealing with Stratos, a planet whose pastoral society was founded by a woman called Lysos and other founding mothers, who wished to create a peaceful society. For this end, men and women were genetically altered. Men's genes were designed to make them less aggressive and sexual, except during summer, when the Wengel star is seen in the sky. For that relatively brief time men would become interested in producing offspring (with the combined genes of the mother and the father). However, women of Stratos are genetically driven towards producing offspring during *winter*, when the "glory frost" rains down to rouse their interest, to produce clone daughters. Even to produce clone daughters, men are needed to sexually "spark" the development of the clone. Thus women try to "woo" men to perform during winter, to give them clone daughters, while men are more eager to mate during summer, to produce genetically varied children with half their genes. These children are called "vars" in Stratoian society.

Stratoian women have less summer children, ”vars”, both male and female, than winter clones who continue their clans. All female vars must go forth from the clan home at the age of 5 (15 in Earth years) and find themselves a niche in society, something they are good at and can make a living doing, so that they can start their own clone clan. Only a small number succeed, the rest merely working in second rate jobs for all their lives and never having children. Men, on the other hand, have only one occupation: life at sea.

Against this background the life of Maia, the novel's heroine, is set. She is a summer var, but not like all the others, since she has an identical twin, Leie. The beginning of the book describes how Maia first realizes she, as a var, is valued less than clone children. Later Maia and Leie plan to use the fact of their being identical twins to their advantage, by pretending to be a small clan when trying to find their niche in the world outside of their clan home. When they leave home, they sign on a ship as deck hands, but end up working on two different ships. Maia works hard and gets her first glimpse of what it is like to live on Stratos as a var. In a severe storm, Leie's ship is lost. Maia is devastated, slowly recovering from the loss of her sister, and later goes out and finds work for herself. She learns of an illicit scheme to get men to produce clone daughters alone, notifies the authorities, and ends up locked up in a cell by the schemers.

While in her cell, she starts to communicate with a fellow prisoner through knocks on a pipe. She gets to know her fellow prisoner, Renna, and starts to appreciate her cleverness and company. When the time to escape comes, she learns to her horror that her fellow captive is not only an alien, come to Stratos in a space ship a few weeks before, but also a man! Renna is not a genetically modified male either, so he is in Stratoian terms ”in rut” all the time. Maia is at first taken aback, but slowly comes to appreciate Renna again, despite his being a male. To most of the people of Stratos, Renna as the outsider is a threat to the balance and peace of their society, and much plotting is done against him.

Maia and Renna's friendship deepens, and they end up on a network of islands along with their shipmates (from Maia's first job), trying to find a way to escape before being killed by the schemers, the same ones that had imprisoned them before. During their escape attempt, Maia

learns that her sister Leie is, in fact, alive, and one of her captors. Leie switches sides, and helps Maia in her attempts to decipher the workings of an old, puzzle-like machine they have found on the island. She gets it to work eventually, learns more of the history of Stratos (how men helped defend the planet from invaders before), and helps Renna fly off to safety. Maia is relieved but rather confused from having her ideas of men, women and Stratoian society shaken so badly by all that has happened, and by Renna (who as a non-genetically altered male was still not dangerous and was likable), leaving her to wonder what to do next.

The novel tells of Maia's adventures and of Stratos in three ways. Firstly, there is the dominant narrative of Maia, following the events from her perspective. The second narrative is that of Lysos, the founder of Stratos, explaining her reasons for her choices in creating the society. The third narrative is Renna's, who is a stranger to Stratos, a man not used to matriarchal societies, and certainly not to a society whose basis lies in clan families of clones.

Cloning discourse starts with the gene, which, as a term, was coined in the beginning of 1900 (Pilnick 2002:8). From the gene it moves on to cell nuclear transplanting (method of cloning, see below), definitions of reproductive and therapeutic cloning, media reports of Dolly, and to Frankensteins in a Brave New World. SF imagery is used a lot in the debate about human cloning, which seems to indicate that science fiction, as a genre, is quite important to cloning discourse. It has been a way to express our fears of cloning, but perhaps it is also a channel for new ideas and alternative views?

## *4.1 What is cloning?*

To discuss cloning, it is first necessary to explain what a gene is, then proceed to how cloning is in actuality done. When cloning is referred to, terms such as 'therapeutic cloning' or 'reproductive cloning' are often used, differentiating the discourse on the basis of the technology's end use. This chapter will also give a brief history of the cloning process itself, as context for cloning discourse.

### 4.1.1 From genes to nuclear transplantation cloning

Genes provide instructions to our cells on how they should operate to perform their specific tasks. A gene is a section of deoxyribonucleic acid, DNA, contained in chromosomes that were passed on to us from our parents at conception. Chromosomes are contained within the nucleus of the cell, and are arranged in pairs. Each chromosome is formed from a single DNA molecule that is many genes along its length. Humans have two sets of 23 chromosomes, i.e. 46 all together (with the exception of the cells from which sperm and eggs develop, which only have one set of 23). 22 of the pairs are the same for males and females, the last one being the pair that determines the sex: females have XX, while males have XY. (Pilnick 2002:10-11)

According to Pilnick (2002:125), genetic engineering can be defined as the "transfer of parts of the genetic material from one cell to another, or the introduction of changes into the genetic material." Cloning then is particular kind of genetic engineering (in nuclear transplantation

cloning). Clone, as a term, means a precise *genetic* copy of a molecule, cell, plant or animal. (Pilnick 2002:143)

There are two ways to get cloned offspring: cell nuclear transfer, and parthenogenesis. Parthenogenesis is a process in which an egg with 46 chromosomes starts dividing, perhaps induced electrically or chemically (Center for Genetics and Society: *Reproductive cloning*). In nature parthenogenesis is a way of reproducing for many plants, honeybees and wasps, and for some species of lizard (Wickware 2002:19). As Wickware (2002:23) points out, ”cloning in nature probably predates sex as a reproductive mode. The cost of sex is considerable.” He explains (Wickware 2002:23): ”A creature that lives in a steady-state environment need not play the sexual game of chance and jeopardize a winning combination with needless recombination”. He also points out that cloning fails as a strategy during times of environmental challenge, when change is needed (Wickware 2002:23).

What is referred to as cloning in the media, or is talked about when the topic is how Dolly the sheep (the first mammal cloned from an adult cell) was created, is in fact somatic cell nuclear transfer, i.e. nuclear transplantation cloning, NTC. NTC, as Pilnick (2002:144) explains, is done when the complete genetic material of one organism is transferred into a fertilized egg of another. The four key steps of the process are as follows: the nucleus of an egg is removed, leaving no genes in the egg itself. Then a new cell is placed under the outer membrane of the egg. Next electricity is used to ”open” the egg and the cell, so that the contents of the latter can enter the nucleus of the egg. Lastly electric current is used to ”jump-start” the egg into developing. The result is an organism with one genetic parent, and small amounts of mitochondrial DNA (DNA that is not in the nucleus of the cell but in the mitochondria, which is the part of the cell that provides energy for it to function) from the egg donor that remains in the egg even after the nucleus is removed, which of course means that the product of NTC is not *absolutely* identical to its genetic parent. (Pilnick 2002:144)

So, what is so difficult about cloning? The fact is that cells begin to differentiate almost as soon as a fetus forms, so that a brain cell becomes a brain cell and can’t turn into anything else. A specialized cell cannot be used to clone a complete organism. One key to the

differentiation of a cell is in the proteins that coat the DNA in the nucleus of a cell. To clone, one needs to entice the proteins of a specialized cell to ”be lost” and take up the proteins that bind to the DNA of a newly fertilized egg. This is a very difficult task, basically returning a cell to its undifferentiated state and letting it direct the development of a whole new organism. It is not lightly that this process has been called biology’s ”splitting up the atom”. (Kolata 1998:24-25)

### 4.1.2 Therapeutic vs reproductive

The purpose for which the embryos are produced further divides the concept of cloning. According to Pilnick (2002:153), therapeutic cloning can be defined as

> the medical and scientific applications of cloning technology that do not result in the production of genetically identical fetuses or babies. Instead, cultures of cells could be cloned and used for treating human disease.

Stem cells are at the heart of a lot of medical research at the moment, there are hopes that they will turn out to be the cure for diseases like Parkinson’s or Alzheimer’s. This is often referred to as ’stem cell research’, although stem cells can also be extracted from discarded embryos, in which case cloning plays no part in the research (Center for Genetics and Society: *Research cloning*). Stem cells could be used to develop donor brain tissue for Alzheimer’s patients, or skin grafts for burn or injury victims, for instance (Pilnick 2002:153). It is a very controversial topic.

In ’reproductive cloning’, after triggering the development of the embryo, it is inserted into a woman’s womb and eventually, if all goes well, a baby is born (Center for Genetics and Society: *Reproductive cloning*). The technology and the process is exactly the same for both reproductive cloning and therapeutic cloning, the only difference is that in the former, the embryo is allowed to develop in a womb into a baby, whereas in therapeutic cloning the embryo is destroyed after the stem cells have been extracted. As Sexton (*What’s in a name?*) states, almost all discourses on cloning differentiate the concept on the basis of its ”end use”, and that most legislation or bans on cloning that have been suggested so far also uphold the distinction.

### 4.1.3 A brief history of cloning

The history of cloning discourse is naturally important context to discussing the cloning discourse of today, and thus the development of the cloning technique itself also matters. It all can be said to have started with Robert Briggs and Thomas J. King in 1951, when they became the first to successfully clone frogs (Kolata 1998:61-65). The egg's nucleus was removed and replaced with an *embryonic* cell, not a differentiated one.

As Kolata (1998:75) points out, there was an atmosphere of science euphoria from the Second World War onwards. Anything seemed possible, including manipulating our genes as a way to control evolution. In the late 1960s and early 70s there were some science scandals, real dilemmas, which led to the ethics movement (Kolata 1998:76-77). The first real cloning debate took place in the 1970s, and begun with a hoax where a book was published, falsely claiming that a millionaire had cloned himself (Kolata 1998:94-95). It was during this time that the tone of the discussion changed to science becoming a fearful thing. In the 1970s there was a growing terror because scientists were isolating genes and people realized they could be moved, i.e. genetic engineering became a possibility (Kolata 1998:108-109). Science fiction writers, naturally, had taken up the themes of science running amok, like in *The Boys from Brazil*[5] or the clone wars in *Star Wars* (Kolata 1998:113).

In 1981 the first mammal was supposedly cloned, a mouse from embryonic cells by Karl Illmensee and Peter Hoppe (Kolata 1998:128-142). It later turned out that Illmensee never showed anyone how to do the cloning, so serious doubts were raised as to whether he could do it at all, i.e. if the mice were really cloned. However, in 1986 two different teams of scientists cloned a cow and a sheep from early embryonic cells, comfirming that mammals could be cloned (Kolata 1998:167).

According to Kolata (1998:189-190), cloning had retreated as an issue by

[5] *The Boys From Brazil* was written by Ira Levin in 1976. It is the story of Dr Joseph Mengele, who was known as the "angel of Death" in German concentration camps during the Second World War. He conducted "medical experiments" on camp inmates. Levin's novel is set in South America (to which many nazis escaped), and it is about how Mengele attempts to reproduce Adolf Hitler from a piece of tissue taken from him while alive. Volunteer women carry 94 clones, which are later adopted and placed in families that resemble Hitler's family (have an elderly father, who must be killed to imitate the circumstances). (Pilnick 2002:158)

1990s. Few scientists took it seriously as a research project by then. She says (Kolata 1998:190) "cloning had returned to the realm of science fiction, not science fact."

*4.2 The human cloning discourse- concern and hope*

Strangely enough, the contemporary discourse on human cloning started with sheep. A very specific and famous sheep at that: Dolly. The discourse of both concern and promise that defines the human cloning debate began with her. Media response to Dolly also makes for a good case study of how cloning discourse moves from initial and general horror to more specific concerns and even some alternative opinions. Government reactions and general media responses to cloning are also discussed in this chapter. The Wellcome Trust study on public perspectives on human cloning (*Public Perspectives on Human Cloning*) says a lot about the discourse on the issue. Science fiction is quite central in also the dominant human cloning discourse, as is discussed below.

4.2.1 Dolly, the miracle sheep?

It was because scientists had convinced themselves that cloning with adult cells was impossible that Dolly came as such a surprise, as well as the fact that it didn't happen in an Ivy League college (Kolata 1998:211). Dolly made the news, but the real breakthrough in cloning science were Ian Wilmut's first cloned sheep, Megan and Morag, who were cloned from *differentiated* embryo cells (Klotzko 2001:4). Dolly, who was born in July of 1997, was in fact a cloned transgenic lamb, Klotzko (2001:8) points out. She had a human gene in every cell of her body. As Kolata (1998:25-26) explains, Dolly was actually created for research into getting animals to produce drugs. For instance, a sheep's cells would be engineered so that the sheep's udder cells would make milk with fibrinogen, a protein as well as a drug that can help in wound healing. *Cloning* one such engineered sheep would be much simpler than, one by one, engineering many sheep who would produce the special milk. Wilmut's innovation in cloning technique was to match the cell cycle (the cycle of events a cell goes through, ending up in cell division) of donor and recipient material through serum starvation before bringing them together (Wickware 2002:29).

Dolly became the number one story of the decade, making cloning

discourse an important one immediately (Kolata 1998:31-35). The cloning discourse arrived just at a point when lay people believed that genes were destiny, thus cloning genetically identical individuals seemed terrifying to most (Kolata 1998:37-38). All through history there has been a pattern of emphasizing either nature or nurture, and Dolly came at a time when the emphasis was on nature. Dolly also came along at an era that celebrates our own individuality and uniqueness. (Kolata 1998:37-38)

Dolly, in other words, opened a very big can of worms. Organizations and governments leaped into action, usually judging cloning technology, or appointing advisory boards on human cloning (Kolata 1998:35-36). The huge number of jokes the existence of Dolly has created is a good indication of her importance. Kolata (1998:34) quotes a few such examples: to William Blake's famous line of "Little lamb, who made thee?" Answer: a significant udder. Or, another example of Dolly's influence, a photocopy firm featuring two identical sheep in their advertisement, saying "Big deal. We've been making perfect copies for years."

The importance of Dolly was, as Nerlich et al (*Fictions, fantasies and fears*) point out, in her suggesting the possibility of human cloning. It seemed an astonishing prospect, but inevitable, since the possibility of human cloning had been discussed in SF for decades. And science fiction was pulled into the cloning debate that Dolly sparked right from the start. Even the very first newspaper article to break the news of Dolly's birth, by Robin McKie of the Observer, said

> But cloning is also likely to cause alarm. The technique could be used on humans, drawing parallels with Huxley's *Brave New World* and the film *The Boys from Brazil*, in which clones of Hitler are made. (quoted in Wilkie and Graham 2001:139)

The experience of McGee (2002:6) and his associates at the Center for Bioethics at the University of Pennsylvania also describes how science fiction was an intimate part of cloning discourse right from the start. The members of the Center gave dozens of interviews, the experience of which McGee (2002:6) describes as follows:

> The proposals to which we would respond were as absurd and fantastic as any in science fiction: families would seek to replace dying children

> with cloned copies, clones engineered to have an ablated cerebral cortex would provide precisely matched transplant organs for their sick "siblings", and clones bred for their roles would take over Wall Street and or the "bad jobs" down at the Public Works.

