

**The Clone as Gothic Trope in
Contemporary Speculative Fiction**

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A Thesis submitted for the degree of Doctor of Philosophy

Division of Literature and Languages
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2014

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Acknowledgements

A single conversation with a
wise man is better than ten
years of study.
Chinese Proverb

I would like to extend my grateful thanks to, in particular, Professor Glennis Byron (Emeritus), Dr Claire McKechnie and Dr Scott Brewster for their invaluable support. Glennis's infectious enthusiasm for literature and specialist advice guided me during the early stages of my work; Claire's positive attitude and enviable ability to motivate kept me going when inspiration was low; and Scott's calm expertise and patient guidance helped me during the final stages. I am indebted to you all. Thanks are also due to Sophie McKenzie, who kindly agreed to be interviewed about her cloning narratives *Blood Ties* and *Blood Ransom*, and also to Dr Will Viney and Dr Sara Wasson for their encouragement and interest in my work.

This thesis would not have been possible were it not for the steadfast support of my friends and family. In particular I would like to thank Dr Bruce Stephen for his gentle encouragement and advice; Nick Noon for sharing her encyclopaedic knowledge of films; Rev. Graham Nash for recommending religious texts during my analysis of *The Angel Maker*; and my parents, sister and partner for their patience and understanding, as well as unfailing love and support.

Abstract

In February 1997, the concept of the clone, previously confined to the pages of fiction, became reality when Dolly the sheep was introduced to the world. The response to this was unprecedented, initiating a discourse on cloning that permeated a range of cultural forms, including literature, film and television. My thesis examines and evaluates this discourse through analysis of contemporary fiction, including Kazuo Ishiguro's *Never Let Me Go* (2005), Stefan Brijs's *The Angel Maker* (2008), Duncan Jones's *Moon* (2009), and BBC America's current television series *Orphan Black*, which first aired in 2013. Such texts are placed in their cultural and historical setting, drawing comparisons between pre- and post-Dolly texts. The thesis traces the progression of the clone from an inhuman science fiction monster, to more of a tragic "human" creature. The clone has, however, retained its fictional portrayal as "other," be that double, copy or manufactured being, and the thesis argues that the clone is a Gothic trope for our times.

The roots of the cloning discourse often lie in Gothic narratives, particularly Mary Shelley's *Frankenstein* (1818), which is analysed as a canonical cloning text. Each chapter focuses on a source of fascination and fear within the cloning discourse: the influence of Gothic paternity on the figure of scientist; the notion of the clone as manufactured product, victim and monster; and the ethical and social implications of cloning. There is a dearth of critical analysis on the contemporary literary clone, with the most comprehensive study to date neither acknowledging the alignment of cloning and the Gothic nor demonstrating the impact of Dolly on fictional portrayals. My thesis

addresses this, interweaving fiction, science and culture to present a monster which simultaneously embodies difference and sameness: a new monster for the twenty-first century.

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Introduction

Little Lamb, who made thee?
Dost thou know who made thee?
William Blake

In a 1971 US *Atlantic Monthly* article, James Watson – the scientist co-responsible for the discovery of the structure of DNA – hints at a "conspiracy" of silence "to keep the general public unaware of a potential threat to their basic way of life" (52). Entitling his article "Moving Toward the Clonal Man," Watson outlines recent scientific advances in the field of cloning, showing how they could lead to the reality of human reproductive cloning.¹ His tone is alarmist as he describes the lives the first clonal humans could lead, using expressions such as "bizarre," "startling," and "fantasies" while warning of the possibility of "abhorrent misuse" (51-52). Within scientific fields, he reveals, the possibility of clonal reproduction had only been "casually mentioned," with discussions being "so vague and devoid of meaningful time estimates as to be virtually soporific" (52). He warns that there will be a "frenetic rush" to experiment with human eggs once they become "a readily available commodity" (52). Watson concludes with a call for a "blanket declaration of the worldwide illegality of human cloning," warning that "if we do not think about it now, the possibility of our having a free choice will one day suddenly be gone" (53).

Watson's article introduces many of the issues, vocabulary and expressions that have come to constitute a discourse on cloning, with the term discourse used in the Foucauldian sense of the word. Foucault describes discourse as a vast field "made up of the

¹ The word clone derives from the Greek "Klawn" meaning twig. Taking cuttings from plants is cloning, and has been done for thousands of years.

totality of all statements (whether spoken or written)" which shape our perception of the world (*Archaeology* 27). The discourse on cloning feeds into, and is influenced by, the literature this thesis discusses, and its emergence and development is traced throughout. The public anxiety Watson's article provoked was heightened by the fact that it was written by a reputable scientist, prompting other scientists to come forward to reassure the public that this vision of a "clonal man" would never achieve fruition. While scientists attempted to dampen fears, however, the bioethicist Willard Gaylin published a 1972 article in *The New York Times Magazine* set to reignite them. "The increasing capacity of man to reconstruct himself," Gaylin states, "is, by definition, the capacity to destroy himself through transformation into another creature – perhaps better, but not man" (88). "The human," he continues, "is the only species capable of systematically altering its 'normal' biological system by use of its equally 'normal' intellectual capacity" (96). "Man did not have to fear God," Gaylin asserts, "he had replaced him" (49). With science progressing at a rapid pace, Gaylin comments that humans have traditionally been spared from being treated as "research animals" due to the fact they are human, but warns that even this rule is being violated in some instances, such as the use of aborted fetuses. Gaylin's article reports the foundation of the Hastings centre in 1969 in New York, an institution which brought together experts from a variety of fields to debate the many bioethical implications arising from scientific advances. These experts – consisting of biologists, physicians, social scientists, theologians and lawyers – shared the conviction that too little time, money and interdisciplinary study was being devoted to problems such as medical ethics and genetic engineering.² That same year, Robert Sinsheimer, Chairman of the biology division at the

² See Callahan's 1984 Hastings Centre Report.

California Institute of Technology, stated he believed it would be possible to clone human organisms within ten or twenty years.

Cloning, Gaylin speculates, would enable the production of multiple copies of a prize-winning racehorse³ – though what then, he reasons, would be the point of racing them, suggesting the potential for science to become a victim of its own success. Cloning would allow the manipulation of breeding to ensure the best cattle for beef, but it would also destroy the evolutionary process by preventing the necessary "expansion and enrichment of the gene pool" (92). It would negatively affect the natural evolution of the species, an issue explored in 1970s cloning narratives such as Naomi Mitchison's *Solution Three* (1975). On a more positive note, he raises the potentially beneficial use of cloning for saving endangered species⁴ and criticises the notion that cloning would enable someone to see "yourself born," reminding us that a human is no more or less than her⁵ genetic potential. Identical twins, "nature's clones," have the potential to be very different individuals, he points out, and cloning could also bring joy to infertile couples. Gaylin sounds a warning note here, however, by pointing out that cloning would totally remove the need for any form of romantic love which has traditionally accompanied and complemented parenthood (96). His article headlines with the bold statement: "The Frankenstein myth becomes reality," and concludes in a similar vein. The tragic irony, he declares, is not that Shelley's fantasy is relevant once again – it is the realisation that it is no

³ Klotzko later comments that this would provide a fascinating nature/nurture experiment, while also giving bookmakers a fit trying to predict the outcome (52).

⁴ To date, attempts at cloning rare and endangered species have proved unsuccessful. The main difficulty with this is finding a suitable supply of eggs. However, in 2000, a rhesus monkey named "Tetra" became the first primate to be cloned by embryo splitting (Whitehouse). She was created to help find cures for human diseases, but it was a creation bringing the technique one step closer to cloning humans.

⁵ Here, and throughout the thesis, when I refer to the human or clone in general, my intention is not to be gender specific.

longer a fantasy, and that we now identify not with Frankenstein, but, as literary scholars have since noted, instead with his monster (97).