Dolly has become a cultural icon, a center of arguments about cloning (Nerlich et al: *Fictions, fantasies and fears*). Dolly can be seen as a metaphor for many things. Dolly the Nightmare represents the fears of human cloning, how scientists are driven blindly to search for the new, into disaster (cf Frankenstein). She represents tailor-made babies and clone armies. Dolly the Medical Advance is just a sheep, not human. She represents the genetic engineering of farm animals. Dolly the Holy Grail of science is the equivalent of the philosopher's stone to some. She represents an opening to new avenues of medical research and intervention. Dolly the Superstar is the most photographed sheep of all time, firmly lodged in public consciousness. Dolly the Cuddly Sheep has become a comforting, familiar symbol of the new genetics. She is cuddly and in need of protection, no threat. She even has a name, unlike monsters (cf Frankenstein and his monster). Dolly the Ambiguous Sheep represents how sheep are the symbol of innocence and purity in Judeo-Christian mythology. But Dolly can also be used: not lamb of God, but lamb of man. Dolly can also be seen as letting the genie out of the bottle and opening Pandora's box, representing fears of human cloning once research into cloning has been started, done in ethical vacuum. "A wolf in sheep's clothing." (Nerlich et al: *Fictions, fantasies and fears*)

### 4.2.2 Government and media responses to cloning

As Pilnick (2002:154) points out, although the benefits and disadvantages of other new genetic technologies have been debated alongside their development, immediate reactions to (human) cloning merely sought to prevent its development. Advisory boards were appointed, regulations and laws passed. The dominant cloning discourse placed much emphasis on concern, and fairly little on hope. However, one thing has been constant throughout the discourse, according to Dorothy Nelkin and Susan Lindee (2001:84), the mass media has been full of messages suggesting that genes mean everything.

Already in March 1997, the European Parliament made a statement pronouncing that cloning human beings "cannot under any circumstances be justified or tolerated by any society, because it is a serious violation of fundamental human rights..." (Pilnick 2002:156). Peter Singer (2001:161) continues, explaining that not only was the resolution passed because human cloning was considered against human rights, but also against the principle of the equality of human beings (because it permits eugenic and racist selection), offends against human dignity, and requires experimentation on humans. The resolution also stated that "each individual has a right to his or her own genetic identity" (Singer 2001:162). The last statement especially, as Singer (2001:162) points out, could not have been thought through, as where does it leave (genetically) identical twins? He even plays with the idea of this right being used as a defense to a charge of a person murdering his or her twin: "Your Honor, I acted in order to defend my right to my own genetic 'identity'" (Singer 2001:162).

There are certain arguments that are at the basis of (the dominant) cloning discourse in the media. Lee M. Silver (2001:65-67) sums these up in three basic themes, the first being that of safety. Those arguing against cloning often bring up the possibility of mutations, creating deformed humans in the process. There is, however, no reason to believe that cloned humans are more susceptible to genetic problems. In fact, as Kolata (1998:237-239) points out, cloning is genetically safer than sexual reproduction, as it bypasses the most common form of birth defect- the wrong number of chromosomes.

The second argument, according to Silver (2001:65-67) focuses on the psychological effects cloning would have on cloned children. Silver points out that identical twins face the same situation of sharing one's genetic makeup with someone else, or a similar situation could be said to exist when a child looks very much like one parent, as sometimes happens, or when parents try to raise their children to be like them, as also happens sometimes even today. Thus cloned children would not really be facing problems children are not facing at this moment. The third theme deals with the effects cloning would have on society. It is argued that the loss of 'evolution' might be disastrous. Silver argues that evolution is not always good progress, and that because only a small percentage of children would be clones, cloning's effects on our society are greatly exaggerated. He concludes that what the discourse

against cloning comes down to is religion, ”playing God”. (Silver 2001:65-67)

As has been mentioned above, the discourse on cloning has been one of both hope and concern. A MORI (Market&Opinions Research International) survey carried out in the UK in 2000, as quoted by Pilnick (2002:182), shows this quite well. About 90% of respondents thought that genetic developments should be used to diagnose and achieve cures for disease. Over 2/3 supported gene therapy, and 94% thought that genetic information should be used to solve crime. At the same time 1/3 of the respondents were concerned that genetic research was interfering with nature, and 70% thought the rules and regulations were not keeping pace with developments. The results clearly indicate hope about the benefits of new genetic technologies, as well as concerns about their consequences.

As Pilnick (2002:151) says, the first response to cloning in media was overwhelmingly negative. Attitudes have begun to change, though. By 1997 WHO was raising concerns that much of the opposition was based on ”science fiction accounts”, and that perhaps policy makers were acting in moral panic rather than deliberation (Pilnick 2002:151). There seems to have been a gradual shift from cloning discourse being a purely moral debate to weighing its safety and efficiency like any other new technology, according to Pilnick (2002:152).

The discourse on human cloning is very different for therapeutic and for reproductive cloning. As Pilnick (2002:148) explains, the argument for reproductive cloning is usually based on a woman’s right to reproduce. Those against it argue that cloning should not be used as means for people to continue their bloodline: wanting to be a parent is deemed acceptable, propagating one’s genes is not (though those naturally able to reproduce can have children for any reason).

The response to therapeutic cloning seems to be much more positive, on the whole. Splitting the discourse into that of reproductive and therapeutic cloning is about the split between the discourses of concern and hope – enhancing the hope by concentrating on therapeutic cloning and its possibilities (Nerlich et al: *The influence of popular cultural imagery on public attitudes towards cloning).* It seems that current media coverage of cloning focuses mainly on therapeutic cloning, or stem cell research,

which is what Sexton (*How to talk about cloning*) says. In 1997 and 1998 cloning discourse concentrated on the potential replication of existing people, but since then stem cell research and its potential in treating degenerative conditions such as Parkinson's or MS has been the central discourse on cloning. Words are important in cloning discourse, as Sexton (*What's in a name?)* points out. Making a distinction between reproductive and therapeutic cloning has brought at least hesitant support for a part of cloning research, even if the technique is exactly the same, regardless of end use. Even the word 'therapeutic' refers to getting better, to healing, provoking positive reactions. It determines discourse, as who could possibly oppose treatments or making sick people better? (Sexton: *What's in a name?)*

Human cloning discourse takes us back to the very foundations of who we are and how we see ourselves. What makes us unique? Kolata (1998:21) sums it up nicely:

> Cloning is a metaphor and a mirror. It allows us to look at ourselves and our values and to decide what is important to us, and why. It also reflects the place of science in our world. Do we see science as a threat or a promise? Are scientists sages or villains?

### 4.2.3 The Wellcome Trust study

As a way to further highlight the dominant discourse on human cloning, let us briefly look at the study Wellcome Trust (*Public Perspectives on Human Cloning*) conducted in the spring of 1998 on the public perspectives on human cloning. Though the study was about attitudes (i.e. something *beyond* discourse), it was based on interviews and discussions (group discussions two hours long, groups reconvened 1-4 weeks later to see if views had changed after receiving more information about cloning), which clearly reveal aspects of human cloning discourse in itself.

The first obvious result of the study was that people's knowledge of the technology of cloning was minimal. Cloning was associated with genetic engineering, not reproductive science. Words mattered: gene therapy was viewed in a much more positive light than genetic engineering or research. In fact, the knowledge of the process of cloning was so minimal that the fact that no sperm is needed to clone,

and that a clone would be born as a baby rather than presented as a ready-made adult surprised most participants. (*Public Perspectives on Human Cloning*)

Overall participants were fearful of the concept of human cloning, and shocked by the implications of the technology. Cloning was firmly rejected by almost all. Additional information about the technology did not change the participants' concerns. For instance, participants were anxious about the thought of not needing men for reproduction. A man was quoted saying "...the conclusion of this is that not only are we not needed, but we will die, actually die out. A woman is going to clone a woman." (*Public Perspectives on Human Cloning*)

Wanting to create a genetic copy of oneself was considered highly selfish by the participants. Initial concerns over genetic individuality lessened when participants realized that experiences and environment matter in "molding" a person. Reproductive cloning was considered unacceptable by almost all participants, however. Concerns were raised, such as how a child with no father at all would fare, growing up in our society. (*Public Perspectives on Human Cloning*)

Therapeutic cloning did not even arise as a topic in group discussions without prompting. First reactions to it were favourable, but later with more thought participants expressed reservations on the type of research needed and the uses to which it would be put. Producing tissues/organs was thought to be all right. If the technology was to be used for biological research, the response was more cautious. For instance, the participants thought that research into cancer was seen as good, but not into aging (issues such as overpopulation and sustainability were brought up). As the participants' knowledge of the technology increased, so did their concerns. In the end, cloning embryos was basically seen just as "bad" as reproductive cloning. The participants had been unaware of embryo research going on in the UK, and the 14-day limit (in the UK, the law says that embryos can be grown till they are 14 days old, after which they need to be destroyed) was questioned in the discussions. Many did think that attitudes to new developments would become more positive over time, like with IVF (*in vitro* fertilization). (*Public Perspectives on Human Cloning*)

Some of the participants saw cloning as a desirable development,

however. For instance, a woman having trouble conceiving said they would consider cloning to have a child, as a last resort, but only if cloning was a reliable method (i.e. no failed tries). A few participants saw cloning as 'progress' and thus to be accepted. (*Public Perspectives on Human Cloning*)

Knowledge on the current regulations of scientific research was extremely limited, and further information about them did not reassure participants. They had very little confidence in regulations controlling any research, including cloning. The participants thought that to be effective, regulations should be international. Conspiracy theories abounded, and participants thought that secret research was taking place. A woman was quoted saying "I think you can pass laws all you like, still don't know that you'll stop it. People will just go and do it in another country." There was also a tendency to think that research is manipulated for more negative ends because of commercial pressures. (*Public Perspectives on Human Cloning*)

Scientists participating in cloning research were viewed as individuals led by their curiosity and enabled by their intellectual ability to push the boundaries of knowledge even further (cf *Frankenstein*), and to have a disregard for potential negative consequences. They were seen to be motivated by selfish needs (curiosity) and a need for personal glory to do the research. Participants did not think that public opinion would affect the kind of research done by scientists. As a female participant said "Do you not think that if everybody – all the public – were against it they'd still do what they want to do anyway" (*Public Perspectives on Human Cloning*)

Images such as photocopied people, automated production lines and artificial incubators were brought up constantly. Cloning was also linked to malevolent outside influences, such as the military, megalomaniac leaders, rogue scientists. Nazis' genetic experiments were referred to. A male participant was quoted saying "Very disturbing- why would you want a replica of you? I certainly wouldn't. It reminds me of Hitler, trying to create a race." As the study reveals, cloning discourse constantly uses narratives taken from popular culture, especially science fiction. Stories such as *Frankenstein* or *Brave New World* are used as a form of shorthand, referring to a concept (with a negative connotation) with no need to explain further. SF stories

clearly coloured the participants thoughts, they often asked 'what are we not being told'. (*Public Perspectives on Human Cloning*)

"I dread to think what could happen if it was to end up like something out of a sci-fi film" a participant had written in their diary. Negative references to books and films were constantly made. *Jurassic Park, The Boys from Brazil, Blade Runner, Frankenstein, Brave New World, Stepford Wives, Star Trek, Alien Resurrection, Gattaca* were all referred to at some point in the discussions, usually in a brief manner with the assumption that others would instantly get the point being made. "Cloning... I mean it's Frankenstein-type medicine", "I have a Brave New World vision where we have half a dozen or so different kinds of human being classified according to their ability... I think Mr Huxley was quite perceptive." and "It's a Star Trek thing- androids with a brain that could think like a human" all show how central science fiction is in cloning discourse. (*Public Perspectives on Human Cloning*)

### 4.2.4. Science fiction in cloning discourse

Science fiction has been extremely important in cloning discourse. Though the hypothesis of this thesis is that SF provides a voice to alternative discourses, it seems that science fiction is also very much a part of the dominant media discourse on human cloning. However, many of the SF references are either to films (which, as was pointed out in chapter 3.1.3, are more conservative and against technology in general) or to books written long ago (they have become a part of the dominant discourse over time). This section explores how science fiction has been used in the dominant human cloning discourse so far.

Matthew Nisbet has examined the role of popular culture and science fiction in particular in cloning discourse in his article *Attack of the Metaphors: Will Star Wars say the cloning debate? (2002)* Nisbet says that we all, public and lawmakers alike, draw upon popular culture when making up our minds about cloning. A fourth of all stem-cell articles in 2001 referred to science fiction, popular culture or used historical metaphors, according to Nisbet. The public and lawmakers alike remember the moral lessons of *Frankenstein, Brave New World* and even *Star Wars* and use them to make their minds up about cloning. He concludes that

By discussing cloning and biotech research in terms of *Frankenstein,* mad scientists, or *Brave New World*, cloning opponents emphasize certain dimensions of the issue over others, limiting debate to terms that marshal support for their position (*Attack of the Metaphors*).

Dorothy Nelkin and Susan Lindee (2001:84-85) suggest that most SF novels and films about cloning are "traditional narratives of divine retribution for violating the sanctity of human life". As discussed above in 3.1.3 The genre of Frankenstein, Mary Shelley started this trend for science fiction. Philip Kitcher (2002:136-137) points out that

Mary Shelley may have a lot to answer for. The Frankenstein story, typically in one of its film versions, colors popular reception of news about cloning, fomenting a potent brew of associations - we assume that human lives can be created to order, that it can be done instantly, that we can achieve exact replicas, and, of course, that it is all going to turn out disastrously.

Nerlich et al (*The influence of popular cultural imagery on public attitudes towards cloning*) suggest that a name like Frankenstein can evoke a script, to be used as an interpretative frame. For instance, *Brave New World* evokes the script of the state managing production of human copies on assembly lines, or *The Boys from Brazil* the frame of a mad dictator wanting to create an army of followers or a master-race. The framing of problems and issues enable us to understand one thing in terms of another, to express commonly held feelings that are hard to express (Pilnick 2002:157). In the case of human cloning, it is the threat to our perception of what humanity is, and to what personal identity and personal dignity are that are expressed through metaphors (Nerlich et al: *Fictions, fantasies and fears).*

Though science fiction is often drawn on to discuss human cloning, there are only a few cinematic and literary references that are used (*Frankenstein, Brave New World, The Boys from Brazil, Stepford Wives, Gattac*a etc), but they *are* referred to in a consistent way (Nerlich et al: *Fictions, fantasies and fears).* Nerlich et al (*Fictions, fantasies and fears)* say that the fundamental metaphors of cloning discourse suggest that clones are copies of inferior value, clones are plants/animals to be farmed, clones are products or machines, body parts of clones are spare parts to be sold and bought etc. Nerlich et al (*The influence of popular cultural imagery on public attitudes towards cloning)* also point out that it is much more difficult to find positive metaphors (e.g. an embryo

described as 'a little ball of cells' or 'a life saving tissue generator').

Nerlich et al (*Fictions, fantasies and fears)* point out how science fiction has been a part of cloning discourse from the start. In the 1930s and 1940s the Nazis were trying to create a super-race. Around the same time Aldous Huxley's *Brave New World* was published. Thus two important themes emerged in literature: armies of identical monsters and the search for immortality, both of which are used in cloning discourse over and over. In the 1950s tadpoles were cloned for the first time, the structure of DNA was discovered, and in literature a new theme emerged: cloning the rich and powerful. In the 60s the topic of cloning humans was explored further, with the theme of cloning loved ones (still very much a part of cloning discourse today). (Nerlich et al: *Fictions, fantasies and fears)*

Both the science and SF of cloning accelerated in the 1970s. For instance, a gene is cloned, and the first IVF baby is born. Many of the IVF arguments are later used in cloning, for example how clones are just twins, or scientists playing God. Themes in SF included clones developing collective consciousness (not a part of cloning discourse later); having a mother but no father; reproducing famous people (*The Boys from Brazil* in 1978); the misunderstanding of clones growing up in months to be living copies of the original. Steady advances in science characterize the 1980s, and SF stories abound, with themes such as replicants (*Blade Runner*), or raising clones to be like the original, and clones taking revenge. In the 1990s such SF works as *Jurassic Park* (reviving extinct species through cloning), *Glory Season* (woman dominant, the most successful clone themselves to create aristocratic families), and the theme of clones as "spare parts". (Nerlich et al: *Fictions, fantasies and fears)*

As we have seen, science fiction has been a central part of human cloning discourse right from the start. However, in the media and popular discourse it has mostly been used to strengthen the dominant discourse of concern. Can it also be, as Landon (2002:33) says, the channel for ideas and views that challenge and overthrow established paradigms, offering an often radically new way of thinking?

# 5. Technology, genetic engineering and reproduction

The analysis revealed three broad themes within the cloning discourse of *Glory Season*. The themes were not predetermined, but rather rose from the text itself, as is fit for discourse analysis. Moving from the particular into the general, even if the organization of the thesis might imply otherwise, the text itself gave rise to the categories found here, as interpreted by the writer, of course.

The analysis was conducted so that notes and quotes were constantly taken when reading the novel. Later the notes were organized according to the issues they seemed to cover, rearranged a few times until clear categories emerged. From the sub-themes that this sorting created, the three broader themes soon became evident.

The first theme covers aspects of *Glory Season*'s discourse connected to technology, genetic engineering, and cloning as a reproductive method. It moves from broader issues, like scientific progress and its implications on societies, to specific issues regarding human cloning as a reproductive method, to topics such as sex versus cloning as a way for humans to reproduce.

The second theme covers the issue of culture. It consists of sub-themes like what is considered normal in a society, the division based on genes in Stratoian society, the status of clones and non-clones, how relationships are different on a clone-based society like Stratos than in contemporary western world, and finally how cloning might affect a society's view of time. All of the sub-themes' discourse is about the changes cloning as a reproductive method might bring about in society, and emphasizes the fact that what seems normal to us, is not the only 'natural' or possible way to think.

The third and final theme is that of genes and "destiny". The discourse here covers issues like how outsiders see clones: as copies of the same person or individuals, identical twins, identicality versus individuality regarding clones, and the topic of predictability. Predictability here means being able to know beforehand something of how your life will play out, due to being a clone and knowing how your sisters turned out.

The chapters are organized into several sub-themes. In turn, each of the sub-themes is analysed in terms of the three aspects detailed above: words and metaphors, voices, as well as intertextuality and ideology. This threefold analysis is the same for each sub-theme. Many quotes are provided in the following three chapters, in order for the reader to follow the reasoning behind the analysis.

Quoted pieces of text are always separate from the surrounding text (irrespective of their length), and in a smaller font size. The page number as well as the 'voice' is provided for reference to make the analysis as easy to follow as possible. When words or phrases are referred to, they are italicized. Italics *within* the quotes themselves are original. In the novel, italics seemed to be used to express Maia's direct thoughts. The same quote may be used in different contexts, and/or under different headings, as it may be the best or clearest example of the different aspects of the text for the analysis. The lists of words provided were not a part of any quantitative analysis, but are provided as a means for the reader to get a "feel" for the vocabulary used in each theme discussed.

## *5.1 Technology*

*Glory Season* contains quite a lot of discourse on technology, science, scientific progress and its effects on society and nature. The sub-theme of scientific progress is discussed mainly through the discourse of benefits and disadvantages. It seems that intertextuality is clearly a part of this discourse, as well as (hidden) assumptions regarding values and cause-and-effect relationships.

### 5.1.1 Words and metaphors

Looking at the vocabulary used reveals an approach that both values, and downplays, the importance of technology for humans. For instance, words and expressions such as *nature, code, tools, skill, improve, the blueprint of humanity, science, ability* speak of technology and its use in society. Interestingly, mostly nouns seem to define and reveal the discourse as that of technology.

*Benefits, flourish, insights, illuminate, heritage, renaissance, romantic,*

*exciting* are used in connection with eras placing much value on scientific progress, while *repressions, superstitions, warm myths and metaphors, frightened* are used in connection with times taking a more anti-technological approach. In addition to nouns, verbs and adjectives now play a significant role in revealing a fairly positive attitude towards scientific progress, as we can see in the quote below, where Renna talks to Maia about scientific progress.

> Oh, there are benefits. Art and culture flourish. Old repressions and superstitions shatter. New insights illuminate and become part of our permanent heritage. A renaissance is the most romantic and exciting of times, but none lasts very long... (376, Maia)

Flourishing, shattering, illuminating – all verbs are used metaphorically, painting a picture of growth, light, and destroying the old. A very positive vision of technology is created in the discourse. Brin, the author of the novel, uses his own words to emphasize this point of view:

> Technology produces more food and comfort and lets fewer babies die. (771, afterword)

> *Lysos and the Founders didn't turn completely away from science. They felt it needful to hold onto this ability. It was a later, frightened generation that clamped down, scared of what trained, independent minds might do.* (678, Maia)

On the other hand, *questioning life's certainties, compulsively doubt, heedless, validity, ego, 'personal fulfillment', values, community, tradition, terrible, ferment, knowledge, power, ecological, danger, expanding populations, misuse of technology* are all used when describing such societies that place emphasis on scientific progress. Verbs and adjectives seem to be the ones loaded with most meaning here, indicating a much more reserved and negative attitude towards technology and its importance for a society. The quote below is again Renna, explaining to Maia, how scientific progress has affected society on his world.

> The sort of epoch in which questioning becomes almost a devotional act. In which all of life's certainties melt, and folk compulsively doubt old ways, heedless of whatever validity those ways once had. Ego and 'personal fulfillment' take precedence over values based on community and tradition. Such times bring terrible ferment, Maia. Along with

> increased knowledge and power comes ecological danger, from expanding populations and misuse of technology. (376, Maia)

The words used seem to indicate an attitude towards scientific progress that takes both sides into account. It might even be called a little ambivalent, recognizing both the benefits and costs of science.

### 5.1.2 Voices

What is most interesting about the discourse on technology in *Glory Season*, perhaps, is that most of it is attributed to Renna, the alien, the outsider, who has firsthand knowledge of very different kinds of cultures and societies. He speaks to Maia about scientific progress and his society at great length.

> Deep down, most humans prefer living out their lives surrounded by comfortable certainties, guided by warm myths and metaphors, knowing that they'll understand their children, and that their children will understand them. (377, Maia)

Though Lysos, the founding mother, uses a lot of technological vocabulary in explaining her choices for the world of Stratos, her words are mostly clinical and detached, in itself revealing an attitude of acceptance in regards to technology. Her voice in the technology discourse in *Glory Season* is explanatory, defending her views, like below.

> Mother nature works by a logic, a harsh code, that served when we were beasts, but no more. Now we grasp her tools, her art, down to its warp and weft. And with skill comes a call for a change. Women –some women– are demanding a better way.
>
> Thus we comrades sought this world, far beyond the hampering moderation of Hominid Phylum. It is the challenge of this founding generation to improve the blueprint of humanity. (5, Lysos)

### 5.1.3 Intertextuality and ideology

There are many kinds of assumptions made regarding technology that are not vocalized in the discourse. For instance, Renna's words on the nature of eras of scientific progress make numerous assumptions.

> Oh, there are benefits. Art and culture flourish. Old repressions and

> superstitions shatter. New insights illuminate and become part of our permanent heritage. A renaissance is the most romantic and exciting of times, but none lasts very long... (376, Maia)

This piece of discourse assumes that a society can be judged in terms of benefits (or disadvantages), but does not specify from whose point of view the benefits are defined. Who decides that art and culture flourishing, or superstitions shattering are generally a good thing, benefits? Or, who says that a romantic and exciting time is a good era? Food, comfort, and fewer babies dying (see above) – does science and technology really provide all this?

> Along with increased knowledge and power comes ecological danger, from expanding populations and misuse of technology. (376, Maia, Renna speaking on scientific progress)

In this other piece, it is assumed that increased knowledge and power are beneficial things – indicating a discourse that is in favour of scientific progress. Who says that increased knowledge and power necessarily mean expanding populations or misuse of technology. In fact, who says expanding populations is a bad thing to begin with? Previous discourse, naturally, which has made us aware of the dangers of overpopulation, and the Frankenstein story of scientists being irresponsible and causing destruction with their hunger for glory.

Intertextuality is clearly at work here. Just as clearly many ideological assumptions are being made about what is valuable and what is not – knowledge and power are good, as well as art and culture flourishing or getting rid of superstitions, while ecological danger and forgetting the good of the community are the flip side of the technology coin. The dominant discourse often seems to concentrate on the flip side of scientific progress, on the side-effects, possible dangers and harms if things go wrong. The discourse of *Glory Season* tends to argue for a balance, or it could be seen as being ambivalent towards the issue of scientific progress.

### *5.2 Genetic engineering*

Genetic engineering is, as we saw, often a part of the dominant human

cloning discourse. *Glory Season* has much to say on this topic as well, mostly through the words of Lysos, the founding mother of Stratos, when she explains her choices for her world and how she ended up making them.

### 5.2.1 Words and metaphors

The vocabulary of the discourse on genetic engineering in *Glory Season* is fairly devoid of adjectives, consisting mostly of nouns and verbs as scientific discourse normally does. Lysos, whose is the voice mostly used to speak on this topic, is, after all, a scientist creating a world and a society. Words such as *clever gene designs, plans, fail, side-effects, predict, replacing, modify humans, changes, adjusted, recent designs, improved, incorporate, genetically, limiting, variants, programming, lab-designed* are used. Lysos' words are mostly either neutral, or positive.

> While making ambitious changes in such fundamentals as sex, we shall also have to modify humans to live and breathe in the air of Stratos. As on other colony worlds, carbon dioxide tolerance and visual-spectrum sensitivities must be adjusted. Moreover, shortly before departing the Phylum, we acquired recent designs for improved kidneys, livers, and sensoria, and shall certainly incorporate them. (195, Lysos)

Positive attitude towards genetic engineering is evident in some of the vocabulary used. Words and expressions such as *to live and breathe, effort to limit population, common good, lesson, our descendants* imply good intentions, a sense of responsibility and shared destiny, which is what is often considered to be lacking in such scientific discourse (cf Wellcome Trust study chapter 4.3.3).

> In the end, all of our clever gene designs, and corresponding plans for cultural conditioning, will come to naught if we are smug or rigid. The heritage we give our children, and the myths we leave to sustain them, must work with the tug and press of life, or they will fail. (256, Lysos)

Change, though much more important when Lysos speaks of the balance of using sex and cloning as reproductive methods (see chapter 5.3), is also a part of the discourse on genetic engineering. The word change, in one form or another, is used very much, as in *changes, times change, passions change, the Great Changes*. As mentioned in chapter 2.6, Fairclough (2001:92-93) sees things like overwording as indications of

the importance of an issue, or as signs of ideological struggle, even.

*The tug and press of life* is one clear metaphor used in the discourse on genetic engineering. It seems to imply a fight, a constant strain on life, on people, conveying an image of challenge for humanity, perhaps implying that genetic engineering might be one way to survive in this pressure. A longer metaphor, but a metaphor nonetheless, can be found in Renna's reactions to Stratos and the planet's society, as can be seen in the quote below. He slowly moves from being negative and skeptical towards genetic engineering on Stratos to partial acceptance. His change in perspective can be seen in the quote below, when Renna and Maia are talking about how Lysos engineered males so that they would be less aggressive.

> "I guess Lysos knew what she was talking about, sometimes," Maia said in a low voice.
>
> Renna shot her a look under furrowed brows. Then, slowly, there spread across his face a smile. An ironic smile that this time conveyed respect, along with affection.
>
> "Yeah," he answered. "I guess maybe now and then she did." (341, Maia)

### 5.2.2 Voices

The discourse of genetic engineering in *Glory Season* is mostly done through the voice of Lysos, the founder of Stratos. Her voice is used to argue certain viewpoints (see 5.3 below) and ideologies, perhaps as it does seem reasonable that she would have had to argue her case to people of her time, before founding Stratos. In such a fashion, *Glory Season*'s intertextuality is clearly maintained.

Lysos is, in fact, an expert on genetic engineering, and as such equipped to argue that point of view. Renna and Maia neither know much about the matter, so their voices cannot be used much to argue the issue, other than perhaps offer some small insights into how genetic engineering might affect people's lives on a daily basis. Since people of Stratos live on boats a lot, as Maia does when working as a deck hand before her life takes more unexpected turns, their kidneys have been modified so that they can drink sea water.

> *"Bless Stratos Mother, for her mild oceans,"* went a sardonic adage, not

> part of any liturgy. *And bless Lysos, for kidneys that can take it.* (50, Maia)

However, Maia's voice is the one through which the unquestioned assumptions are made, as above. She takes the changes for granted, does not see any moral issues in the matter, as her society is based on the fact that genetic engineering is a good, needful thing. In fact, to her, unmodified humans may seem backward and unappetizing. To Maia unmodified sexual patterns are *barbaric*, she regards her people's sexual cycles (based on seasonal changes) as the ”natural way”.

> However barbaric their unmodified sexual patterns, cultured people on other worlds probably bathed the same way as on Stratos. (347, Maia)

### 5.2.3 Intertextuality and ideology

Some of Lysos' discourse, however, does seem to have a tinge of arrogance or recklessness about it, though the actual words used don't reveal it as such. Previous discourse, specifically the themes of Frankenstein discussed above (chapter 3.1.3), make even neutral words and expressions sound slightly ominous when talking about genetic engineering. Lysos' words when speaking about the Stratoian reproductive cycle (first quote below), and responding to the ”natural argument” (i.e. we should not change what nature has intended, as that is the ”natural, normal and best way”) have this slightly ominous ring to them.

> There will be side-effects we cannot now predict, but the possibility of error should not deter us. We are only replacing one rather arbitrary set of stimuli and impulses with another. (238, Lysos)

> Behaviors which might be excusable in dumb beasts can seem perverted, criminal, when performed by thinking beings. Just because a trait is ”natural” does not oblige us to keep it. (141, Lysos)

The above reference clearly takes a stand to previous discourse, which has claimed that something being natural means that it should be kept that way. Though one could argue that this is an imaginary voice responding to an imaginary claim, it is clear that discourse on cloning and genetic engineering often includes just such an argument. The 'playing God' argument, in essence, the 'nature intended it that way, so

leave it alone' discourse, referred to above as the "natural argument".

Lysos' discussions about genetic engineering make all kinds of assumptions. For instance, that self-interest and common good are not usually the same thing (see below), also that self-interest and natural instinct win over the common good. And, of course, that 'common good' is what we should aim for.

> Our chief hope lies in finding ways of permanently tying self-interest to the common good. (63, Lysos)

> One lesson we've learned – any effort to limit population cannot rest on persuasion alone. Times change. Passions change, and even the highest flown moralizing eventually palls in the face of natural instinct.
>
> We could do it genetically, limiting each woman to just two births. But variants who break the programming will outbreed all others, soon putting us back where we started. Anyway, our descendants may at times *need* rapid reproduction. We mustn't limit them to a narrow way of life. (63, Lysos)

The text above also assumes that outbreeding is what would happen, if not controlled by some means, as well as implying that a narrow way of life is not a good thing. Such a comment is clearly a part of today's western society, referring to our discourse of individuality and choice. The ability to choose is what matters- and here the text is saying that the ability to choose between genetic makeups and ways of reproduction are a good thing, and a part of our ideology of choice.

Some pieces of text within the *Glory Season* are otherwise quite clearly in favour of genetic engineering. For instance, Maia's voice is used a couple of times to produce discourse that points out how genetic engineering may be good, even needful and necessary, if we are ever to adapt to other kinds of environments, i.e. other planets. As in the quote below, the discourse in *Glory Season* seems to say that accepting genetic engineering opens up new possibilities for humanity, and that perhaps it's not such a bad thing after all (like being able to drink salty sea water, may save numerous lives and at least make life easier, for instance).

*5.3 Cloning as a reproductive method*

The third sub-theme is that of cloning as a reproductive method. Lysos' voice is used in this discourse of sex and cloning, of change and stability, of genetic mixing and genetic copies. Such discourse argues that cloning may be the perfect method to reproduce when the environment is stable, but sex is needed to adapt to changing conditions.

An obvious theme within the human cloning discourse in *Glory Season* is that of cloning versus sex as a reproductive method. Or, put another way, the stability and perfection of keeping the same genes, versus change and adapting to a changing environment by creating new genetic combinations.