THE SCIENTIFIC AND LITERARY CONTEXT OF CLONING

Gaylin's article proved particularly influential in the development of a cultural discourse on cloning, and is frequently referred to in later academic texts.⁶ Between them, Gaylin and Watson initiated what the bioethicist and lawyer Arlene Judith Klotzko identifies as "a wave of cloning anxiety" (8). These early articles set the tone for the cloning discourse which follows, initiating its direction in subsequent years and decades and evoking the language of fear. Public attention moved on, however, to new advances in reproductive technology in the 1970s, namely In Vitro Fertilisation (IVF). The controversy and alarm initiated by breakthroughs in IVF would be mirrored by the response to the cloning of Dolly the sheep in 1997, with similar objections being raised. "The genealogy of cloning," the authors of *Human Cloning in the Media* explain, "and the prospects for human cloning today are linked to the history of the development of human reproductive technologies and to the evolution of practices associated with IVF" (Haran et al. 19). IVF created what was considered the morally ambiguous construct of an early embryo developing outside of the womb. The belief that life begins at fertilisation, IVF pioneer Robert Winston explained during a lecture, led some to suggest IVF equated to "murder." The backlash reduced, however, after the birth of Louise Brown on 25 July 1978: she was the world's first successful test-tube baby.⁷ The presentation of a healthy baby undermined speculation that

⁶ For example, Gaylin's article is referred to by Jon Turney in *Frankenstein's Footsteps* (1998) and Lee M. Silver's *Remaking Eden: Cloning and Beyond in a Brave New World* (1998).

⁷ Although the Browns knew the procedure they were undergoing was experimental, they were not made aware that no prior case had resulted in a baby, raising questions over informed consent (Henig 134).

IVF may produce some form of monster; as Klotzko points out, "photographs of adorable babies don't quite mix with scary headlines" (8). In a national survey carried out by Gallup shortly after Louise Brown's birth, 60% of American women stated they were in favour of IVF, a sharp contrast to the vocal opposition expressed prior to her birth (Kiefer). The evident normality of her birth, and the overall health of the baby, helped to dissipate earlier concerns.⁸

As the public furore surrounding IVF settled, science continued to advance behind the scenes. One year later in 1979, Karl Illmensee, an embryologist at Geneva University, claimed to have successfully cloned mice by nuclear transfer from early embryo cells, publishing the results in 1981. This breakthrough heralded the first cloning of a mammal, an announcement that shocked and excited scientists whose repeated failures had led to the general opinion that it was not possible. Questions were later raised, however, by Illmensee's refusal to demonstrate his technique and rumours that he often worked alone in the lab. When no one was able to reproduce his results, he was accused of falsifying his experiments and he lost his National Institutes of Health grant. Despite accusations of fraud it was never proved, and it remains unclear as to whether he did succeed.⁹ Such a scenario is typically Gothic, recalling Shelley's eponymous Frankenstein, himself from Geneva, whose scientific methods were never verified, and Wells's Moreau who was subjected to "desertion by the great body of scientific workers" (34). It also features in Stefan Brijs's contemporary reworking of *Frankenstein, The Angel Maker* (2008), in which Victor Hoppe refuses to verify the results of his cloning experiments, also performed on mice. Davor Solter, a highly regarded developmental biologist, and his student, Frank McGrath, made

⁸ Louise's birth at Oldham General Hospital by caesarean section was filmed and shown as a video news release which has been made available on YouTube (Wellcome Library).

⁹ Wilmut later commented it seems likely that he did but was then unable to replicate it (Klotzko 30).

repeated attempts to replicate Illmensee's results. The experiments proved unsuccessful, prompting them to publish an article in the scientific journals *Cell* and *Nature* which asserted that "the cloning of mammals by simple nuclear transfer is biologically impossible" (1319). Their findings were accepted as "fact," resulting in funding into cloning becoming increasingly difficult to obtain.¹⁰ In a similarly Gothic vein, cloning became a discredited field, with those pursuing it reflecting the hubristic ambitions of fictional rogue scientists such as Frankenstein and Moreau.

In 1993, progress was made in the field of cloning, however, as scientists Jerry L. Hall and his supervisor Robert Stillman became the first to clone human embryos.¹¹ As *TIME* described: "he started with 17 microscopic embryos and multiplied them like the Bible's loaves and fishes into 48" (Elmer-Dewitt). *TIME*'s analogy evoked religious terminology and imagery, suggesting the breakthrough to be miraculous, or even supernatural. The scientists themselves, revealing themselves out of synch with the public, appeared stunned by the controversy their experiments provoked. A spokesperson for the Japan Medical Association declared the experiment "unthinkable," French President Francois Mitterrand announced he was "horrified" and the Vatican press reported it was leading humanity down "a tunnel of madness."¹² As the controversy surrounding IVF showed, some "pro-lifers" consider discarding an embryo as murder, feeding into the debate concerning the point at which human life begins. An emotional Hall defended his work: "I revere human life," he asserted, "I respect people's concerns and feelings. But we have not created human life or destroyed human life in this experiment" (Elmer-Dewitt).

¹⁰ When Dolly's creation disproved this, it created a scandal in the scientific field and negatively impacted on the scientists' careers.

¹¹ Hall was director of the in-vitro lab at George Washington University, while Stillman was head of the entire in-vitro fertilization programme.

¹² Front page editorial in L'Osservatore Romano, reported in *The New York Times* (Kolata "The Hot Debate").

They saw their experiments as the next logical step within the field of IVF, declaring themselves driven by a desire to relieve the human suffering caused by infertility. Indeed, *TIME* suggested, there may be a market for it, quoting one woman's reaction: "it's pretty scary... but I'd probably consider it as a desperate last attempt."¹³ The move from IVF towards cloning, however, was enough to cause panic, with a *TIME/CNN* poll carried out in March 1997 showing that 89% felt cloning to be morally unacceptable, and three quarters considered it against God's will ("Poll"). Again, the link between cloning and religion is evident, though it is a link, Margaret O'Brien Steinfelds of *Commonweal* magazine suggests, which is not the result of people believing there is a commandment "Thou shalt not clone," but rather that "there are limits to what humans ought to be thinking about doing" (Elmer-Dewitt). It is the notion that cloning crosses an invisible moral line, attacking the fundamental ethical principles upon which being human is based and founded, a fear held by those who do not hold strong religious beliefs as well as those who do. This fear that cloning tampers with nature and involves transgressing moral and ethical boundaries underpins many of the fictional representations of cloning this thesis examines.

While earlier breakthroughs in reproductive technologies initiated controversy and alarm, the worldwide response to, and condemnation of, Dolly's cloning was unprecedented. It propelled cloning into the media spotlight, as the next section shows, and initiated a broadening of literary interest in the topic. The response to the announcement of Dolly's cloning prompted the Wellcome Trust, shortly after in the spring of 1998, to commission a public consultation entitled "Public Perspectives on Human Cloning." The

¹³ Barbara Tilden, a 39 year old from Illinois, quoted in *TIME* magazine (Elmer-Dewitt).

results revealed the firm rejection of human cloning by nearly all participants, who expressed shock at the implications of the technology.¹⁴

The social implications of human cloning appear to have been the primary concern of participants during this consultation, with the medical risks of human cloning considered "a secondary issue" (Wellcome Trust 41). While participants expressed misunderstanding surrounding the technique of cloning, increased clarity of the technical process did not modify primary concerns. Issues raised through the report included a "public mistrust" of scientists, with concern being expressed over "the regulation of scientific research" and "a cynical view" taken of "scientists' motives" (5). Such concerns appear justified given the subsequent emergence of real-life "mad scientists" embarking on a quest to become the first to clone a human, which the first chapter discusses. Attention was also drawn to the effect cloning would have upon family relationships. A male participant expressed the fear that men could literally "die out" as "a woman is going to clone a woman" (17) – a concern glibly raised by *The New York Times* report of Dolly's creation when it quoted a cell biologist joking that with cloning, "there'd be no need for men" (Kolata "With Cloning"). Meanwhile, a female participant expressed unease at the prospect of someone discovering "actually you did not have a father at all, genetically" (Wellcome Trust 17), suggesting cloning is a threat to fatherhood. Comparisons were made between IVF and cloning, with each group containing individuals who felt the perception of cloning was "likely to become more positive over time" (32), as had been the case with IVF. An elderly male participant commented: "You have to go with the times, they thought the penicillin guy was mad. ... In 50 years time, our offspring will be thinking entirely differently to us" (30). This more

¹⁴ This expression of shock echoes *The Sun's* headline announcing Dolly's birth: "Clone Shock" alongside the duplicate image of Dolly's head (Coppie).

positive prognosis that the fear associated with cloning will, as with IVF, diminish with time has not, however, proved valid.