5.3.1 Words and metaphors

As mentioned above, this theme is quite clearly characterized by the sex versus self-cloning dichotomy, which is also evident in the words used. Referring to sex as a reproductive method that deals out new genetic combinations, which are needed to adapt to a changing environment, is characterized by words such as *sex, shifting conditions, variability, ruins perfection, using sex, circumstances change, variations, adapt, a changing world, use sex, mixing genes, new combinations, change.*

> Sex has flourished because environments are seldom static. Climate, competition, parasites – all make for shifting conditions. What was ideal in one generation may be fatal the next. With variability, your offspring get a fighting chance. (164, Lysos)

Cloning, on the other hand, is discussed in terms such as *static environments, ideal, perfection, well-adapted, duplicate daughters, cloning, keep perfection, a fixed environment, self-copying.*

> Sex inevitably ruins perfection. Parthenogenesis would seem to work better – at least theoretically. In simple, static environments, well-adapted lizards who produce duplicate daughters are known to have advantage over those using sex. (163, Lysos)

A great variety of words and expressions is used to emphasize this difference between the two methods of reproduction, between the

stability of cloning and the constant change of sexual reproduction. The *perfection* of cloning is often mentioned, which clearly brings a very positive connotation to play. On the other hand, adapting to a *changing environment* is about the survival of the fittest, which is what is currently thought to be the necessary way for all species to survive at all.

Another obvious theme connected to the one discussed above is that of choice, once again. *Choosing* between stability and change is clearly a focus in the reproduction discourse in *Glory Season*. Words such as *choice, options, the best of both worlds, select their own path, predictability, opportunity, sameness, surprise, keep perfection, slight variations, to meet new challenges, adapt* emphasize the ability to choose between the two methods, self-cloning and sex. Quite obviously even the words used convey a positive attitude towards the concept of choice in this matter.

> Why does sex exist?
>
> For three billion years, life on Earth did well enough without it. A reproductive organism simply divided, thus arranging for its posterity to be carried on by two almost-perfect copies.
>
> That "almost" was crucial. In nature, true perfection is a blind alley, leading to extinction. Slight variations, acted on by selection, let even single-cell species adapt to a changing world. (89, Lysos)

The metaphors used in this reproductive discourse also emphasize the dichotomy of gene-mixing sex and perfection-keeping cloning. Expressions such as *tools of creation, the gene-churning magic of normal sexuality, true perfection is a blind alley, to meet new challenges* are used in the discourse. *Tools of creation* create a strong image of a carpenter-type individual yielding his tools to mold humans, when in western belief systems creation is usually reserved for God. The metaphor seems to imply that changing humanity's future has been taken from God, and is now in the hands of people themselves, to do as they see fit. Normally this is seen in a negative light, as in the Frankenstein-discourse talked about in chapter 3.1.3.

> What if circumstances change? We may need the gene-churning magic of normal sexuality, from time to time. (132, Lysos)

*The gene-churning magic of normal sexuality* on the other hand, places emphasis on the uncontrollable factors of new genetic combinations via

sex. The power is not in human hands, now, but up to nature, chance, God even. *True perfection is a blind alley* implies, when viewing the discourse as a whole, that though true perfection sounds tempting, it can be a disaster in nature, in genetics. That progress, trying out new things (genetic combinations) is the only way to move, unlike cloning which keeps humanity at a standstill. Adapting to a changing world is considered a necessity for the survival of any species.

### 5.3.2 Voices

Once again, the voice used is mostly that of Lysos, the main founder of Stratos. Her voice is almost solely used to debate the issue of sex versus cloning as a reproductive method. It is easier to involve earlier discourse on cloning when her voice is used, because it is used in a way to imply that she is proving her case, defending her choices to others in her time with views more in line with the dominant cloning discourse discussed in earlier chapters of this thesis. Knowing that the dominant discourse has mainly argued against cloning as a reproductive method, Lysos' words can be seen as a response to that argument.

> With the tools of creation in our hands, shall we not give our descendants choice? Options? The best of both worlds?
>
> Let us equip them to select their own path between predictability and opportunity. Let them be prepared to deal with both sameness and surprise. (164, Lysos)

The other voice used a little is that of Renna's but through Maia's narrative. He is explaining to Maia the backgrounds of Lysos' choice, how she came to consider parthenogenesis as a reproductive method, by imitating some lizards and other animals found on Earth. His voice is also one of an "outsider" to Stratoian society, thus able to argue both sides, that of sex and that of self-copying. Maia's voice cannot be used to any large extent, because she could not have a view that could be considered even remotely objective or multifaceted, having grown up in a culture that takes reproduction by cloning for granted. Any anti-dominant arguments in her voice would have no credibility.

> She also remembered Renna's comments on Lysian biology – how it had been inspired by certain lizards and insects, back on Old Earth.
>
> *"Cloning lets you keep perfection. But perfection for what? Take aphids. In a fixed environment, they reproduce by self-copying. But*

> *come a dry spell, or frost, or disease, and suddenly they use sex like mad, mixing genes for new combinations, to meet new challenges."* (564, Maia, Renna speaking)

### 5.3.3 Intertextuality and ideology

As briefly mentioned above, Lysos' voice is used intertextually, to very indirectly refer to earlier discourse on cloning as a reproductive method. Her words argue for cloning to have a place in human society for having children, as yet another option in this age where having choices is of value on its own. The discourse on sex and cloning as methods of reproduction in *Glory Season* clearly implies that instead of having a narrow perspective and disregarding cloning all together, perhaps seeing it as a possible option to further enrich our lives is more sensible.

All Lysos' words imply that it is possible to plan for the future. To maximize our descendants' chances to survive and adapt to their environment, and that moral issues are not important when deciding such things, only costs and benefits, quite the opposite to the dominant discourse on cloning that often appeals to morals as the end-all argument against human cloning.

> With the tools of creation in our hands, shall we not give our descendants choice? Options? The best of both worlds?
>
> Let us equip them to select their own path between predictability and opportunity. Let them be prepared to deal with both sameness and surprise. (164, Lysos)

The need for males, or rather the lack of need if cloning is used widely as a reproductive method, is one that often comes up in dominant cloning discourse, as can be seen above in chapter 4. The intertextuality of *Glory Season* can clearly be seen in Lysos' comment below, referring to a planet that supposedly tried to do away with males completely, failing in such an arrangement. The discourse suggests that even if attempted, males are such an integral part of reproduction they are always needed. That though we know much of reproduction, there is always more to be known, and that safety is what matters when deciding on how to alter humanity's reproductive patterns. Again, no plea in morality can be found to argue the need for males in society, but a rather straight-forward analysis of potential side-effects and

outcomes. This can be seen when Lysos refers to an earlier experiment on another planet, where women tried to take men out of the reproductive equation all together by using cloning to reproduce, with disastrous results.

> That was the rationale behind early parthenogenesis experiments on Herlandia – attempting to cull masculinity from the human process entirely. Attempts that failed. The need for a male component seems deeply woven through the chemistry of mammalian reproduction. Even our most advanced techniques cannot safely overcome it. (115, Lysos)

### *5.4 Earning self-cloning*

The fourth sub-theme deals with the issue of who gets to be cloned? It is a very central part of the dominant cloning discourse, usually by implying that cloning should not be used, because only the wealthy would be able to get themselves cloned, and that that would not be fair on the rest of humanity. Thus the question of *earning* cloning, which is what happens on Stratos- a woman that has proved herself capable of finding a way to support herself and her daughters in the future gets to reproduce – is an intertextual theme in *Glory Season*.

#### 5.4.1 Words and metaphors

The discourse of self-cloning as a reproductive method in *Glory Season* focuses somewhat on the issue of who gets to be cloned. On Stratos, the selection is based on ability and talent, not on money, which is often the concern voiced in dominant cloning discourse. Words and expressions such as *parthenogenetic reproduction, individual, proves herself, continues, genetically, inborn talents preserved, renewal, preservation, talent, ability,the original, establish* are used in the discourse. They all underline the concept of *earning* the right to clone oneself. Stratoian society is based on the concept of proving one's genes before getting to replicate them, as Renna explains in his log (a journal he keeps):

> If an individual proves herself – say in the marketplace of goods or ideas – she continues. Not with the same body or precise memories, but genetically, with inborn talents preserved, and a continuity of upbringing that only clone-parenting provides. When all factors are right, the first mother's flowering of skill carries on. Yet, each

> daughter is a renewal, a fresh burst of enthusiasm. Preservation needn't mean calcification. (418, Renna)

The metaphors used also emphasize the value of earning the right to reproduce. Expressions such as *flowering of skill, a fresh burst of enthusiasm* convey an image of growth, vitality and ability, all considered traits that are needed to survive and do well.

### 5.4.2 Voices

On Stratos, a clone has already proved herself. Her very existence means that her genes are already established. A variant has to go out and prove herself, to show that her genes are worth keeping and repeating. This fact is constantly expressed in the discourse through words and expressions. For instance, a nursery rhyme Maia remembers emphasizes this difference.

> *Clone-child you must stay within,*
> *Home-hive to protect, renew.*
> *Var-child you must strive and win,*
> *Half-mom and half-man, it's true.* (35, Maia)

Since this is an aspect that is expressed throughout the novel, in side comments and taken-for-granted assumptions, Maia's voice is rather important in expressing it. Pieces of discourse such as the one below are scattered throughout the book, as is the concept of proving one's genes to earn the right to reproduce them in Stratoian culture.

> Every one of them was clone-descended from a single, half-Poeskie summerling who had seized a niche by luck and talent, thereby winning a posterity. It was a dream all var-kids shared – to dig in, prosper, and establish a new line. Once in a thousand times, it happened. (22, Maia)

Maia's is the only narrative from within Stratoian culture, to express this taken-for-granted aspect of that society. Her voice expresses the hidden assumptions of her culture, visible to us since we do not share the Stratoian views.

Renna's voice is used in a few instances to bring in some intertextual references to the dominant cloning discourse. His voice is again that of an outsider, bringing in the (dominant) view which Maia could not

possibly have any knowledge of. Renna's voice brings intertextuality to *Glory Season*'s discourse on cloning as a method of reproduction, as is seen in the next chapter.

### 5.4.3 Intertextuality and ideology

It is quite clear that the discourse on cloning as a reproductive method in *Glory Season* takes part in earlier discourse on the topic. dominant cloning discourse sometimes expresses concern over how cloning as a way to reproduce would only be available to a wealthy few, or how it would be used to only recreate great talent or skillful individuals. Renna's voice is used, as mentioned above, to bring in the aspect of intertextuality, i.e. referring to the dominant discourse of who gets cloned, for instance, or how it *could* be just a normal way for people to reproduce, not just a rare, delicate, lab-based procedure.

> An egg cell, carefully prepared with a donor's genetic material, is implanted within a chemically stimulated volunteer, or the artificial womb recently perfected on New Terra. Either way, the delicate, expensive process is generally reserved for a world's most creative, or revered, or wealthy individuals, depending on local custom. I know of no planet where clones make up a significant fraction of the population... except on Stratos! (353, Renna)

> Here, they [clones] comprise over eighty percent! On Stratos, parthenogenetic reproduction is as easy or hard, as cheap or dear, as having babies the normal way. Results of this one innovation pervade the whole culture. (353-354, Renna)

Here it is explicitly said that cloning, when only reserved to a few, and done in a lab, could never make for a common method to reproduce, which is sometimes voiced as a concern in dominant cloning discourse (worry about narrowing the gene pool). The discourse here states that such mechanical and laboratory-delicate processes could never make up for a significant fraction of babies born.

Other pieces of discourse imply that although there are valid worries that if cloning ever becomes a significant way to reproduce, it will narrow the gene pool, perhaps other ways might make it a good thing. Survival of the fittest is a very widely accepted principle, in which an organism proves its adaptation to the environment by managing to

continue its genes. Here it is taken for granted that survival and continuation of the fittest genes is, indeed, a good thing, as can be seen in the quote below.

> ”Let ’em fight for it, like I’m fight’n right now. It’s the only fair way. Lysos was wise.” (323, Maia, a variant woman speaking on the clan system)

The second human cloning discourse theme that emerged from the science fiction novel *Glory Season* is that of society. How cloning, as a method of reproduction, might change and affect society. How similarity rather than diversity might become the norm. How people might be divided based on their genes – whether they are shared with others or not – and how that one definition might decide one's status in society. Having cloning as a significant method of reproduction has also changed relationships on Stratos. Motherhood, fatherhood, being someone's child don't mean the same in a society where most adults are clones as they do in a society where reproduction is still a matter of sex. Finally, continuing genetically even after death changes a (cloned) person's perspective on Stratos – clone families think in terms of generations and hundreds of years, instead of single lifetimes.

All of the aspects of Stratoian society outlined above show one possible way human society might be changed if cloning became an important way to reproduce. It raises its own issues – such as placing value on people based (merely) on their genes, creating new kinds of relationships, and gaining a new sense of continuity and perspective on time. The discourse in *Glory Season* basically goes to show that technology may change society, that normality is what one is used to, and that though an outlandish idea to us at this age, cloning may be just another change for humanity to get used to, neither good or bad.

### *6.1 What is normal?*

This sub-theme is about the cloning discourse in *Glory Season* that addresses the issue of normality. What do we consider normal, natural? By describing another world, and the people in it, with their different views of what is normal or natural, the discourse here brings to light certain ideological assumptions we tend to make. To us variety and diversity are normal, and in contemporary western society also very much desirable. The discourse in *Glory Season* reveals some of our unquestioned assumptions about normality by entertaining at least some very different ones.

6.1.2 Words and metaphors

In this sub-theme it is not so much the individual words that matter, but the assumptions made or made visible. However, words and expressions such as *getting used to, diversity, patterns, nature's way, known, all her life, chosen, hard to imagine, to know, natural reaction, the assumption, likely, normal,* all point to the discourse of normality, the familiar, that which is taken for granted. The words speak of the assumptions we all make all the time about the world, and about what is normal, or seems natural to us. Maia often mentions what is thought to be "natural" on Stratos.

> Their private scheme involved taking *advantage* of that natural reaction – the assumption that two identicals were likely to be clones. (39, Maia)

Adjectives are very revealing here. For instance, expressions like *however barbaric their unmodified sexual patterns* or *wild, unpredictable variety* show the assumptions Maia makes. On Stratos genetic modifications are the norm, and everything else seems backward and unsophisticated to Stratoians. Or, from the viewpoint of people used to clones, constant variety may seem frightening and confusing.

> *Before Lysos, on Phylum worlds, vars like us were normal and clones rare. Everyone had a father... Sometimes one you even grew up knowing.* Maia used to ponder images of a teeming planet, filled with wild, unpredictable variety. (29, Maia)

6.1.2 Voices

Maia's voice is the one used almost exclusively in the discourse of normality in *Glory Season*. She is the one that is inside Stratoian society, the one that can take things for granted, not having had contact with other cultures or worlds, at first anyway. Later she does come into contact with Renna, the alien, which changes her assumptions somewhat, and makes her question the things she's found 'natural' all her life. She ponders issues like how on Stratos men seek women in summer, and women chase men in winter (first quote below), or thinks about how the clan system may seem natural to her, but appalling from another point of view.

> These were patterns Maia had known all her life. Nature's way.
>
> *Well, the way chosen for us by Lysos and the Founders,* Maia pondered, listening in the dark. *It's hard to imagine any other.* (116, Maia)

> Of late, though, Maia had come to adopt Renna's attitude. All of this was well-designed, as natural as could be, and from another point of view, appalling. (745, Maia)

Renna and Lysos cannot make unquestioned assumptions about what is normal and what is not, since they *know* that other worlds do things differently, and that the way they see before them is not the *only* way. Renna's voice is used to express a discourse of 'adaptation'. He is at first very aware of the difference of Stratoian society in comparison to the one he grew up in, but later becomes more and more used to it, starting to adjust to the local culture and thus begin to share the Stratoians' sense of normality about certain things, to some extent.

> After weeks in Caria, meeting delegations of high clans, getting used to double, triple, and quadruple visions of the same facial types, it felt disorienting to see so much diversity in one place. (422, Renna)

### 6.1.3 Intertextuality and ideology

This theme of what is considered normal is about ideology all the way through, since ideology is those assumptions within a text that are taken for granted. However, in a fictional story about another world these assumptions are not hidden to us, but rather obviously visible, and in such a way that points out to us our own hidden assumptions, the things which we in turn take for granted. *Glory Season* challenges those ideological views.

Maia takes many things in her culture for granted. For instance, she doesn't really question the way Stratos values people based on their genes, or rather on the fact if those genes are shared by others. She also takes it for granted that vars are of less value. It is the normal, natural way of life for her.

> Her nostrils flared in distaste. What would a poor clan like this do with all those uniques? ... "Experiments" like Maia and Leie were filling the lower streets in every town. (38, Maia)

Maia's voice is used throughout the novel to express startlingly new viewpoints. For instance, in a way to connect to the discussion of individuality and whether a clone would be one, some of Maia's assumptions and offhanded comments bring new points of view into the discussion. Small, normal (to her), everyday things in Maia's life show us how very different her world is.

> Though Port Sanger held a population of several thousand, there had never been more than a hundred distinct visages to know when growing up. (66, Maia)

On Stratos having an individual face is not a good thing, and it is *normal* that the "same" face is shared by many people. *Tasteful uniformity* shows Maia's assumptions about her world. How a var is *painfully aware* of her uniqueness in a society of clan families of clones.

> From toddlers to older threes and fours, they all wore bright Lamatia tartans, their hair woven in clan style. Yet all such bids at tasteful uniformity failed. Unlike normal kids, each summer brat remained a blaring show of individuality, painfully aware of her uniqueness. (14, Maia)

The dominant discourse on cloning has covered the topic of individuality, whether a clone would have true individuality, and even talks of a person's right to a unique genetic pattern. The discourse here brings new perspectives – normal is what we grow up with knowing, and valuing uniqueness and individuality is not "the only natural way" of living.

### *6.2 A society divided*

This sub-theme discusses the fact that on Stratos, genetic background divides the society into two, or rather three, separate classes. The first one is that of clones, second being variants, and the third is that of men, which is largely ignored in the society. Clones share their genetic pattern with a clan family of sisters and mothers, vars have each a unique genetic combination, as do men, but with the addition of a Y chromosome. The words and expressions used throughout the novel make this division quite clear.

### 6.2.1 Words and metaphors

The words used in *Glory Season* quite obviously reveal a severe divide between clones and vars in Stratoian society. A separation based on genetics, and which then pervades the whole culture. Words used to refer to either clones or vars make the huge gap between the two quite apparent. The huge number of synonyms used for vars or clones goes to show the importance of this issue: *summer fivers, summer children, father-ship, gene-father, the winter smugs, birth-momma, varling, variant-daughter, winter-born sixer, summerling, clan mothers, a clone, var, scattered seed, clone-daughter, var-offspring, a summer child, winterling, cloneling, clanmate, var-child, var-buddies, identicals* are just some of the terms used.

What matters on Stratos is what time of year one was born. The winter born are clones, while the summer born are variants, or vars. This definition is at the bottom of the whole society, and is evident throughout the book. People are often referred to by such terms as to make this difference clear, as is evident from "observing" Maia's life.

> "You hot-time brats are a pain," Claire said. "Sometimes I wish the founders of Stratos had been more radical, and chosen to do without your kind."...
>
> "But Lysos was wise," the old teacher went on with a sigh. "You summerlings are our wild seeds..." (16, Maia)

Even nursery rhymes on Stratos, the very things children learn from, emphasize the difference between vars and clones.

> *Clone-child you must stay within,*
> *Home-hive to protect, renew.*
> *Var-child you must strive and win,*
> *Half-mom and half-man, it's true.* (35, Maia)

Such an amount of synonyms clearly shows the importance of the issue. As Fairclough (2001:96) argues, overwording on an issue shows that there is some importance given to or even ideological struggle taking place surrounding that topic. In this, *Glory Season* is in line with the dominant cloning discourse – both make genetics the important matter.

### 6.2.2 Voices

Though all voices are used in this discourse of variant versus clone, Maia's voice is really the only one used to show how the divide is expressed and seen in the everyday life of Stratos. Neither Lysos nor Renna can have this view of Stratoian society. Their voices are those of outsiders, though Renna learns much of life on Stratos. But in addition to not having grown up on Stratos, and thus acquiring the belief and value systems of the culture, Renna is also a man, emotionally unable to grasp the difference between clones and vars as a woman on Stratos would.

Maia, as a variant with an identical twin, can see both sides of the world, in some ways, though always aware of being a summer kid, and being treated as a var. She herself, even, keeps making a point of the difference in genes.

> She ignored the staring clones and vars and faced the arena. (60, Maia)

Of the three voices used in the book Maia's is the only one within the society of Stratos, the only one whose voice is, and can be, used to portray the culture from within. Hers is the only voce that can show us Stratoians' taken-for-granted assumptions, and tell us more about our own through such discourse.

### 6.2.3 Intertextuality and ideology

As mentioned above, the dominant cloning discourse is *about* genes. The issue of clones is an issue of genetics, of two or more people sharing the exact same genes. This is, after all, what separates clones from "normal" people, and we place great emphasis on this difference. This is also an important part of the discourse in *Glory Season*, though from a different perspective. Still, the novel emphasizes the division of individuals based on their genes, thus making genes the centre of discussion again. Though other parts of *Glory Season*'s human cloning discourse take into account the nurture aspect of the nature-nurture debate, the whole novel is based on the idea that genetics matter.

On Stratos, genetics is almost the only thing that matters. It determines your status, and how your life is likely to turn out. As a way to emphasize the difference of people with clone sisters and those

without, people are often referred to based on their genetic patterns, or rather the time of year they were born.

> ”Listen, summer-trash. While on board, you’ll take orders, or swim back where you came from!” (57, Maia)

On Stratos, your genes tell almost all people will want or need to know about you. As in the dominant cloning discourse, genes, separating clones from vars, is what matters. The two are still considered significantly different, though valued differently on Stratos than in our contemporary western societies. The Stratoian’s fixation on genes tends to force the reader to rethink their own values in the matter, it brings our own taken-for-granted assumptions about the issue to light.

### *6.3 Status*

The status of clones versus variants has been briefly mentioned above in 6.1 and 6.2. It is another sub-theme in the discourse of *Glory Season* that is expressed throughout the book. On Stratos clones are of more value in and of themselves, by just having been conceived in winter, than variants are. The dominant cloning discourse is almost exactly the opposite. It often seems to imply that clones would be ’lesser’ people, less human, less individual than ”normal” people.

#### 6.3.1 Words and metaphors

Though the words used in referring to clones and vars, as was seen above, sometimes also carry with them negative or positive associations, words and expressions are not so much the tool that makes the difference in status obvious. However, of course some words and expressions make the difference in value between clones and vars evident, such as *summer trash, hot-time brats, variant brats, plump winter Lamais, attractively identical, distaste, uniques, ”experiments”, not to bother, a face with just one owner, more valuable in winter.*

> But the sailors had no eye for two adolescent summerlings – two *variant* brats – when there were plump winter Lamais about, all attractively identical, well-dressed and well-mannered. (8, Maia)

Though mostly the difference in status between clones and vars is obvious in *Glory Season*, only some of the individual words and expressions show distinct connotations and value-ladden meanings.

### 6.3.2 Voices

Again, the voice used in this sub-theme of status is that of Maia, the one within the society of Stratos. Her voice is the one that takes us through the everyday life on Stratos, as an identical twin, as well as a var. It is Maia's voice that first introduces us to the culture of Stratos, in the first place, as she herself learns the difference in status between clones and vars.

> "Ha! I'm pure Lamai, just like my sisters, mothers an' grandmas. But you're a *summer* kid. That makes you *U-neek*. Var!" (1, Maia)

Maia's is the voice through which the discourse of status based on genes is voiced. Her voice shows to us what it is like to live in a society which clearly differentiates between people based on their genes alone, and takes it for granted. Just as the human cloning discourse has a tendency doing, implying that sharing someone else's genes would make someone less of an individual, less of a person.

> The same physical act was more valuable in winter than in summer, because fathering had nothing to do with it. (191, Maia)

Lysos' and Renna's narratives cannot be used in this sub-theme, since they are not "products" of Stratoian culture themselves. They do not share Maia's assumptions about the status and value of clones and vars.

### 6.3.3 Intertextuality and ideology

As mentioned above in 6.3.2, the dominant cloning discourse often implies that a person's value is based on whether they have their own, unique genetic pattern or not. Or so the European Union's declaration on people having the right to their own genetic identities would imply. This is very much true on Stratos, though in quite the opposite way – if one is the sole owner of a genetic pattern, she is not very much valued in Stratoian society.

> Yet, there was a sense of familiarity, as if she and Calma ought to be gossiping about acquaintances they had in common. Of course they had none. The familiarity went one way. Nor would Calma likely recall Maia, if they met again. People tended not to bother memorizing, or even much noticing, a face with just one owner. (144, Maia)

Maia herself takes it for granted that genes are what determines someone's status, and that variants like herself are naturally of lesser value.

> Her nostrils flared in distaste. What would a poor clan like this do with all those uniques? ... "Experiments" like Maia and Leie were filling the lower streets in every town. (38, Maia)

Only at the end of the novel, having been influenced by meeting Renna, who is from another world, does she start to question some of her culture's hidden assumptions (*Strangely* in the quote below). But even so, *Glory Season* keeps up the dominant cloning discourse's tendency to differentiate between people based on their genes.

> *But this person before me is unique. There is nothing else like her in the world.*
>
> Strangely, Maia found no disappointment in that notion. None at all. (584, Maia)

Through Maia taking many things for granted throughout the novel, *Glory Season* makes the reader very much aware of how much this society places emphasis and value on genes. On sharing genes with someone. At the same time, our own culture and the dominant cloning discourse is *worried* about people sharing the same genes. Though the issue is the same, *Glory Season*'s approach may make one question this assumption of genes mattering so much, thus offering a whole new perspective on the issue of human cloning.

### *6.4 Relationships*

The new reproductive patterns, and the value placed on genes has a huge impact on human relationships in Stratoian society. Mother, father, sister – none of these relationships mean on Stratos what they mean on contemporary Earth. How different relationships are valued,

and how people relate to others, are very different on Stratos, as will be seen in this chapter. Cloning has brought about great changes in society.

### 6.4.1 Words and metaphors

On Stratos, children are brought up in clan families of clones, where sisters, mothers and grandmothers rear their clones, vars and male children, though each three groups in very different ways. As clones are more valued from birth than vars, and females in general more than males, family relationships are very different on Stratos than on contemporary Earth.

Many words and phrases characterize this sub-theme. Words free from (negative) connotations or with positive ones, to us, such as father, have very different meanings on Stratos and in *Glory Season*. There the word may become a vague insult, and does not signify a meaningful or close relationship 99% of the time. The discourse on family ties and relationships is conducted in such (fairly neutral) words and phrases as *father, the slur, nasty, pure Lamai, just like, sisters, mothers an' grandmas, var, males, bear clones, copy themselves, one lifetime, lowlife, haughty clones, men, end-of-life solace, normal folk, clones, clanmates, continue, clan, own boy, brothers, sons, knowing, drawbacks and advantages, close relationship, happenstance of sperm and egg, clone, full sisters, unpredictable dilemma, birth-momma.*

> "I can't play with you no more," her half sister, Sylvina, taunted one day. "'Cause you had a *father*!"
>
> "Did n-not!" Maia stammered, rocked by the slur, knowing that the word was vaguely nasty. (...)
>
> "Ha! I'm pure Lamai, just like my sisters, mothers an' grandmas. But you're a *summer* kid. That makes you *U-neek*. Var!" (1, Maia)

What is conveyed is a picture of a society with a very different view of what family is than in contemporary western societies. On Stratos, a family is a clan family of clones, being reared up in the same manner, generation after generation. Vars and males get a very practical education. All three groups are kept quite separate, so the term sister is mainly reserved to full clone sisters, brother is not used much, as father is not, since it has negative connotations in most connections.

> What men and vars had in common was that both had fathers – though seldom knew their names. Both were lowlife in the eyes of haughty clones. (77, Maia)

Some expressions used could be called metaphors. *End-of-life solace, happenstance of sperm and egg* both quite succinctly sum up the Stratoin view of relationships, and of the difference between the three classes. *End of life solace*, referring to the ”continuity” clones get from knowing that their genes carry on, emphasizes the difference in feeling and viewpoint between clones and vars (and men), as well as show why clones must feel quite close to their sisters and mothers, and not care so much about the others – they have nothing to do with their continuity. *Happenstance of sperm and egg*, when referring to who are one's parents and siblings are, points out how on Stratos genes matter in only one sense in regards to relationships. Only full sisters matter, those that share your genes, not the ones that have a ”mix”, and always a different mix from yours, at that.

### 6.4.2 Voices

Again, the voice used is Maia's. Hers is still the voice from within Stratoian culture, the only one whose voice can be used to express inside knowledge, matters taken for granted. Her voice is the one that, through saying what is taken for granted in her culture, questions the naturalness of our own assumptions about the world, about family relationships.

> Both men and vars lacked the end-of-life solace afforded to normal folk – to clones – who knew they would continue through their clanmates, in all ways but direct memory.
>
> *I guess there's still a chance for me in that way. Leie could succeed in her plans, becoming great, founding a clan.* (345, Maia)

But, again, Maia's contemplative nature and association with things she had not considered before, she gains new insights into her culture. Her contact with Renna makes her question her own assumptions about the world. She begins to wonder about other worlds, bringing the assumptions of Stratoian culture into focus.

> *Imagine, sisters continuing to know their own brothers, and mothers their sons, long after life has turned them into men.* Maia could think of

> several drawbacks and advantages to such a close relationship. (...)
> As if happenstance of sperm and egg meant anything in a big, hard world. (121, Maia)

### 6.4.3 Intertextuality and ideology

As in the previous sub-themes, Maia's voice is used to show the reader Stratoian ideology and culture, what is taken for granted there, the hidden assumptions not so hidden to us. For instance, Maia refers to clones as *normal folk*, accepting the assumption that clones are the basis to which others are compared, i.e. having no father is the normal way.

> What men and vars had in common was that both had fathers – though seldom knew their names. Both were lowlife in the eyes of haughty clones. (77, Maia)

As Maia ponders the issue of clones versus vars, she tries to take on the viewpoint of clones, bringing yet another perspective into the discourse on family and relationships. How other people might seem distant and unfathomable to a clone, who is used to knowing her sister's mind quite well.

> *From a clone's point of view, I guess every person who's not one of your full sisters is an unpredictable dilemma. It's just the same for us vars, only we're used to it.* (86, Maia)

Maia's narrative shows us the hidden assumptions of Stratoian culture, making us aware of ours. Who says that close relationships with both mother and father, as well as sisters and brothers is the only feasible way? "The natural way"? Maia's Stratoian voice shows us how societies adapt to change. There has been some concern over how cloning would affect family relationships or the structure of society. This sub-theme's discourse suggest that humans adapt, and start taking their way for granted so quickly that such worries are, perhaps, not needed. Humans adapt to change all the time.

## *6.5 View of time*

With the change in reproductive pattern and method, as well as the change in family system and relationships, the view of time is different

on Stratos than in contemporary western societies at the moment, for instance. Clan families think in terms of generations, not forced to think and plan within the scope of one lifetime. Such long-term thinking is not as usual and natural to our contemporary western culture, which this sub-theme brings into focus. This part of cloning discourse in *Glory Season* seems to bring a whole new aspect into human cloning discourse in general – a new benefit that might be gained from self-copying as a reproductive method, perhaps.

### 6.5.1 Words and metaphors

View of time is an important sub-theme in the human cloning discourse of *Glory Season*. The discourse is characterized by words and expressions like *accomplished in one lifetime, shortsightedness, Stratoin clans, thinking short-term, other ways, change in perspective, separating vars from clones, urgent, less pressing, patient view of Stratoin hives, pondering of centuries, millennia, in the here and now, the long term, posterity, long-range thinking, limited to clone families, generations of experience, view of life, took time, sense of continuity.*

> *Renna said humans often turn whole worlds into deserts, though shortsightedness. That's one trap we avoided. No one could accuse Lysos, or Stratoin clans, of thinking short-term.*
>
> *But Renna also hinted there are other ways to do it, without giving up so much.* (726, Maia)

As can be seen from the list, there are two opposite views described – first one being that of centuries and millennia, of patience and generations, and the second that of short term, the here and now. The second view is connected to "Phylum" worlds, i.e. ones like ours, as well as to vars and men on Stratos, while the first one is the perspective Stratoian clones share.