One of the key points to emerge from the Wellcome Trust consultation is that fiction appears to have far more influence on the public than scientific "fact." Many participants stated they have "a vivid image in their mind" of the clone, with frequent descriptions of "photocopied individuals and automated production lines or artificial incubators producing multiple adult clones" (13). They also made frequent references to "genetic experiments conducted by Nazis" (13). Such a notion is likely to have been formed by *The Boys from Brazil*, which was frequently referred to, and the report shows the discussion was "peppered throughout with negative references to films and books" (14) including *Jurassic Park*, *Blade Runner*, *Invasion of the Body Snatchers*, *Frankenstein*, *Brave New World*, *The Stepford Wives*, *Star Trek* and *Alien Resurrection*. One participant admitted: "I have a Brave New World vision where we have half a dozen or so different kinds of human beings classified according to their ability. ... I think Mr Huxley was quite perceptive" (14). There appears an inability among many participants to distinguish between a clone and cyborg, with one woman commenting: "It's a *Star Trek* thing – androids with a brain that could think like a human" (14).¹⁵ The influence of fiction in shaping the public's attitude, and thus the discourse on cloning as a whole, is revealed throughout this thesis.

Three canonical literary texts in particular are crucial to the cloning discourse, and are referred to repeatedly in discussions to raise specific concerns. Mary Shelley's *Frankenstein* (1818) introduces the concept of the mad scientist and functions as a

¹⁵ This is a theory encouraged by the Catholic priest Father Saunders when he stated cloning "would only produce humanoids or androids – soulless replicas of human beings that could be used as slaves" (Zzaman).

metaphor to suggest science has progressed too far; Aldous Huxley's *Brave New World* (1932) serves as a warning about state control; and Ira Levin's *The Boys from Brazil* (1976) conveys the consequences of placing power in the wrong hands, leading to the creation of a master race. These texts have become so embedded in the public imagination that, as Jon Turney, former science editor of *The Times Higher Education Supplement*, observes in relation to *Frankenstein*, "The Frankenstein script has become one of the most important in our culture's discussion of science and technology. To activate it, all you need is the word: Frankenstein" (6).

The association between *Frankenstein* and cloning was made explicit through the headline of Gaylin's influential 1972 cloning report, "Frankenstein myth becomes reality," and features frequently in the press coverage of Dolly's cloning. *Chicago Tribune*, for example, suggests that rather than turning to cloning, "curl up with a copy of 'Frankenstein' instead. Heed the warnings" (Page). It is firmly rooted in the public's mind as the Wellcome Trust report has shown, with one participant describing cloning as "Frankenstein-type medicine" (14). Though not necessarily a view borne out by literary criticism, within the public perception, Shelley's novel produces one of the starkest literary warnings against scientific progress.

One of the most troubling aspects of Dolly's creation is the way in which it challenges the distinction between fact and fiction, as horrific images that had previously been held at a comforting distance seemed to seep into the real world. This blurring of fact and fiction was brought to the public's attention by press reports on the breakthrough, with nearly every article referring to at least one of the canonical texts mentioned above. *The Guardian*, for example, begins its article: "Scientists last night dismissed fears of a 'Brave

New World' of cloned superhumans..." (Radford). Although appearing to support the scientists' dismissal of the fears, by highlighting what some of those fears are they instead perpetuate them. Those glancing at the article are most likely to have "Brave New World" – words further emphasised through the use of quotation marks – and "cloned superhumans" fixed in their minds. *The Observer* suggests cloning humans drew "parallels with Huxley's *Brave New World* and the film *The Boys from Brazil*, in which clones of Hitler are made" (McKie). In America, *The Washington Post* reportage of Dolly asks: "Remember the 1978 movie *The Boys from Brazil*, in which aging Nazis plotted to clone little Hitlers?" (Glassman). *TIME*'s "Special Report on Cloning" emphasises the potential for evil through cloning by reference to literary texts: "Ban human cloning in America, as in England, and it will develop on some island of Dr Moreau. The possibilities are as endless as they are ghastly: human hybrids, clone armies, slave hatcheries, 'delta' and 'epsilon' sub-beings out of Aldous Huxley's *Brave New World*" (Krauthammer). Repeatedly quoted in the press was the possibility of "creating armies of dictators" (McKie), directly alluding to the third cloning classic, *The Boys from Brazil*. This text is also frequently raised in The Wellcome Trust report. The tone used when referring to these canonical texts makes the implications behind them explicit, even to those unfamiliar with them. By bringing up these narratives, the press helped to cloud the public's perception of cloning with, as Klotzko puts it, "science fiction" colouring attitudes to "science fact" (xxxiii).

Cloning emerged most clearly as a literary topic during the 1970s, when IVF controversy was rife, but it was a topic primarily restricted to the science fiction genre, associating cloning humans with futuristic worlds and dystopian nightmares. Clones were deemed robotic, less than human, a threat to humanity rather than a part of it. Such texts

include Kate Wilhelm's *Where Late the Sweet Birds Sang*, published in 1974, Naomi Mitchison's 1975 novel *Solution Three* and Pamela Sargent's *Cloned Lives*, published in 1976. These books portray clones as a "higher species" (Wilhelm 60), a "rising forest of genetic excellence" (Mitchison 24) who are, nonetheless, not quite human. Exploring issues of identity, these narratives adopt a nostalgic tone, suggesting cloning would strip a human down from an individual to a part. They promote the fear initiated by *Brave New World* that humans could be "forever multiplied" (Mitchison 23). A shift in the narrative portrayal of clones was, however, initiated by Dolly's creation.

THE CREATION OF DOLLY: A WOLF IN SHEEP'S CLOTHING?

Before the start of the new millennium, an unsuspecting public awakened to the news that for the first time life had been created from adult body parts, as the boundaries between fact and fiction were disturbed. It was 1997 when a very ordinary looking sheep named Dolly¹⁶ was revealed as the world's first cloned mammal from adult cells,¹⁷ the "man-made" creation of a team of Scottish scientists. That same year, Labour won a landslide victory, ending eighteen years of Conservative rule, and Diana's death demonstrated the public's extensive capacity for sympathy, as traditional authority was shown to be out of touch with the people. The influence of public opinion was shown to be substantial that year, and this is epitomised in the response to Dolly, as this section shows. The fact Dolly was introduced to the world as a fully grown sheep, seven months after her birth on 5th July

¹⁶ Her lab name was 6LL3, a name that creates the impression of her being a scientific experiment, a product rather than a media friendly miracle.

¹⁷ It later emerged that the same team had cloned two sheep previously from embryonic cells, making Dolly the first mammal cloned from adult cells. In 1952, Robert Briggs and Thomas J. King cloned northern leopard frogs, the first cloning of an amphibian.

1996 in the quiet Scottish village of Roslin,¹⁸ is likely to have increased confusion surrounding cloning, supporting the misleading impression that a clone would become an immediate adult.¹⁹ A mammary gland cell taken from a six-year-old Finn-Dorset ewe – the identity of which will never be known – was transferred to a surrogate sheep of a different breed (Scottish Blackface) in order to provide visual evidence that Dolly was a clone. Dolly's creation catapulted cloning into the media spotlight and captured the public's imagination in interesting ways. *The Observer* broke an embargo on a paper by the Roslin team set to be published in *Nature*,²⁰ essentially transferring control from the scientific community to the media. The story broke on 23rd February 1997 with the rather modest headline: "Scientists Clone Adult Sheep: Triumph for UK raises alarm over human use" (McKie). Such media restraint, however, did not last long. Once in the hands of the tabloids, the story was hyperbolised and sensationalised to extremes. "CLONE SHOCK," announced *The Sun* the next morning, declaring Dolly the first mammal "copied" from an adult animal:



Fig. 1. Hold ye front page (Coppie).

¹⁸In a curious aside in which she herself adds to the sense of Gothic intrigue surrounding cloning, Klotzko points out that Roslin was previously famed for Rosslyn chapel which itself holds a dark history. It is rumoured that the stonemason who carved the pillar in his master's absence, was subsequently murdered by the mason when he flew into in a jealous rage on beholding its magnificence (xxvii). Rosslyn Chapel has also been made famous by its inclusion in Dan Brown's *The Da Vinci Code* (2003, later adapted in 2006).

¹⁹ Dolly's birth was initially kept a secret due to a patent application on the cloning process.

²⁰ This paper, entitled "Viable offspring derived from foetal and adult mammalian cells" was subsequently published in *Nature* on 27 February 1997 (Wilmut).

Other tabloids reiterated this alarmist tone, with *The Daily Mail* headlining, "Her mother's twin: New fears as a lamb is cloned from adult cell" (Derbyshire). Inevitably there was a difference in tone between the tabloid and broadsheet press, with Eric Jensen suggesting that a "central theme of utopian hope emerged" with the broadsheets focusing on the therapeutic benefits cloning could bring (124). The broadsheet press outlined the potential this breakthrough may have for curing diseases, with *The Independent* reporting that "the immediate application of cloning will be to study ageing, cancer and genetics, and to produce medicines" (Arthur, "First"). That same article, however, broke the news with the headline: "First cloned lamb paves way for life by production line." The positive aspects of the breakthrough were overshadowed by the implications it could have, with attention being drawn to more sensationalist suggestions of factory-style reproduction, the belief it is inherently "unnatural" as well as the frequently referred-to possibility of "creating armies of dictators" (McKie). The focus jumped immediately from animal cloning and its potential therapeutic benefit, to the prospect of human reproduction cloning. A mere mention of the possibility was enough to provoke alarm. Sensationalist scenarios were not restricted to the tabloid press, with John Huxford suggesting "the elite press" was "positioning itself against science" in the cloning debate (194).

As can be seen, the press played a crucial role in shaping public opinion about cloning. As sociologist Dorothy Nelkin observes: "for most people the reality of science is what they read in the press. They understand science less through direct experience or past education than through the filter of journalistic language and imagery" (2). The press can consequentially be said to play a central role in developing the discourse on cloning,

producing through their reporting a rhetoric of fear. While most scientists attempted to dampen down the rhetoric, even science failed to hold up a united front, with Lee M. Silver, Professor of Molecular Biology and Public Policy at Princeton University, famously exclaiming in response to Dolly's cloning: "It basically means that there are no limits. It means all of science fiction is true..." (Kolata, "Scientist").²¹ Dolly's existence, Klotzko explains, proved that "the blueprint for the formation of a human exists in each differentiated cell" (xxvii); it reveals human cloning to be a distinct possibility. Dolly provides evidence that "our cells, the very units of which we are made, can be persuaded, given enough time and effort, to remodel themselves, to change their nature and to travel back in time"²² (Meek), providing evidence of the malleability of the body. In contrast to the general tone of alarm adopted by the press, *The New Statesman* playfully labelled the 90s "the decade of the sheep": "Damien Hirst pickles one, posing the question 'what is art?' A research team clone one, posing the question 'what is life?'" (Sharp). The issue of cloning, previously of primary interest to scientists and dystopian science fiction, moved into the mainstream of public awareness following Dolly's creation. While, as has been shown, earlier cloning articles set the tone for a cloning discourse and established an alignment with the Gothic, it is this historic event which transfers it to the global stage, providing a scale and urgency which establishes a cultural discourse on cloning.

These early reports on Dolly's cloning centred primarily on *human* cloning, inducing a sense of horror and fear which would come to surround the discourse in the years which followed. This deflected attention away from the morality of animal cloning. It took 277 attempts to clone Dolly, with cloning producing lambs unable to catch their

²¹ Although this statement has been met with ridicule, it exemplifies the strength of feeling provoked.

²² The notion of time travel forms an immediate connection between Dolly's creation and science fiction plots.

breath; lambs with shrunken kidneys; and lambs with undifferentiated liver cells unable to function correctly, to name just a few of the defects that resulted (Klotzko 55).²³ Abnormalities, some of them shocking, have been found in clones from every mammalian species, with many dying before or shortly after birth. "Many of the pregnancies in animal cloning experiments have gone badly wrong," reported *The Observer*, resulting in a number of horrific deformities (Revill). Such rhetoric functioned as a warning to the public of the potential dangers which would surround human reproductive cloning. Reproductive cloning carries a success rate of around 50%, deemed acceptable with animals but unthinkable for humans. In April 1997, the *New Scientist* published an article entitled "The Suffering of the Lambs,"²⁴ querying whether the suffering cloning brought made it worthy of the risk. The article comments that in a vain attempt to defuse public concerns, the team at the Roslin Institute and PPL Therapeutics emphasised the benefits cloned livestock held for medicine, the possibility of new cures and meeting the desperate shortfall in human transplant organs through cloned transgenic pigs (Gordon). Speaking to the House of Commons' Science and Technology Committee, in a eugenicist vein of thinking, Dolly's creator Ian Wilmut stressed the potential benefits cloning held for the livestock industry, predicting that in around twenty years, 85% of British cattle could be cloned and bred to match the qualities of the top 10 to 15% of livestock (Lynas). The concern for animal welfare was less widely discussed, including the strange phenomenon of creating sheep and cows that are born up to twice the normal size, which led to the closing of cow cloning company Granada Genetics of Houston, Texas (Gordon).

²³ As well as the obvious suffering caused by these failed attempts, there was also a significant financial loss.

²⁴ Even the *New Scientist* was unable to resist a connection with fiction, as the echo of *The Silence of the Lambs* suggests, and fiction, as this thesis shows, came to play a significant role in the cloning discourse.

The weight of public antipathy towards cloning, and the near hysteria it provoked generally, prompted a nervous British government to withdraw all funding from the Roslin project, demonstrating the influence of public opinion on legislation. This was despite the possible medical benefits which could be derived from cloning, and repeated reassurances from experts that for ethical reasons there would be no attempt to clone a human in the near future. Predictions that the scientists responsible for Dolly would progress to human cloning proved false, with Wilmut clearly stating that he was against human reproductive cloning due to the risk it poses of deformed fetuses and miscarriages. Yet while it may be ethically unviable at present, since the creation of Dolly its practical application has become an acknowledged possibility.

While Britain was shaken by the scientific breakthrough brought about on home soil, the global effect was far greater. Across the world, leaders were forced to respond to the global panic that ensued, establishing commissions and imposing bans without waiting for answers to the many questions being asked (Klotzko xxiv). The European Parliament called for a worldwide ban on human cloning, declaring it, in their 1998 Resolution on Human Cloning, "unethical, morally repugnant, contrary to respect for the person, and a grave violation of fundamental human rights which cannot under any circumstances be justified or accepted" (Annas, Andrews and Isasit 171). This unequivocal rejection of human cloning reflected the public reaction to Dolly's creation. MEPs exhibited their strength of feeling against human cloning by wearing identical masks:



Fig. 2. European Parliament's views on human cloning (R. Watson 847).

This image of masked European leaders and decision makers forms a visual display of uniformity which parallels the visions of horror prompted by the public discourse on cloning, linking it, once again, more closely with fiction than scientific fact. In March 2005, the UN General Assembly adopted a declaration calling on all nations to enact legislation to "prohibit all forms of human cloning" (Fifty-Ninth). Across the globe, the tone and style of language used to reject cloning was similar, with America objecting on the grounds that it was "morally despicable, repugnant, totally inappropriate, ethically wrong, socially misguided, and biologically mistaken" (Silver 92). US President Bill Clinton set up a special task force to investigate the legal and ethical implications of cloning, with 90% of Americans stating they wanted cloning banned in a *TIME/CNN/Yankelovich* poll carried out in February 2001 (Paul). Shortly after the announcement of Dolly's cloning, Pope John Paul II publicly denounced the breakthrough as a "dangerous experiment" that could undermine human dignity, while in a *TIME/CNN* poll shortly afterwards a resounding 91% of Americans stated they would not consider cloning themselves (Page). Religious leaders were quick to express condemnation, with the Church of Scotland putting forward a motion in May 1997 which stated that "to replicate

any human technologically is a violation of the basic dignity and uniqueness of each human being made in God's image. ... It is not the same as twinning" (Bruce). This again demonstrates the uncomfortable interweaving of religion and science in modern culture, which is central to later novels such as *The Angel Maker*, as the first chapter shows.

Cloning is at the forefront of debates about scientific advances and, like other scientists, Wilmut has publicly expressed bewilderment at the extent of the public's interest. He has queried why other recent advances in science have not provoked more ethical debate, such as the prospect of genetic alteration: for example, manipulation at embryo stage to create gills to enable breathing underwater is, he suggests, something which may be on the horizon (Meek). Wilmut has further expressed surprise at the lack of general awareness of such developments as this, outcomes which have arisen from the Human Genome project.²⁵ Instead, the public appear fixated on the prospect of cloning.²⁶ This may to some extent be accounted for by the cultural focus on the clone, with Harry Griffin, the Roslin Institute's Assistant Director for Science, pointing out that "clone" is "a single-syllable word that fits well in the headlines" (Meek). The media's interest in cloning fuelled the public's fascination, and this has, in turn, influenced literary and cinematic portrayals of the clone which have, in turn, shaped public (and even scientific) responses to the possibilities of human cloning. These interweaving strands all contribute to, and form a part of, the discourse on cloning.