> Such long-range thinking is supposedly limited to clone families, with generations of experience and a view of life that stretched beyond the individual's. (341-342, Maia)

### 6.5.2 Voices

As with the other sub-themes in this chapter, the voice used is that of Maia's. Hers is, as has been pointed out many times, the voice from

within Stratos. Lysos was a 'var' herself, from a society of mostly vars, so she could not have realized how differently clones would think in terms of time, perhaps. Renna is an outsider as well, and though he must see the difference between clones and vars in this respect, his voice does remain that of an outsider, not capable of truly grasping the clones' view of time.

In this particular sub-theme Maia's narrative emphasizes the difference between clones and variants in terms of their view of time.

> There it was again, the change in perspective separating vars from clones. What a summerling had seen as urgent *must* appear less pressing in the patient view of Stratoin hives. (701, Maia)

Her voice is that of a var, but having grown up in a clan-family, she has some insight into the clone perspective as well. Still, as vars are not encouraged to think long-term, her perspective is necessarily different from that of a clone.

> In theory, the law was where all three social orders met as equals. In practice, it took time to learn the marsh of planetary, regional, and local codes, as well as precedents and traditions passed down from the Founding and even Old Earth. Large clans often deputized one or more full daughters to study law, argue cases, and cast block votes during elections. What young var could afford to give more than a passing glance through dusty legal tomes, even when they were available? (136-137, Maia)

### 6.5.3 Intertextuality and ideology

*Glory Season*'s discourse on human cloning includes discourse on people's perspective on time. It suggests that perhaps cloning as a reproductive method might force us to think in terms of centuries and millennia, as opposed to the much more short-term thinking of today. Thus the discourse of cloning in *Glory Season* is connected to, perhaps, the discourse of ecology and sustainability. Brin himself brings this intertextuality to play in the afterword of *Glory Season*.

> Too much sameness may be stifling on fictional Stratos, but too little sense of continuity may be killing the real Earth of here and now. (765, afterword)

The discourse here assumes that long-term thinking is the way to go, the perspective we should strive for. That perhaps long-term thinking, or lack of it, is what is missing from our world today, causing us to make mistakes our children will pay the price for. Such mistakes would not happen on Stratos, at least not nearly as often.

> The clans urged single vars to leave off any useless pondering of centuries, millennia. Summerlings should concentrate on success in the here and now. The long term only becomes your affair once your house is established and you have posterity to worry about. (524, Maia)

Maia, from a Stratoian perspective certainly extolls the virtues of long-term thinking, making it the perspective to aim for, as well as Renna through Maia's voice.

> *Renna said humans often turn whole worlds into deserts, though shortsightedness. That's one trap we avoided. No one could accuse Lysos, or Stratoin clans, of thinking short-term.*
>
> *But Renna also hinted there are other ways to do it, without giving up so much.* (726, Maia)

This hidden assumption is thus as much a part of Stratoian society as it is of contemporary western cultures – long-range planning is very much called for in all kinds of discourse, including that of human cloning. The narrowing of the gene pool, for instance, is often referred to when talking about cloning's long-term effects on our world. The 'view of time'-discourse of the novel is thus very much a part of larger discourses, as well as maintaining a certain ideological view.

# 7. Genes=destiny?

The third and final theme of human cloning discourse in the science fiction novel *Glory Season* is that of genes and 'destiny'. Though the expression is perhaps a bit vague, it describes the theme best. The theme covers such issues as how outsiders see clones (as copies of the same person or as individuals), identical twins being similar yet different despite sharing the same genes, clones being identical and still individuals, and the topic of the predictability of life. This theme, on the whole, deals with the topic of having the exact same genes (as clones or identical twins do), and issues related to that fact.

In dominant cloning discourse it is often said that everyone has a right to their own, individual genetic make-up, thus suggesting that cloned humans would not be separate individuals, but rather different versions of the same person. However, identical twins even now share the same genes, and nobody seems to question their individuality or the fact that they are two separate, though perhaps similar, people. The theme refers to the controversial issue of nature vs nurture, how genes or the environment we grow up in affect us. As such this theme is very strongly intertextual.

## *7.1 Outsider's point of view: clones as copies*

A fairly small, but perhaps a rather important sub-theme in the novel is, how outsiders would see Stratos. How a person that has grown up in an individualistic culture would react to a culture based on human cloning, a society consisting of clan families of clones? This sub-theme brings in our own viewpoint, as contemporary western culture is very strongly individualistic, valuing difference and uniqueness – thus cloning may easily seem unnatural and something very strongly undesirable. This sub-theme clearly connects to the dominant cloning discourse, showing how such a view of valuing difference above all may not be the only right one, and how perspectives may change with time.

### 7.1.1 Words and metaphors

This rather small sub-theme within the discourse of human cloning in

the novel *Glory Season* is characterized by a vocabulary of opposites, and of the science fiction imagery dominant cloning discourse has used to such a large extent (see chapter 4). For instance, words and expressions such as *growing up, era obsessed with individuality, variety, diversity, different, atypical, familiar, weakness, same type, amplifies itself, picturing, uniform faces, swarms, identical, blank-eyed, silent, coordinated lockstep, humans-as-ants* are used in the discourse of this sub-theme.

Though this sub-theme is minor, quite a few metaphors are used. For instance, in the quote above, *variety was our religion, diversity our fixation* are quite effective in painting a picture of unreasoned belief, of a slightly insane concentration on variety and diversity. Renna often uses such images in his ponderings of Stratoian culture, here discussing his preconceptions of a society of clones.

> Envisioning life on a planet of clones, I couldn't help picturing phalanx after phalanx of uniform faces... Swarms of identical, blank-eyed bipeds moving in silent, coordinated lockstep. A caricature of humans-as-ants, or humans-as-bees.
>
> I should have known better. (328-329, Renna)

Here there are several metaphors and expressions that are clearly a part of the dominant way of using science fiction imagery to paint a very depressing, frightening picture of human cloning. *Humans-as-ants*, for instance, makes one envision a hive of identical people, functioning as one, without personality or individuality, a horror to the contemporary western person. Or, for instance in the quote above, *silent, coordinated lockstep* paints instantly an image familiar to all of us from science fiction cinema, where usually an insane dictator has manufactured an army of identical, soulless clones, often to try to take over the world.

### 7.1.2 Voices

As even the name of this sub-theme indicates, the voice used here is mostly that of the outsider, Renna. He is the only one that shares *our* history and view of individuality and imagery of the clone armies of science fiction. Thus his is the only view that can bridge the gap between our gut cultural reaction that human clones would be like bees or ants, and the view that though clones would share much, they still

remain individuals with distinct personalities and histories.

> My problem arises from growing up in an era obsessed with individuality.
>
> Variety was our religion, diversity our fixation. Whatever was different or atypical won favor over the familiar. Other always came before self. (385, Renna)

His voice is not only used to bridge this gap, but to suggest that perhaps valuing individuality and variety can go too far. He, as an interstellar traveler used to observing different cultures, has experience in distancing himself from his ”natural” reactions, and pending judgment. As a result, his voice tends to expose our own hidden assumptions about various aspects of society.

### 7.1.3 Intertextuality and ideology

As has been referred to above, this sub-theme is really all about intertextuality and ideology. Renna's unique point of view as the outsider on Stratos is used to good effect, to point out how contemporary western culture is focused only on diversity. His narrative may even be suggesting that perhaps such emphasis on variety and uniqueness can go too far, that it may limit our vision for the future and prevent us from considering what is truly best for us and our children.

> Envisioning life on a planet of clones, I couldn't help picturing phalanx after phalanx of uniform faces... Swarms of identical, blank-eyed bipeds moving in silent, coordinated lockstep. A caricature of humans-as-ants, or humans-as-bees.
>
> I should have known better. (328-329, Renna)

As Renna here comes to realize that his science fictional images of clone armies are rather ridiculous when faced with the reality of human clones, so the discourse in *Glory Season* suggests that perhaps alternative views are more reasonable than the dominant one using the visions of horror of past science fiction. The last sentence in the quite above quite clearly reveals the alternative feel of the discourse here.

In *Glory Season* intertextuality is nowhere as clear as here in this sub-theme. The dominant cloning discourse makes extensive use of the

stories and images of science fiction, of clone armies: masses of identical, soulless people manufactured for a purpose, not people with their own personalities, wills and purposes. These images are used here, but refuted in the end as being false. Renna's voice suggests that it was foolish to take such images as possible or plausible representations of reality in the first place. The discourse reveals our hidden assumptions of not considering people with the same genes as separate persons but rather as science fictional monsters.

### *7.2 Identical twins*

The next sub-theme discussed is that of twinhood. Maia, the heroine of *Glory Season*, is herself an identical twin. Her narrative constantly reveals how the twins, though sharing exactly the same genes, just like clones do, are quite different in their personalities. Maia is shown as an individual with her own drives and tendencies, a person quite separate from her twin.

The theme clearly takes a stand on earlier discourse, bringing intertextuality to play again. It is often argued that people have a right to their unique genetic patterns, ignoring the existence of identical twins. As the counter argument to the claim that clones as people who share the same genes would not be separate individuals, twinhood is often mentioned in connection with human cloning, and it is also used very much in the discourse in the novel here.

#### 7.2.1 Words and metaphors

The words and expressions used in the twin-discourse in *Glory Season* define the issue quite nicely. They tell the tale of similarity and difference at the same time: *genes and common upbringing, the twins, diverge, coalesce, the result of environmental influences, aspects of character, too deep ever to change, seldom perfectly identical, told apart, discerning eye, summer doubles, same genes, differed so, alike genetically as any pair of clones, notion of individuality, the more verbal of the two, twins' minor differences, matched.*

> Even winter kids were seldom perfectly identical. Rare summer doubles like Maia and Leie could be told apart by a discerning eye.(...) ...they

had the same genes. (11, Maia)

Words like *twins, identicals* or *summer doubles* are used to refer to identical twins like Maia and Leie, as Maia's narrative above shows us. The rest of the wording characterizes the discourse quite well, with words like *diverge, told apart, differed so, differences* emphasizing the differences the be found between identical twins. At the same time, the discourse is defined by words like *coalesce, same genes, matched, alike genetically* which point out the similarities, often referring to their shared genetic pattern, like we can see in the quote below as Maia ponders the differences and similarities between her and her identical twin.

> Although the twins' minor differences had irked them, important things, like their taste in people, had always matched. (545, Maia)

The words and expressions used in this sub-theme clearly communicate an emphasis on the view that identical twins, though sharing the same genes and certain aspects of personality, are still separate people that can be quite different from each other.

### 7.2.2 Voices

The voice used for this sub-theme of twinhood is, naturally, that of Maia. She is the one within the Stratoin culture, again, but for this sub-theme this point of view is not the one that matters. In Stratoin culture, as in ours, twinhood is not the norm, even if sharing the same genes is. On Stratos, identical genes usually go with identical upbringing in their clan families, emphasizing the bond with their clone sisters, thus strengthening the similarities of the clones, not the differences between them.

> ...nothing like the bond among clones, whose mothers, aunts, and grandmothers shared both genes and common upbringing, stretching back generations. Moreover, the twins had lately seemed to diverge, rather than coalesce. (21, Maia)

As such, (identical) twinhood is in a similar position on Stratos as it is in our contemporary western culture, being quite rare. Maia's narrative constantly refers to the fact that though she and her sister share the

same genes, they are quite dissimilar in many ways from each other (and from their Lamai mothers), and often wonders if this is the result of different experiences in life or some other factor. In the quote below, she is thinking about how she is not afraid of heights, unlike the Lamai women.

> *Maybe I'll put her in a cage, suspended from a great height, to see if it's genetic, or simply the results of environmental influences I've been through, since we parted.* (601, Maia)

Her voice is the only possible one for this theme, as she is the only person with an "insider's view" of the issue, being an identical twin herself. Her narrative brings many issues and subjects to light about genes and their importance in shaping who we are, about how despite having the same genes, two people might still be very different from each other.

> She differed so from her sibling, even though they were as alike genetically as any pair of clones. It had made Maia more willing than most vars to accept the notion of individuality among winter folk. (89, Maia)

### 7.2.3 Intertextuality and ideology

As referred to above, this sub-theme of twinhood is all about intertextuality and ideology, about our assumptions on the importance of genes. Maia's narrative shows us how we tend to assume that clones are merely (perfect) copies of each other. This view is questioned by the existence of identical twins, who not only share the same genes, but are born at the same time and usually share the same childhood environment, as Maia and Leie do.

The discourse quite clearly brings to light our hidden assumptions about genes making us who we are, especially in regards to the cloning discourse. In dominant cloning discourse, the right to our unique genetic makeup is often referred to (see chapter 4.2.2 on government responses to cloning). Images of perfectly identical people, both in appearance and personality, are quite often used when speaking of clones. The discourse of human cloning in *Glory Season*, throughout the book, challenges this view by portraying Maia and Leie, identical twins, as two unique individuals with differing personalities, tastes and

interests.

> Maia neglected to remind her sister that as little girls they *had* experimented with codes, cryptograms, and private jargon, until Leie grew bored and quit. Privately, Maia had never stopped making anagrams or finding patterns in letter blocks scattered on the crèche floor. (67-68, Maia)

> A gift from Leie, she realized. Ever the more verbal of the two, while Maia had been the one attracted to things visual – patterns and puzzles. ( 457, Maia)

Maia and Leie, though sharing the same genes and certain aspects of personality, are shown to be different in many ways. However, the discourse does recognize the similarities between them as well, not completely refuting the importance of genes on shaping who we are.

> Despite all trials and experience, some aspects of character might be too deep ever to change. Once more, it was Leie who recovered first to comment. (638, Maia)

This sub-theme of identical twins briefly touches on the age-old debate on nature versus nurture. The importance of genes versus the importance of environmental influences and the way we are brought up, a very central part of cloning discourse in general. As can be seen from the constantly made assumption about clones being merely different versions of the same person, today's discourse emphasizes the importance of genes, of nature (see 4.2.2, Nelkin and Lindee).

### *7.3 Identicality versus individuality?*

A sub-theme quite closely connected to that of twinhood, the sub-theme of the previous chapter, is that of, to coin a phrase, identicality and individuality. It is a topic that runs through *Glory Season* from the start to the finish. Are clones completely identical, or are they individual people?

On Stratos, clones share the same upbringing and environment through their whole lives, which emphasizes similarity rather than difference. However, the discourse clearly indicates that even on

Stratos, clones, just like identical twins, are similar and still individual at the same time. Clearly, genes are not all that matters.

### 7.3.1 Words and metaphors

The words and expressions used in the identical versus individual discourse in the novel express the sub-theme's tendency quite clearly. They refer to both sameness and difference, with expressions such as *identical, little to distinguish, recognized, half-sisters, alike, the Lamai type* playing up the identical-angle. Maia's narrative often shows us how despite sharing all genes, the clone women of Stratos are still not completely identical.

> Maia recognized most of the full-clone winterlings, her half-sisters, despite their being alike in nearly every way. (43, Maia)

> Identical except in the scars of individual happenstance, the pug-nosed Ortyns seldom spoke. Among themselves words seemed unnecessary. (19, Maia)

Though a lot of the words used refer to similarity, implying that clones are indeed nearly identical, some expressions used in the discourse distinctly refer to individuality among clones. Words such as *a clone's individuality, individual happenstance, as individuals, on their own, subtle differences, "identical"* emphasize the differences to be found even between clones on Stratos.

> All Stratoin children, whether clone or var, learned to notice subtle differences among "identical" women. (614, Maia)

### 7.3.2 Voices

Maia's voice is used to express this sub-theme within the human cloning discourse in *Glory Season*. Hers is the only voice that can speak on identicality and individuality from experience, as below when Maia comes across a clan family in which the clones are different, with individual interests and tendencies (very shocking on Stratos).