²⁵ This project began in 1989 as an international scientific research project to determine the sequence of chemical base pairs which make up DNA and to identify and map genes of the human genome.

²⁶ The Discovery Channel ran a documentary on cloning a mammoth which proved its most popular documentary ever, according to Harry Griffin (Meek).

CRITICAL CONTEXT

Maria Ferreira's *I Am The Other: Literary Negotiations of Human Cloning* (2005) is perhaps the most pertinent study to mine to have emerged in recent years. From the outset, Ferreira presents her own stance on the cloning debate, stating that texts from "Aldous Huxley's *Brave New World* (1932)" to "Michael Marshall Smith's *Spare* (1998)" display "predominantly negative" representations of human cloning which encourage "misapprehensions" (4) about human clones. Ferreira describes the cloning narratives she analyses as largely displaying "an apocalyptic sensibility, depicting highly improbable and strained alternative worlds" (3). Significantly, the fiction Ferreira focuses on, despite the fact her book was not published until 2005, could be classified as "pre-Dolly" literature, work which would largely be considered science fiction.²⁷ Although Ferreira briefly acknowledges the significance of Dolly's creation in her introduction as firing "the popular imagination and gradually permeating popular discourse" (4), she fails to analyse altered literary perceptions of the clone which come about as a result. This is a gap my thesis fills, revealing that post-Dolly fiction has moved towards a more sympathetic, more human, portrayal of human clones, moving cloning narratives beyond the narrow confines of science fiction. Ferreira discusses the perception of the clone as double, copy and other. She attempts a defence of the human clone in opposition to Baudrillard's theory, asserting the potential of a human clone to have "human feelings" and taking issue with Baudrillard's portrayal of them as "inferior copies of the original" (155). My focus is on how contemporary, post-Dolly literature represents the human clone, moving beyond Ferreira's analysis of earlier texts, while also using some of her analysis, which is largely theoretical, as a grounding for my own extended approach. However, my own work goes a step further

²⁷ *Spare* was first published in 1996, despite Ferreira dating it as 1998.

by expressly connecting human cloning with the Gothic. Ferreira only once, in a footnote within her introduction, acknowledges the connection between the Gothic and cloning, stating that "from a certain point of view" cloning can "be seen as forming part of the Gothic strand" (16). She continues that "the idea of cloning brings up a cluster of deep-seated fears and uncanny feelings of dread and anxiety that sum up what might be described as the Gothic atmosphere of our times," but does not extend these ideas - ideas which I believe are crucial to an analysis of human cloning - to her main discussion.

The commercialisation of the Gothic has become the feature of much contemporary Gothic theory, with Lucie Armitt describing in *Twentieth-Century Gothic* (2011) the "limitless appetite" for the Gothic (1) and Catherine Spooner stating in *Contemporary Gothic* (2006): "it has reached new levels of mass production" (23). As Dietz has observed in his exploration of the postmodern double, clones "signify the ultimate triumph of mass production: the mass production of human beings" (212). My thesis not only acknowledges this, in particular in my second chapter on manufacturing humans, it also demonstrates the Gothic features within this aspect of our "global consumer culture" (Spooner 23). "Gothic sells," asserts Spooner (23), and so too does cloning. Thanks to Dolly, cloning has also become "big business" (23). Not only has it sparked press and media attention which has extended from Dolly to maverick scientists and ethical concerns over therapeutic and pet cloning,²⁸ Hollywood stars have also begun to take on the role of clones²⁹ as cloning has become a mainstream topic of interest. The fascination for Gothic which Spooner outlines

²⁸ In April 2014, channel 4 televised a one-off film entitled "The £60,000 Puppy: Cloning Man's Best Friend" which documented a competition for a British dog owner to have their pet cloned and starred South Korean scientist Hwang Woo-suk.

²⁹ Examples include Mark Romanek's 2007 adaptation of *Never Let Me Go* in which Keira Knightley, Carey Mulligan and Andrew Garfield all play clones, and Duncan Jones's 2009 *Moon* in which Sam Rockwell plays multiple clones.

is to some extent mirrored by the cloning discourse, and the fiction this thesis explores enables us to envision a future in which the science of cloning has taken the next logical step towards humans, turning humanity itself into a commodity. Spooner, however, describes the Gothic as "a genre" which is "profoundly concerned with the past" (9), suggesting that the notion of a "Gothic calendar," which she discovered and bought at her local mall in 2002, is paradoxical because it points towards "what is about to happen in the future" (12). My own thesis, in contrast, suggests a change in direction of the Gothic from the past to the future, a move which has been acknowledged by Gothic critics such as Fred Botting.

Botting's interest in the posthuman, however, focuses primarily on the cyborg rather than clone, but he also states that "Gothic calls into question the power of science to guarantee a comfortable future," with scientific discovery, from *Frankenstein* onwards, being conveyed as "as much a threat as promise" ("Aftergothic" 279). Botting includes clones in his list of posthuman figures, describing "a fantastic flight from a humanised world and towards an inhuman technological dimension, figures for developments in genetic and information science, cyborgs, mutants, clones" (*Limits* 14). Botting envisions a posthuman world in which the "monsters of corporeal and scientific transformation" are virtually "assimilated to reality" ("Post-Millennial" 503). He briefly analyses *Never Let Me Go* in relation to monstrosity in his 2013 essay but he has not, however, made cloning a primary focus of his work thus far. Similarly, other critics, such as Judith Halberstam, Katherine N. Hayles and Elaine L. Graham, speak in general terms when discussing the posthuman subject, focusing primarily on the cyborg. While their research has been influential, in particular for my second chapter on manufacturing humans, my thesis takes

their research further through a specific focus on the clone. The clone as posthuman subject differs significantly from the cyborg, which can be clearly distinguished from the human through its lack of "bodily excess" (Botting, "Future Horror" 150), through its uncanny similarity, which, I would argue, aligns it more closely with the Gothic.

Sara Wasson closely aligns cloning and the Gothic in her essay entitled, using a quotation from *Spare*: "A Butcher's Shop Where the Meat Still Moved." Wasson's analysis of the double within cloning narratives complements my own research, which extends her analysis by recognising the reversal within cloning narratives from a focus on the double as monstrous other, to a more sinister portrayal of the original. As Wasson explains, "the monstrous body" within the three cloning narratives she analyses, "is the body of the organ *recipient*, a body monstrous in its artificially enhanced ability to assimilate the tissue of others" (73). While Wasson is limited by space to just three works of fiction, my own thesis expands on her examination of the clone as double, demonstrating that this reversal of the double is not restricted to organ harvesting, but is more broadly evident within cloning narratives, such as in the films Michael Bay's *The Island* (2005) and Duncan Jones's *Moon* (2009). Wasson discusses the market for organ harvesting, and my thesis expands upon her research in the fourth chapter. Despite analysing texts published before and after Dolly's creation, Wasson does not historicise the texts she analyses, disregarding changes within fiction brought about post-Dolly.

Central to my thesis is the portrayal of clone as other, which brings the issue of monstrosity to the fore. Recent contributions to monster theory have described a shift towards "sympathising with monsters" (Botting, *Limits* 13). As the monster becomes less monstrous, Botting suggests, society loses a sense of the self, erasing "all human

distinctions and differences" (*Limits* 158). My thesis relates monster theory to the clone, revealing that changes within conceptions of monstrosity are also reflected in altered perceptions of the clone, with a more sympathetic portrayal in post-Dolly texts. In *Monster Theory* (1996), Jeffrey Jerome Cohen explains that the monster both attracts and repels; it deconstructs categories and takes ambiguous shapes. The monster is "dangerous," Cohen asserts, "a form suspended between forms that threatens to smash distinctions" (6). Cohen's description applies as readily to the clone, as my thesis shows, and his understanding of the monster informs my analysis of the clone within contemporary fiction. Huet's *Monstrous Imagination* (1993) traces the history of the monster, relating it to the ancient legend of the golem: "an uninformed mass without a soul" (239). One of the concerns often raised in relation to human cloning is that a clone would not contain a soul, as exemplified in some of the texts this thesis analyses, including Kazuo Ishiguro's *Never Let Me Go* (2005) and David Mitchell's *Cloud Atlas* (2004).

My thesis explores fictional portrayals of the clone in relation to the cloning discourse which has arisen post-Dolly, and as such a close analysis of that discourse has been imperative. In addition to my own cultural analysis of cloning, which involves closely analysing media and newspaper reports of cloning, as well as the 1998 Wellcome Trust report, I have also been informed by several critical studies. These include *Human Cloning in the Media: From Science Fiction to Science Practice* (2008), which surveys the cultural significance of cloning, emphasising the importance within the "genealogy of cloning" of developments within human reproductive technologies, labelling both Louise Brown's birth in 1978 and Dolly's birth in 1996 as crucial markers (Haran et al. 19). Gina Kolata, who has published a number of articles relating to cloning in *The New York Times* as well as a book

entitled *Clone: The Road to Dolly and the Path Ahead* (1997), has also helped to inform my research into the discourse on cloning, evidencing the global impact made by a team of Scottish scientists. Dolly's significance is further demonstrated by the fact that news of her creation initiated last-minute amendments of Jon Turney's *Frankenstein's Footsteps: Science, Genetics and Popular Culture* (1998) and Lee M. Silver's *Remaking Eden: Cloning and Beyond in a Brave New World* (1998) to acknowledge that reproductive cloning could no longer be viewed as impossible. Klotzko's *A Clone of Your Own? The Science and Ethics of Cloning* (2006) combines scientific fact with general interest in an accessible overview of the cloning discourse. Klotzko outlines scientific developments and the public's response to them, with what appears a clear agenda to dampen fear, emphasising that a human clone would have the same opportunity for individuality as other humans: "A clone would have the same potential for an open future and an unencumbered ability to be an independent moral agent. We are," Klotzko argues, "far more than the sum of our genes" (151). These texts provide a useful overview of the cultural context and bioethics of cloning, supporting much of my own research and highlighting the global importance of Dolly's creation.

The ethical implications which arise from cloning are central to these texts, and also to my thesis. *Clones and Clones: Facts and Fantasies about Human Cloning*, published shortly after the announcement of Dolly in 1998, provides a critical overview of the pros and cons of cloning, and consists of a collection of essays written by scholars from a range of disciplines including legal, social, bioethical and religious. One of the most influential essays for my thesis is William Ian Miller's "Sheep, Joking, Cloning and the Uncanny." Miller suggests that there are emotional responses, prompted by human cloning, within the

human, such as "disgust, horror and the sense of the uncanny," which reveal that we are "pressing against" the "constraints on being human... in a dangerous way" (87). While his, and other essays within the collection, have provided useful background information to the social implications cloning may have, they only briefly consider the influence of contemporary literature and film, which is the focus of this thesis. Only one of the essays in *Clones and Clones* momentarily connects cloning and the Gothic, with Wendy Doniger pointing out in her essay "Sex and the Mythological Clone" that Gothic novels such as *Jekyll and Hyde* (1886), *The Island of Doctor Moreau* (1896) and *Dracula* (1897) have reacted to specific scientific advances of their time that energised "British society in ways similar to those in which the recent advances in cloning have affected our own society" (115). My own research into how contemporary literature has responded to the cloning of Dolly expands and develops Doniger's observation.

While essays have been written on individual cloning texts - most notably Mark Currie's "Controlling Time" (2009) on Kazuo Ishiguro's *Never Let Me Go* (2005) and Mark Jerng's "Giving Form to Life" (2008) which also analyses *The Island* - the only comprehensive study connecting cloning and literature has been Ferreira's book, which has, as I have shown, limitations. Ferreira concentrates on early cloning narratives, while my own is largely focused on post-Dolly fiction, building on and expanding the research which has already taken place. More than that, however, my thesis expressly connects cloning with the Gothic, filling an evident gap, while also tracing the cultural history of cloning debates over the last four decades. It draws together research from varying fields to provide a comprehensive analysis of fictional portrayals of the clone.

THE GOTHIC AND FEAR

The literary Gothic feeds on cultural fears and anxieties, re-emerging with particular force at times of crisis. For the purposes of this study, what I mean by "the Gothic" is a collection of images, language, tropes and motifs that instil fear. It is prevalent in the cloning discourse, which largely amounts to a discourse based on fear, and the ways in which cloning fiction engages with these fears is a central concern. This thesis examines cultural narratives on cloning which are represented through the media, science, and fictional portrayals, and the central thread connecting these overlapping and interweaving narratives is the Gothic. Gothic fiction such as *Frankenstein*, Martin Tropp explains in *Images of Fear: How Horror Stories Helped to Shape Modern Culture*, still resonates today "because they echo fears that have remained with us" (5), or, in the case of cloning, fears which have grown out of narratives such as *Frankenstein*. Gothic fiction, Tropp concludes, provides "a way to escape the fears of our century and, paradoxically, to face them" (9). Fear is the defining element of the Gothic for my thesis. "Fear is felt" (8), argues Joanna Bourke in her cultural history, and in recent times fear has shifted from a focus on death and disaster to a psychological state. Fear has turned inwards, to a fear of what we are or might become. "Scientists," Bourke explains, portraying them in the role of villain, have "replaced sorcerers in threatening to destroy the world" (5). Following Dolly's creation, the prospect of cloned humans appeared an imminent possibility, with maverick scientists appearing on the scene vying to be the first to clone a human. "In the twenty-first century," Bourke warns, "we must consider the possibility that the most frightening peril is the one we are in the process of forging" (x). As my thesis shows, fear is no longer about the unknown, but the limits, or lack of limits, of the known.

Dolly brought the issue of cloning into the mainstream of public awareness, resulting in what amounts to a discourse of fear. The response to Dolly's cloning repeatedly utilised the language of fear, describing it as repugnant, unnatural and contrary to human dignity. The figure of the clone, a being artificially created from adult body parts, was made real through the cloning of Dolly, forming a direct link to Mary Shelley's Gothic tale. Indeed, cloning provides a perfect vehicle for transferring *Frankenstein* to a contemporary context, and is made more sinister by overlapping with fact. Since *Frankenstein*, Gothic writers have demonstrated a particular interest in the ways in which the artificially created being disturbs notions of the "human" and indeed challenges such categories as the human and the monstrous. In this way, the clone becomes a Gothic trope, a "man-made" figure which continues to disturb distinctions and challenge what it means to be human. Through the figure of the clone, the Gothic explores the deep-rooted fear that the monster lies within each one of us: "we are all Frankensteins, or monsters" (Botting, *Limits* 6). The creation of a human clone challenges our understanding of what is considered to be normal and safe, and involves a confrontation with the uncanny, a term central to the Gothic. Freud describes the uncanny as an effect "often and easily produced when the distinction between imagination and reality is effaced, as when something hitherto regarded as imaginary appears before us in reality" (221). This is precisely what happens with the clone which also, of course, represents the uncanny effect of a repetition of the same, initiating a confrontation with the double. Encountering one's clone is the equivalent of encountering the self. The double is "a thing of terror," according to Freud: it is a "harbinger of death" (195), and it is a figure that continues to resonate, influencing the cloning discourse by doing so.

Cloning repeatedly challenges assumptions, confuses distinctions and confronts taboos, and all this, together with its transgressive nature, connects it directly with the Gothic. While some contemporary critics such as Lucie Armitt suggest the Gothic is everywhere - Armitt describes the Gothic as an "ever expanding 'monster'" (2) - and while there has been much critical debate over definitions of the Gothic, it is a mode characterised by an interest in areas of disquiet and unease. As has been shown, rapid advances in scientific knowledge have produced various anxieties about cloning, and it is from these anxieties that the Gothic appears, as has been the case throughout its history. While formerly the past has been a main focus of the Gothic, in the twenty-first century I would argue it is not so much the past that provokes fear, as the future. This to some extent mirrors nineteenth-century Gothic fiction which brought fears over scientific progress to the fore, a move initiated by *Frankenstein*. Contemporary fiction, as Botting has argued, anxiously portrays the future "as a place of destruction and decay, as ruined as the Gothic past" ("Aftergothic" 279). Chris Baldick and Robert Mighall concur, suggesting the anxieties produced by Gothic fiction are not related to "the persistence of the Gothic past, but the arrival of *the enlightened future*" (283).³⁰ The future is a place where "new Frankenstein and new monsters" are "barely distinguishable," a place involving "identification with monstrosity" (Botting, *Limits* 157). The human can no longer be comfortably categorised by its difference from the other, as the future is also a place where difference has broken down into what Baudrillard has described as "the hell of the same" (113). The Gothic is continuously evolving and has, as such, moved beyond its fixation with the past. Its recent fascination with consumption, commodification and simulation, as charted by critics such as Botting and Hogle, coupled with the recuperation of the

³⁰ The question of whether or not cloning leads to an "enlightened future" is, of course, a moot point.

monstrous, as already discussed, explicitly connects cloning discourse with Gothic theory and practice. The clone is arguably a more frightening prospect than the vampire, werewolf or zombie, due to her overlapping with fact. The clone can no longer be comfortably contained within the realms of fantasy, and furthermore is visually indistinguishable. As Ferreira's title suggests, through cloning "we" are the other, and this in itself is quintessentially Gothic. Cloning is at the heart of recent developments within the Gothic, instigating a move towards what Hogle describes as "simulated life" ("The Gothic" 159), joining the ranks of other Gothic tropes. It points the way for the Gothic still to come.