> "Which are you? *Which* Upsala?"
>
> It was a decidedly strange query to Maia's ears, as if a clone's individuality ever mattered. (739, Maia)

Though Maia herself is an identical twin, sharing the same genes as her sister, she does not see this as the same thing as clones sharing the same genetic makeup. She, like her culture in general, makes a difference between vars and clones, despite happenstance making two of those vars share their genes. As the quote above shows us, she tends to share her culture's views on clones and their (lack of) individuality, even when her own experience tells her differently.

### 7.3.3 Intertextuality and ideology

As referred to in 7.3.2 above, Maia's voice reveals Stratoian assumptions about identicality and individuality among clones. On Stratos, as in our contemporary western culture, genes matter. Stratoian non-clones tend to assume that clones do not have clear and separate (sense of) individuality as vars do, which is also true of our contemporary discourse. Why else would we make declarations on everyone's right to their own unique genetic pattern if we did not think that sharing that pattern would somehow lessen our human dignity?

The difference is that on Stratos individuality and uniqueness are not valued as they are by the west today. There it is taken for granted that clones would understand each other, get along with each other, and be good at what the others are good at. Maia's run into a clan family where the clones do not live together, or make their living doing the same thing, brings this perspective into light.

> "They all live on their own! In houses or apartments they purchase *as individuals*. Each makes her own living." (748, Maia)

Yet minor differences among clones is also taken for granted on Stratos. Small things that separate one clone from the other are noticed, in order to tell one clone apart from the other. As such, this tendency tells us that individuality *does* matter on Stratos as well, because otherwise Stratoians would not bother to differentiate between individual clones of a family.

The discourse seems to imply that the images of perfect copies, of identical automatons that the dominant cloning discourse keeps creating are, perhaps, not reasonable. For instance, Maia immediately

recognizes which Lamai mother walks into the courtyard, having learned to notice the subtle differences between clones.

> Then, into the courtyard flowed a figure smaller but more fearsome than the upset lugar – Savant Mother Claire (...) Even in old age, she embodied the Lamai type. Furrow-browed and tight-lipped, yet severely beautiful... (15-16, Maia)

Through such constant reminders, the reader is forced to consider their assumptions about clones being perfect copies of the original. The discourse seems to suggest that though clones would be similar, they would most definitely be separate individuals, just as identical twins are. Just because those differences are small or not as obvious does not mean clones as people would be any less human, as the author himself points out in the afterword of the novel.

> On Stratos, the daughters of an ancient clan would exhibit solidarity and self-knowledge unimaginable to vars like ourselves, but that wouldn't necessarily make them automatons, or stop them being human. (767, afterword)

### *7.4 Predictability*

The final sub-theme is that of predictability, how on Stratos being a clone means knowing the pattern your life is going to take. Knowing how your personality will shape up over the years, the susceptibilities you have for disease, or the crises you will most likely go through.

The discourse here is about the predictability sharing your genes with someone might bring about, and not only in a negative sense. It might be a relief, having some idea of how your life will turn out, or knowing what health weaknesses you have, for instance. To a contemporary western person such predictability may also seem quite unnatural and even unappealing, but it might help us plan for the future. Long-range thinking, once again, is brought into the discourse on human cloning.

#### 7.4.1 Words and metaphors

The discourse of predictability when it comes to human cloning in *Glory Season* is characterized by words and expressions such as *normally lived,*

*tended to, late in life, patterns, phase of life, in adolescence, in middle-age, when you got older, predict, life cycles*. They all show a predilection with the cycle of life, knowing how one's life will turn out.

> Although Lamais were cool toward their var-daughters, they tended to mellow with age, even going as far as showing real affection late in life. Two of the departed grannies had almost been nice. (146, Maia)

On Stratos, a clone's pattern of life is known. Generations of full sisters, mothers and grandmothers have made the pattern obvious, so that one has a profound knowledge of what traits and tendencies one is likely to demonstrate at which age. Such expectations, of course, also help to shape the very tendencies that are looked for.

> If you established a clan – your distant great-great-granddaughters would think a lot like you, with similar upbringing and near-identical brains. (555, Maia)

The words used show us how the cycle of life and the predictability in that regard is a fairly important aspect of human cloning discourse in *Glory Season*.

### 7.4.2 Voices

The voice used to express the discourse of predictability is, once again, that of Maia. As in previous sub-themes, Renna and Lysos would not be able to bring to us the startling taken-for-granted assumptions Maia's narrative brings into play, as below in this offhanded comment Maia makes.

> Being vars, they could not even roughly predict their own life cycles. (261, Maia)

However, sometimes Maia's reactions are, perhaps, not those of a typical Stratoian. She has a tendency to look beyond the 'natural way', the taken-for-granted views of her culture.

> That was another thing about being a var. Unlike normal folk, you had no clear idea what you'd look like when you got older. Maia wasn't sure she didn't prefer it that way. (152, Maia)

Maia's narrative as an inhabitant of Stratos, as an identical twin and as a var is effectively used to take the reader within the local culture. Maia is also sufficiently open-minded and questioning of her culture's ways to offer the reader a more familiar viewpoint, one that sometimes looks at things from a more individualistic, western perspective as well.

### 7.4.3 Intertextuality and ideology

On Stratos, it is taken for granted that predictability and stability are preferable over unpredictability and difference. Maia's narrative reveals such perspectives clearly to western readers. Though Maia herself does not always completely share her culture's assumptions about how life is and should be, her voice nonetheless brings them into the discourse.

The quote above in 7.4.2 quite clearly shows the hidden assumptions of Stratoin culture. Clones are the 'normal folk', and their self-knowledge about how their lives will turn out as they get older is also the norm. Vars not knowing, for instance, what they would look like as they aged, or what diseases they were prone to, is the undesirable way to live, on Stratos.

The discourse in *Glory Season* on predictability is, quite often, positive in regards to knowing one's life cycle, and on being able to make better long-term plans with such self-knowledge. However, from a western point of view some of Maia's narrative seems quite stifling, if not distinctly unappealing.

> She had grown up surrounded by Lamai mothers, aunts, half-sisters, knowing the patterns they exhibited at each phase of life. The cautious enthusiasm of late three-year-olds, for instance, which quickly took cover behind a cynical mask by the time each towheaded girl turned four. A romantic outburst in adolescence, followed by withdrawal and withering contempt for anything or anyone non-Lamai – a disdain that intensified, the more worthy any outsider seemed. And finally, in middle-age, a mellowing, a relaxation of the armor, just enough for the ruling age-group to make alliances and deal successfully with the outer world. The first young Lamai var, the founder, must have been lucky, or very clever, to reach that age of tact all by herself. From then on, matters grew easier as each generation fine-tuned the art of being that continuous single entity, Lamai. (556, Maia)

In societies where individuality and variety are valued, so is unpredictability up to a point, and having such knowledge as the quote above shows of one's life is usually deemed undesirable. It seems stifling, limiting, again returning to the discourse of options – such discourse seems to take away a person's options on the life they are going to lead.

*Glory Season*'s discourse on the predictability of life, especially for clones, once more returns to the discourse of choice. A reader easily reacts to passages such as the one above with disgust as well as wonder and insight, because from a western point of view, the predictability of life on Stratos takes away the ability to choose freely, which is very much valued in today's world.

Nevertheless, the discourse also shows the reader how predictability is not altogether a bad thing. Long-term thinking, and knowing one's weaknesses, maybe, are strengths a society based on the concept and reproductive method of cloning might bring with it. Knowing, for instance, that though the pain of adolescence feels like it will last for ever, it would be over by the time young adulthood came along, might make life easier to get through during the crisis. On the whole, the discourse of predictability of life offers an alternative viewpoint, leading the reader, sometimes, to question their assumptions about what is natural and desirable.

# 8. Discussion

The purpose of this chapter is to pull the analysis together, to see what it actually told us about the human cloning discourse in *Glory Season*. What is said about human cloning in the novel? How is it said? What do the words, expressions and metaphors used tell us about the discourse? How about the voices used? What kind of intertextuality is there in *Glory Season*'s cloning discourse? Are there underlying ideological assumptions or struggles to be found within the text? How do the results of the analysis compare to the hypothesis, i.e. does the human cloning discourse in the science fiction novel examined here offer new, alternative approaches to the issue at hand? This chapter attempts to sum up the results of the previous three chapters, to clarify the conclusions made from the analysis.

## *8.1 Technology, genetic engineering and cloning as a reproductive method*

The technology discourse in *Glory Season* takes a rather two-sided approach, bringing in both the negatives and the positives of scientific progress for a society. However, the words used, and the way they are used, express a tendency to focus more on the positive. It is assumed that knowledge and power are good things, and that they bring good outcomes for people. The discourse tends to view the issue in terms of costs and benefits, assuming that morality does not come into play when deciding what is good for people, for a society. The same is true of the genetic engineering discourse and the cloning as a reproductive method discourse in the novel. It is assumed that weighing costs and benefits is the way to decide, that morality does not come into question when deciding such issues, very much the opposite of the dominant cloning discourse that quite often appeals to morality in its human cloning debate. In the genetic engineering discourse, it is assumed that when self interest and common good clash, self interest wins, and that common good is the one that *should* win.

Intertextuality is clearly at work here. The dominant discourse often tends to concentrate on the flipside of the coin, on the dangers of new technologies, as the Frankensteinian themes discussed in 3.1.3 point out. Here the discourse, though not inclusively positive, does tend to argue that technology brings many good things with it, and that a

more balanced view is called for.

The genetic engineering discourse in *Glory Season* is expressed through neutral, or positive, words and expressions. As Lysos' is the voice mostly used, she as a scientist speaks with fairly neutral scientific terms. As she argues for her choices for her world, she is very strongly an intertextual voice in her discourses of technology, genetic engineering and cloning as a reproductive method. Lysos, through explaining and defending her choices to others in her time, brings intertextuality to work throughout this theme, as it seems that others in her time thought more along the lines of the current dominant cloning discourse. Her voice can even be used to respond to specific arguments in the dominant cloning discourse, as that of 'naturalness', how we should not mess with nature. Her response, naturally, is along the lines of: does natural necessarily mean good, or better? Or, in the cloning as a reproductive method discourse, her voice is used to argue that perhaps instead of disregarding cloning all together, it can be seen as yet another option to broaden our lives – again a view not much entertained in the dominant cloning discourse.

Even neutral words sound slightly ominous when genetic engineering is discussed in *Glory Season*. The explanation is previous discourse, again the legacy of Frankenstein is brought into the picture. For instance, the metaphor of *tools of creation* in the next sub-theme of cloning as reproduction: the word creation brings God, and man playing God (cf Frankenstein), instantly into the discourse.

The discourse on genetic engineering already touches upon a point that keeps recurring in the whole of *Glory Season*, and the whole of the analysis of the novel. In all of the novel, it is taken for granted that having choices, and the ability to choose, is a good thing, a desirable thing. From this point of view it is argued, for instance, that genetic engineering or cloning as a reproductive method are good – they offer us more options to choose from, in order to get the best possible outcome for us and our children.

In discussing sex and cloning as methods of reproduction, a great variety of words and expressions is used to emphasize this difference between the two. The *perfection* of cloning is often mentioned, which clearly brings a very positive connotation to play. On the other hand,

adapting to a *changing environment* is about the survival of the fittest, which is what is currently thought to be the necessary way for all species to survive at all. Again, *choosing* between stability and change is clearly a focus in the reproduction discourse in *Glory Season*.

The fourth, and final, sub-theme is intertextual throughout, as it responds to an issue often raised in dominant cloning discourse. It is often argued, that cloning should not be made possible, because it would only be available to the rich and famous, not to regular people. That money should not rule such things. *Glory Season* is based on the idea of human cloning as a significant method of reproduction, where clones are born because a person has *proved herself* competent, and able to succeed in her society. Here it is taken for granted that survival and continuation of the fittest genes is a good thing, which is in line of the dominant view.

### *8.2 Cloning and society*

The second theme that emerged from the analysis covers issues regarding culture and cloning. How, perhaps, our culture might change or what issues might rise if cloning became a significant method of reproduction.

Throughout the whole of this theme that plays up the differences between clones and vars, and shows us the everyday assumptions made by Stratoians, the narrative used is that of Maia. She is the one that *shares* those assumptions, she takes for granted things that us contemporary western people never would, thus exposing us to new ideas that often force us to examine our own views. All through this theme of cloning and society, her voice takes us on a trip to a world where people are judged and valued based on their genes alone. The dominant human cloning discourse tends to do the exact same thing, for instance, by saying that it is against human rights and human dignity to clone, to make one person share the same genes with another, as if that made them less human. Though both discourses are all about genes, the approach of *Glory Season* is so extreme that it forces the reader to reevaluate, perhaps, their perspective on the importance of genes.

The first sub-theme discussed in chapter 7 was that of normality. This sub-theme, really, is continued throughout the other topics covered in the chapter, as Maia's voice is used to constantly reveal to us what is considered normal on her world. For instance, on Stratos genetic modifications on their sexuality are what is normal, so anything else seems uncivilized to them. In a fictional story about another world these ideological assumptions are not hidden, but rather obviously visible. When we read about the assumptions Maia makes about the world and people in it, we are forced to look at the things we ourselves take for granted, in turn.

For instance, she doesn't really question the way Stratos values people based on their genes, or rather on the fact if those genes are shared by others. She also takes it for granted that vars are of less value. So where does our assumption that clones would inherently be, or feel, of lesser value come from? Or, for example, on Stratos having an individual face is not a good thing, and it is *normal* that the "same" face is shared by many people? Is it any more normal that it is *not* shared by many people? The discourse here seems to argue that normal is what we grow up with knowing, and as such valuing uniqueness and individuality is not "the only natural way" of living.

The division between clones and vars is at the heart of Stratoian society. The great amount of words used for vars or clones goes to show the importance of this issue, because as Fairclough (2001:96) argues, overwording on an issue shows a preoccupation with a certain aspect of reality, or perhaps ideological struggle surrounding the issue. In this, *Glory Season* is in line with the dominant cloning discourse – both discourses make genes the central issue. Some of the words used to refer to clones and vars are drenched with connotations, revealing the status given to each group of people on Stratos.

The words used throughout this theme (and especially in sub-themes of clones versus vars, and that of status) reveal a central issue, that of judging people based entirely on their genetic makeup. The Stratoian's fixation on genes and their way of valuing people based on them tends to force the reader to reexamine their own values in the matter, thus bringing our own taken-for-granted assumptions to light. For instance, isn't the European Union's declaration on how cloning would be against human dignity, and how each person has a right to their own,

unique genetic makeup just what the Stratoian's do, but in reverse? We value unique genetic patterns, they shared ones. *Glory Season*'s discourse may lead the reader to question this assumption of genes mattering so much, and in such a way offering a whole new perspective on the issue of human cloning.

The issue of family and relationships is sometimes brought up in dominant cloning discourse. What would it mean if humans were cloned? Would the "original" be the parent, or the sibling, of the cloned child, is a topic that comes up regularly, for example. On Stratos, relationships are not as they are in contemporary western societies, making this sub-theme, perhaps, an intertextual response to such concerns. Father, mother, sister, and brother have all very different meanings to Stratoians than to the reader, as is evident all through the novel. It does make one realize that we take the mother and father with children, who are each other's brothers and sisters setup very much for granted, assuming that is the natural way, when it is just one possible way for humans to connect to each other. Of course even today other cultures have very different family "setups" than contemporary western societies. Overall, this sub-theme's discourse seems to suggest that humans adapt to changing conditions and values all the time, that people and societies adjust when new technologies come along.

The final sub-theme of chapter 7 was that of time, or the difference in perspective clones and variants might have in regards to it. The words used in the discourse tell us that there are two opposite views described – first one being the clones' view of centuries and millennia, of patience and generations, and the second the perspective vars have, short term, the here and now. The discourse seems to suggest that perhaps cloning as a reproductive method might force us to think in terms of centuries and millennia, as opposed to the much more short-term thinking of today – a completely new perspective on human cloning. It is also assumed that long-term thinking is the way to go, the perspective we should strive for, which is the dominant view also.

### *8.3 Genes and destiny*

The final theme discussed in this thesis is that of genes and destiny.

Chapter 8 covered various themes in connection with the idea that is genes all that matters? Do they decide our future, what we are and what we become? Such question are central in human cloning discourse.

The first three sub-themes are all slightly different perspectives on the same issue, whether or not clones are separate individuals, of as much value as any other human being, or not. The first one dealt with the outsider's perspective, talking through Renna's voice, who apparently shares the view modern western societies have on the matter, instantly turning to images of identical, soulless automatons when thinking of clones. He comes to realize how ridiculous such fantasies are, when faced with the reality of living, breathing human beings. Renna's voice is also used to express the view that perhaps valuing difference and variety can go too far. That it may limit our thinking, and stop us from choosing the best for us and future generations. The discourse of choice is brought into play again.

The next two sub-themes, those of twinhood and of identicality versus individuality, deal with the same issue from within Stratos, through Maia's voice. Hers is the only voice with inside knowledge, being both a twin, and a Stratoian woman. The words and expressions used tell us that the discourse here emphasizes that although identical twins and clones both, sharing the same genes, are similar, they are not perfect copies of each other, but rather individual people with their own personalities and agendas.

Maia's narrative shows the modern western reader how we tend to assume that clones are merely (perfect) copies of each other, different versions of the same person, more or less. Images of photocopied people, exactly alike, is often brought into the dominant cloning discourse. The discourse of twinhood, identicality and individuality, throughout the book, challenges this view by portraying Maia and Leie, identical twins, as two unique individuals. *Glory Season*'s discourse on human cloning tends to argue that though people who share genes may be similar (identical twins *or* clones), they are not identical. That clones would not be any less human than identical twins today, for instance. This view is quite the opposite to the one brought up in the dominant discourse.

The final sub-theme of chapter 8 was that of predictability, of knowing how one's life will turn out. Maia's voice is used again, as hers is the narrative of a person from inside Stratos, showing the reader the sometimes startling, taken-for-granted assumptions Stratoians make. Maia, as has been mentioned, does tend to look beyond the "natural way" of her culture, thus showing us more about *our* ideologies and hidden assumptions.

On Stratos, it is taken for granted that predictability and knowing one's life cycle are good and desirable things. Today in the western societies individuality and variety are valued, and thus is unpredictability, somewhat. From such a perspective, having detailed, ahead-of-time knowledge about one's life is usually deemed undesirable. To the reader, it seems to take away a person's options on the life they are going to lead, to limit their choices. Exposing the ideologies here may lead the reader to question their "natural reactions". On the whole, the discourse of predictability of life again offers an alternative viewpoint.

# 9. Conclusion

Doing discourse analysis on the science fiction novel *Glory Season* in regards to its human cloning discourse revealed quite a few things. It was the hypothesis of this thesis, that as science fiction in general is a genre to express new, alternative viewpoints on various issues, in accord with Landon's (2002:33) opinion that SF challenges and overthrows established paradigms, offering an often radically new way of thinking, which is at this thesis' center of interest. Thus, as a novel of science fiction, *Glory Season* might offer the reader novel ideas about human cloning, which is a specific, clearly definable topic the novel deals with. Fowler's (1981:22) perspective, that in fiction the artificiality of its world points out our accepted assumptions about reality, was taken as a basis for analysis.

Accordingly, throughout the analysis I attempted to examine the discourse against that of the dominant view. The dominant discourse is expressed mostly through mass media, which has been quite uniformly negative towards the issue of human cloning. As such, the novel does not take clear stand on the issue, whether cloning in itself is a good thing or not. The book is based on the idea of cloning, taking its existence for granted, taking off from that point. However, through analysing the novel's discourse through three aspects, many alternative approaches to the topic of human cloning and its implications could be found.

The one discourse that kept repeating itself in the novel, over and over again, was that of choice. A clear theme within the discourse of the novel, was that of valuing the ability to choose. It was taken for granted that having choice was a desirable thing, and it was suggested that perhaps seeing human cloning as yet another option available to humanity might be the best approach. A reasonable one, at any case.

Another clear theme within the discourse in the novel is that of costs and benefits, strongly connected to the discourse on choice. The discourse took it for granted that issues such as cloning or genetic engineering should be examined in terms of their costs and benefits for all of humanity, not as moral issues. It also suggested that adding another option to our reproductive methods, another option to our way of life, might be seen as a benefit rather than a cost. This is an

alternative view, certainly, when compared to the dominant cloning discourse.

Many of the smaller themes touched on issues expressed in dominant discourse, and offered alternative views on them, thus bringing the discourse of concern more into the discourse of hope, of belief in the capacity of humanity to adjust to changes. For instance, the worry about a narrowing gene pool through cloning, or men becoming unneeded, were referred to. The discourse indicated that such worries may very well be unnecessary, as people have a tendency to solve problems, to adjust to a changing world, to survive.

The discourse of *Glory Season* offered some new, perhaps startling viewpoints and ideas regarding cloning as well. For instance, the thought that cloning might give us a more long-term view of life, is not one that is a part of the dominant cloning discourse at all. The discourse in the novel seemed to suggest that perhaps cloning, as a way to ensure our continuity in a manner of speaking, beyond a single lifetime, might bring about the ability to think in terms of generations, of millennia. Such long-range thinking and planning is seen as very desirable, in both the discourse in *Glory Season* and in general.

The final larger theme of the human cloning discourse in the science fiction novel is that of genes. The dominant cloning discourse is all about genes. It assumes genes are destiny, in the sense that people with the exact same genes would be exactly alike. Through discourse on twins and clones, the novel's discourse challenges this view. Through a fixation on genes in *its* discourse, the idea that perhaps genes are not so important after all is suggested to the reader. Again, very unlike the dominant discourse.

All in all, the hypothesis of this thesis was fairly well held up. Alternative views *were* expressed in the novel, when examined against the background of the dominant cloning discourse as seen in the media. Perhaps the discourse in *Glory Season* isn't quite as startlingly new or alternative as it might be, being science fiction, but it clearly does bring new perspectives into play. The novel does, as Roberts (2000:28) points out of the genre of science fiction, provide means for exploring alterity.

There are certain weaknesses to be found with the analysis. First of all,

most of the background information on the dominant cloning discourse is more recent than the novel itself. Thus, it might be argued, the background is not relevant. However, this thesis argues that though the discourse in the mass media is rather time-sensitive, novels are quite another matter. They are not only read the year they are published, but rather pick up new readers all the time, and as such they are a part of the discourse even much later. As has been seen, sometimes SF books become a part of the dominant discourse, which is proof enough of their relevance even decades after their publication. Also, older information of the dominant cloning discourse was not available (as we have seen, the human cloning discourse became *really* heated only after the birth of Dolly in 1997), and thus the newer studies were used.

Another weakness, perhaps, is that the analysis is not very detailed. It does not analyse words in much depth or detail, let alone grammatical or other linguistic features. Such detailed analysis was not possible in such a short space as a Master's thesis is, nor was it desirable in this case. As Potter and Wetherell (1987:168) point out, discourse analysis looks at "what is actually said or written, not some general idea that seems to be intended", and this goal was fairly well met in the analysis. The issues within the discourse were not the topic in and of themselves, but rather as reference points for examining the relationship between *Glory Season*'s human cloning discourse and that of the dominant one.

In most studies of science fiction's role in the human cloning discourse, only the references to SF *within* the mass media is discussed. However, this thesis proves that the role of science fiction in regards to human cloning is not as simple, or as straight-forward as that. It is also used as a channel for different, perhaps even novel, ideas, and it is the belief of this writer that the same is true for issues beyond cloning. David Brin did not set out to bring new blood into the human cloning discourse when he wrote his book. However, the intentions of the writer are not of any consequence in discourse analysis, what matters is what is *there*. *Glory Season*, unlike *Frankenstein* or *The Boys from Brazil,* is not a part of the dominant cloning discourse. It makes the reader question their assumptions about the issue, and offers alternative perspectives instead.

Further, more detailed study on the novel *Glory Season* would be

certainly fascinating. The novel is also a part of the discourse on the relationship between men and women, and their stand in society, and examining what the novel brings into the discourse would be another topic for study. Further study on the role of science fiction as a channel for new, alternative ideas is another captivating topic, perhaps comparing science fiction to some other fictional genre to see whether it is a feature specific to SF. Human cloning discourse, too, could use further study. The dominant cloning discourse changes, even if it changes slowly, and seeing how the definition of technologies (e.g. the division of human cloning into therapeutic and reproductive), for instance, affects it might be interesting.

On the whole, discourse analytical studies on fictional novels seem to be rather rare. But as discourse is anything with which we make meanings, including nonverbal communication or things like clothes, fiction most definitely is a significant part of discourse. Discourse analysis as a method of analysis for fiction can be very useful and reveal many fascinating aspects of both the discourse examined as well as of the novel and genre itself, as the analysis here hopefully shows.

Although the importance of a genre like science fiction is often belittled, one need only think of the groups of young boys and girls who do not pay much attention to newspapers and ”serious” tv, but who do read hoards of SF to see how significant the genre’s impact may be. Be as it may, in this particular science fiction novel the genre’s most basic premise was upheld – it did offer the reader new perspectives on the world.

## Bibliography

Primary Sources:

Brin, David 1993. *Glory Season.* New York: Bantam Books.

Brin, David 2002. *Kiln People.* New York: Tom Doherty Associates, LLC.

Secondary sources:

Bukatman, Scott 1993 (2002). *Terminal identity: The Virtual Subject in Postmodern Science Fiction.* Durham and London: Duke University Press.

Clute, John, and Peter Nicholls (eds.) 1993. *The Encyclopedia of Science Fiction.* New York: St. Martin's Griffin.

van Dijk, Teun A. (ed.) 1985. *Discourse and Literature.* Amsterdam/ Philadephia: John Benjamins Publishing Company.

Disch, Thomas M. 1998 (2000). Revised edition. *The Dreams Our Stuff Is Made of: How Science Fiction Conquered the World.* New York: Simon & Schuster.

Fairclough, Norman 2001. 2nd edition. *Language and Power.* London: Pearson Education Ltd.

Fairclough, Norman 1992 (2002). *Discourse and Social Change.* USA: Blackwell Publishers Inc.

Fairclough, Norman 1995 (2002). *Media Discourse.* London: Edward Arnold (Hodder Hedline Group).

Fairclough, Norman 2003. *Analysing Discourse. Textual analysis for social research.* New York: Routledge.

Fowler, Roger 1981. *Literature as Social Discourse. The practise of linguicsic criticism.* London: Batsford Academic and Educational Ltd.

Hartwell, David G. 1996 . *The Age of Wonders:Exploring the World of Science Fiction.* New York: Tom Doherty Associates, Inc.

Hess-Lüttich, Ernest W.B. 1985. Dramatic Discourse in van Dijk 1985, 199-214.

Kitcher, Philip 2001. Human Cloning in McGee 2002, 136-153.

Klotzko, Arlene Judith (ed.) 2001. *The Cloning Sourcebook.* New York: Oxford University Press, Inc.

Kolata, Gina 1998. *Clone: the road to Dolly, and the path ahead.* New York: William Morrow and Company, Inc.

Landon, Brooks 2002. *Science Fiction After 1900: from the steam man to the stars.* New York & London: Routledge.

Luukka, Minna-Riitta 2000. Näkökulma luo kohteen: diskurssintutkimuksen taustaoletukset in Sajavaara et al (eds.) 2000, 133-160.

McGee, Glenn (ed.) 2002. 3rd edition. *The Human cloning Debate.* California: Berkeley Hills Books.

Murphie, Andrew and John Potts 2003. *Culture and Technology.* New York: Palgrave Macmillan.

Nelkin, Dorothy and Lindee, Susan 2001. Cloning in the Popular Imagination in Klotzko 2001, 83-93.

Pietikäinen, Sari 2000. Kriittinen diskurssintutkimus in Sajavaara et al (eds.) 2000, 133-160.

Pilnick, Alison 2002. *Genetics and Society: an introduction.* Buckingham: Open University Press.

Potter, Jonathan 1996 (2000). *Representing Reality. Discourse, Rhetoric and Social Construction.* London: Sage Publications Ltd.

Potter, Jonathan and Margaret Wetherell 1987 (2002). *Discourse and Social Psychology. Beyond attitudes and behaviour.* London: Sage Publications Ltd.

Roberts, Adam 2000 (2003). *Science Fiction.* London and New York: Routledge.

Sajavaara, Kari and Arja Piirainen-Marsh (eds.) 2000. *Kieli, diskurssi & yhteisö.* Jyväskylä: Jyväskylän yliopisto.

Silver, Lee M. 2001. Thinking Twice, or Thrice, about Cloning in Klotzko (ed.) 2001, 61-69.

Singer, Peter 2001. Cloning Humans and Cloning Animals in Klotzko (ed.) 2001, 160-168.

Sinisalo, Johanna 16.1.2003. *Fantasia lajityyppinä ja kirjailijan työvälineenä.* Lecture on the course Fantasian monet maailmat (16/1-3/4/2003).

Wickware, Potter 2002. History and Technique of Cloning in McGee (ed.) 2002, 17-41.

Wilkie, Tom and Graham, Elizabeth 2001. Power without responsibility: Media portrayals of British Science in Klotzko (ed.) 2001, 135-150.

Wood, Linda A. and Rolf O. Kroger 2000. *Doing Discourse Analysis. Methods for Studying Action in Talk and Text.* California: Sage Publications, Inc.

Internet sources:

Annas, George J: *Why we should ban human cloning.* http://www.bumc.bu.edu/www/sph/lw/pvl/lim/why-98-jul9.htm The New England Journal of Medicine, Vol.339, No.2, 9/7/1998. Accessed 6/11/2003.

*Biography of David Brin, Ph.D.* http://www.davidbrin.com/biography.html 1/1/2004. Accessed 19/1/2004.

Brin, David: *The Matrix: Tomorrow May Be Different.* http://www.davidbrin.com/matrixarticle.html 2003. Accessed

25.2.2005.

Nerlich, Brigitte, Clarke, David D & Dingwall, Robert: *Fictions, fantasies and fears. The literary foundations of the cloning debate.* http://metaphorik.de/aufsaetze/nerlich_fictions.htm 2001. Accessed 5/10/2004.

Nerlich, Brigitte, Clarke, David D & Dingwall, Robert: *The influence of popular cultural imagery on public attitudes towards cloning*. http://www.socresonline.org.uk/4/3/netrlich.html Sociological Research Online, vol.4 no3 30/9/1999. Accessed 5/10/2004.

Nisbet, Matthew: *Attack of the Metaphors: Will Star Wars say the cloning debate?* http://www.prospect.org/webfeatures/2002/05/nisbet-m-05-15.html The American Prospect Online 15/5/2002. Accessed 6/11/2003.

*Reproductive cloning basic science* http://www.genetics-and-society.org/technologies/cloning/reproscience.html Center for Genetics and Society 30/5/2003. Accessed 6/11/2003.

*Research cloning basic science* http://www.genetics-and-society.org/technologies/cloning/researchscience.html Center for Genetics and Society 30/5/2003. Accessed 6/11/2003.

Sexton, Sarah: *How to talk about cloning without talking about cloning. Public discourse in the UK.* http://www.thecornerhouse.org.uk/document/biomed.html Biomedical Ethics, vol.5, No.3, 12/2000. The Corner House 18/4/2002. Accessed 6/11/2003.

Sexton, Sarah: *What's in a Name? The Language and Discourse of Human Embryo Cloning*. Originally presented at the conference 'Techniques of Reproducton: Media, Life, Discourse', University of Paderborn, 1-2/12/2001. http://www.thecornerhouse.org.uk/document/clonenam.html The Corner House 18/4/2002. Accessed 6/11/2003.

Wellcome Trust: *Public Perspectives on Human Cloning*. http://www.wellcome.ac.uk/doc_WTD003422.html Wellcome Trust 1/1/1998. Accessed 5/10/2004.