METHODOLOGY

The writing of this thesis involved four key steps, with each validating and leading naturally to the next stage of my research. In choosing and narrowing down the topic, I turned first to *Frankenstein*, considering how the notion of creation has been transferred to a contemporary context in literature and film. Cloning provides the perfect vehicle for this, since it tests the limits of the human and provides a natural extension of the ideas introduced in *Frankenstein*. Concentrating on cloning as the subject matter enabled me to narrow my focus sufficiently for the purposes of this study, removing the necessity of dealing with more technological creations such as cyborgs. Eugenics is another area which, although I deal with it to some extent, in particular in relation to genetic engineering, is not my central focus.³¹

The next stage, and one which continued throughout the writing of the thesis, involved identifying and analysing cloning literature and film. My initial approach was not confined to a specific time period, covering cloning narratives from Huxley's *Brave New*

³¹ Eugenics is a topic scholars may wish to explore further, however, extending my research in this direction.

World in 1932 to the modern day. Within this, however, patterns began to emerge, revealing a cluster of cloning science fiction novels during the 1970s, which formed a distinct contrast with more contemporary cloning texts, such as *Never Let Me Go*. Discovering this prompted a consideration of the historical context in which the texts were written, which led to the third stage of my research.

The natural next step involved an investigation into the cultural context of cloning, during which the significance of Dolly's creation became apparent. The announcement of this in 1997 impacted globally, resulting in, as I have argued in earlier sections of this introduction, the development of a cloning discourse. This prompted an interest in how fiction influenced, and was influenced by, that discourse, which added another dimension to my research, and enabled me to historicise the relation of post-Dolly debates to contemporary cloning fiction. The issues which emerged most strongly through the course of this stage formed the focus of individual chapters, ensuring the arguments put forward in this thesis are research-driven.

The final stage involved a re-evaluation of cloning fiction, approaching it from a fresh perspective as a result of the research which had come to light. The image of Dolly created, I argue in this thesis, represents a turning point in literary portrayals of the clone which resulted in a move away from science fiction and a closer alignment with Gothic language, tropes and images. The arguments put forth in each chapter were shaped and formulated from the issues which emerged from the discourse on cloning, closely analysing how fiction engages with them.

CHAPTER SUMMARIES

My opening chapter, following on from the cloning discourse this introduction discusses, investigates the real-life maverick scientist which emerged following Dolly's introduction to the world, prompting a comparison with the literary figure of mad scientist made famous through characters such as Frankenstein, Jekyll and Moreau. It closely examines the mad scientist trope, analysing the way the traditional figure, powerfully conjured during the nineteenth century, has changed in contemporary cloning texts, aligning itself with the father figure. While Dale Townshend formulates a link between Gothic paternity and nineteenth-century novels such as *Frankenstein* in *The Orders of Gothic* (2007), my first chapter transfers this to a contemporary context, making explicit the link between paternity and the mad scientist in cloning fiction. The chapter considers how this connection has softened the mad scientist trope in one sense, while also strengthening it in another by combining it with the most traditionally powerful father figure: God. Victor Hoppe exemplifies this in *The Angel Maker*, which is analysed alongside other contemporary texts such as Margaret Peterson Haddix's *Double Identity* (2005), Kevin Guilfoile's *Cast of Shadows* (2005) and Nick Hamm's 2004 film *Godsend*.

Cloning transfers the act of creation to one of production, and in the second chapter, the commercialisation of the human is discussed, drawing on Huxley's *Brave New World* as a background, canonical text. The depiction of the clone as less than human is analysed in relation to 1970s texts, and the debate over what it means to be human is extended to films such as Ridley Scott's *Blade Runner* (1982). With the villainous nature of the mad scientist figure reducing in contemporary cloning texts, as the first chapter shows, a space has opened up for a new villain, and the chief executive fills this gap. This is considered in

relation to cloning texts such as Jon Davison's *The 6th Day* (2000) and *The Island* as well as *Double Identity*. The clone, the chapter shows, is variously described as other, be that copy, double or manufactured being, and treated as slave or victim. This is considered in relation to various texts including *Cloud Atlas* and Nancy Farmer's *House of the Scorpion* (2002). Despite the increased recognition of the humanity of clones in later texts, the chapter demonstrates, their treatment within those texts is far from humane. This is aptly demonstrated in *Never Let Me Go*, a text analysed throughout the thesis.

The clone as monster forms the topic of the third chapter, with analysis exploring the way in which interpretations of monstrosity have evolved, showing how perception of the clone has changed in line with this. The chapter considers varying depictions of the monster, including moral transgression, in relation to Ira Levin's *Boys from Brazil* (1976) and *Cast of Shadows*. With the previous chapter highlighting the commodification of the human, this chapter discusses whether consumer society has become the new monster. An obsession of twenty-first-century society, one which has spiralled thanks to increased scientific and technological knowledge, is the desire to retain youth. While a seemingly futuristic figure, the clone also initiates a confrontation with one of consumerist society's greatest fears: premature ageing. The widely publicised case of Dolly's arthritis brought this issue to the fore, and the chapter discusses how subsequent literary portrayals of the clone, such as *The Angel Maker* and Camille DeAngelis's *Mary Modern* (2007), address this, moving the clone into the realm of monster. It also analyses the monstrous hybrids cloning makes possible in films such as Vincenzo Natali's *Splice* (2009) and Jean-Pierre Jeunet's *Alien Resurrection* (1997).

An analysis of the ethical implications of the advances in science, particularly in relation to therapeutic cloning and related medical advances, is central to the wider discussion of cloning and is addressed in the fourth chapter. This chapter analyses the bioethical debates relating to scientific breakthroughs such as cloning, and shows how fiction engages with them. Cloning has made genetic engineering a viable possibility in the future, and this chapter examines medical advances such as this in Margaret Atwood's *Oryx and Crake* (2003); xenotransplantation in Malorie Blackman's *Pig-Heart Boy* (1997); and saviour siblings in Jodi Picoult's *My Sister's Keeper* (2004). These texts are considered alongside cloning narratives dealing with organ harvesting, including Robert S. Fiveson's *The Clonus Horror* (1979), *Spares* (1996), Sophie McKenzie's *Blood Ties* (2008) and *Blood Ransom* (2010) and *Never Let Me Go*. In the same way as cloning for spare parts prioritises one human over another, so xenotransplantation and saviour siblings prioritise one human over another, be that human or other species, exploring the moral dilemma of whether it is justifiable to destroy one life as a means of saving another.

The fifth and final chapter moves the focus back to social structures, discussing the role of the clone within a family unit. It explores the way in which the clone confuses traditional family roles in cloning fiction such as Eva Hoffman's *The Secret* (2001), *Splice*, Caryl Churchill's *A Number* (2002) and *Mary Modern*, showing in particular how it brings the taboo of incest into the spotlight in texts such as Benedek Fliegauf's film *Womb* (2008), and discusses the notion of inherited memory. It also analyses the first series of BBC America's award-winning drama *Orphan Black* (2013). The emotional impact of cloning is discussed here, with cloning appearing to prevent the necessity of letting go after loss, but in doing so stunting natural human development and growth. Press coverage of Dolly has

frequently speculated upon the potential for cloning to destroy the family unit. Few contemporary cloning texts disagree. Throughout, the future is shown to be the new locus of fear, a locus which has replaced the Gothic's previous preoccupation with the past. It is a future that is filled with uncertainty, speculation and doubt.

Chapter 1

The Mad Scientist and Gothic Paternity

This thing of darkness I
Acknowledge mine
The Tempest, V. i.

Thou art my Father, thou my Author, thou
My being gav'st me
Paradise Lost

The mad scientist trope, like the discourse on cloning, is one enveloped in fear. That fear was brought to life following the cloning of Dolly, when the sinister trope, previously confined to fiction, appeared to be echoed in real life. This chapter examines some eccentric real-life figures and the impact they have had on the cloning discourse, before moving on to fictional representations of the mad scientist trope. Existing research into the fictional use of the mad scientist tends to focus on how it impacts on public perceptions of science in a detrimental way. As Lindy A. Orthia states, scholars typically claim that villainous scientific figures in fiction represent a critique of science, relating it to "societal discomfort or negativity towards science" (526). Scientists frequently object to fictional portrayals of the "mad scientist," suggesting that they heighten public misconceptions about science and ignite fears that a ruthless individual could transgress moral boundaries in the name of science, and indeed, may already be doing so under a veil of secrecy. Michael Crichton, author of the cloning classic *Jurassic Park* (1990), counters such criticisms by declaring that fiction's role is to entertain rather than reflect reality, absolving the ethical responsibilities of writers in doing so (Schummer 99-100). Scientists are

justified in being concerned, however, given the way in which the public perception of science as a whole is guided by fictional portrayals, as the 1998 Wellcome Trust report shows. The mad scientist trope shows society's relationship with scientists during different historical periods, revealing underlying anxieties (Gerlach and Hamilton 82). The assumption, held both by the public and many critics, concerning the mad scientist trope is that it represents amoral scientists, an amoral science. It is an assumption the media have shown themselves eager to promote in their portrayal of real-life maverick scientists, one that generates interest by fuelling alarm, encouraging the public to buy their papers or watch their shows.

The next section examines the portrayal of real-life maverick scientists bestowed by the media and press, and by the scientists themselves. The image they present largely reflects the traditional mad scientist trope, which this chapter analyses, in particular in relation to *Frankenstein* and the nineteenth-century Gothic texts which followed. These are the fictional mad scientists the public most frequently recall in relation to cloning, as the Wellcome Trust report shows, and the chapter moves from them to 1970s cloning fiction, a time when cloning as a topic first came into prominence. These cloning texts bring the issue of the family into focus, and the next section considers the "new-age father" construct that developed around that time. The altered perception of fatherhood has been reflected in the fictional mad scientist trope in contemporary cloning narratives, as this chapter shows, with the mad scientist and father figure combining. Although seeds of this transformation can be seen in nineteenth-century texts, these present a far more sinister image, one which appears to be reflected in some of the real-life cloning mavericks which emerged after the announcement of Dolly's creation.

THE MAD SCIENTIST MADE REAL

With reality continuing to mirror fiction within the discourse on cloning, the threatening figure of the mad scientist has loomed large in the late twentieth and early twenty-first centuries, to some extent justifying fears that now the capability to clone humans exists, it could easily be manipulated by an unscrupulous individual. "We are going to become one with God," declared the notorious Richard Seed on National public radio, rather unhappily echoing Victor Frankenstein's Promethean ambitions. A nuclear physicist from Chicago, Seed emerged on the scene shortly after Dolly's creation, announcing his intention to be the first to clone a human before federal law was enacted to ban the process, volunteering his wife's womb for this "holy purpose" (Klotzko xix). He declared his objective to set up a human cloning clinic as a "profitable fertility clinic," sparking criticism for his monetary and egotistical motivations (Seed). Presenting himself respectably in a suit and tie, his outward appearance, however, was not out of the ordinary, though attempts were made by the media to demonise him:

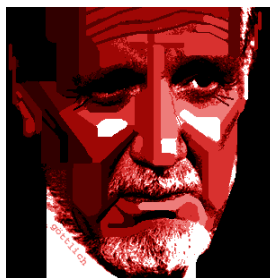


Fig. 3. Richard Seed bathed in inferno red (P. Cohen).

TIME described him as an "oversize man" who "looks like an Old Testament prophet" (Nash et al., "Cloning's" 58), a description linking him to the fictional mad scientist Moreau which this chapter later analyses. In particular it is Seed's words, spoken in an

authoritative, gravelly tone, and the implication behind them which provoke revulsion – made if anything more sinister by his serious presentation and credentials which are impressive enough to ensure his voice is heard.³² Indeed, the media have proved eager to air his views, using the controversy surrounding him as an opportunity to arouse interest and stimulate debate. Reputable scientists, on the other hand, have continually distanced themselves from the more "eccentric" Seed, though *ABC News* reported that "there are no scientists who have dismissed his claims out of hand" ("Are the Clones"). Seed became the focus of numerous network-television shows, received extensive coverage from the American press, and prompted angry debate in Congress and "stark warnings" from the White House (Johnson). Seeking funding for his controversial human cloning project, Seed increased concerns over inadequate legislation to police cloning, by suggesting he would travel to Mexico to carry out his experiments if necessary (Petersen 82). Seed also appeared on the second of a three-part documentary on the transhuman, directed by Belgian visual artist and filmmaker Frank Theys in 2006 (*Technocalyps*). Seed stated: "We are going to become Gods, period. If you don't like it, get off. You don't have to participate, you don't have to contribute, but if you are going to interfere with me becoming God,³³ then we'll have trouble. There'll be warfare" (Baxteru). The documentary explores humanity's quest for immortality and the prospect that humanity is not the end product of evolution. The inquiry includes a number of interviews by top experts and thinkers on the subject worldwide, and Seed's contribution is both serious and starkly honest. He has a vision for the future in which human cloning plays a central role, leading towards immortality. While presenting himself as a scientific expert, his vision and lofty ambitions

³² Seed has a Harvard PhD in Physics and a background in fertility treatment and embryo research.

³³ Seed appears to display a form of "God complex."

align him more closely with the "mad scientist" construct from Mary Shelley's novel, commenting during his radio interview: "I've said many times that you can't stop science..." (Seed).

While Seed has the outward appearance of a conventional scientist, Raël presents himself as a far more eccentric and troubling "mad scientist" on the cloning scene. French sports journalist Claude Vorilhon changed his name to Raël following an alleged meeting with extra-terrestrials named "Elohim"³⁴ near a French volcano in December 1973. He claims these aliens later transported him to their planet, stating they created humankind through cloning in laboratories more than 25,000 years ago and have passed on to him the secrets of cloning.³⁵ Raël formed the Raëlian Movement shortly after this, publishing several books³⁶ and making a number of public appearances to promote his message. The movement claims to have more than 35,000 members across eighty-five countries, with a particularly strong presence in Switzerland,³⁷ where in August 1997 nearly one thousand people gathered to celebrate the cult movement. "Sects," Philippe Borgeaud, a professor of religious history at Geneva University has commented, "don't only provide spirituality, they give a power or importance to people who are lacking it" ("Switzerland"). Though Raël may seem too eccentric a figure to be taken seriously by mainstream society, he has prompted a significant band of loyal followers. Appearing in hippy clothes and surrounding himself with a harem of attractive young women, Raël initially adopted the symbol of a

³⁴ "Elohim," according to Raëlians, translates to "those who came from the sky" (Beyer, "The Elohim").

³⁵ There are similarities with Robert Zemeckis's 1997 Hollywood movie *Contact* starring Jodie Foster.

³⁶ His books include *Le Livre qui dit la vérité* ("The Book which Tells the Truth") in 1974; *Accueillir les extra-terrestres* ("Let's Welcome the Extra-terrestrials") in 1979; *La Méditation Sensuelle* ("Sensual Meditation") in 1980 and *Oui au Clonage Humain* ("Yes to Human Cloning") in 2001.

³⁷ The Swiss involvement in cults was highlighted in 1994 by the deaths of 48 members of the Order of the Solar Temple ("Switzerland").

Swastica³⁸ inside a Star of David to promote his message, a symbol he claimed to have seen on the Elohim spaceship:



Fig. 4. Official Raëlian symbol: a hexagon and Swastika entwined (Daily Mail Reporter).

Raël was initially met with ridicule, as shown by his 1988 interview on the Late Late Show where he is mocked by his interviewer, Gay Byrne, and jeered by the studio audience (TheInveritas). He subsequently made a number of bold claims that initiated controversy and disgust, including that he could resurrect all those who died following the September 11th terrorist attacks.

Raël's peculiar appearance and eccentric proclamations, in which he aligns himself with almond-eyed aliens, provide the impression of him as more of a fictional "sci-fi" character than a scientific threat. His influence, however, was made more significant when in May 1997 the International Raëlian Movement formed a company to fund the research and development of human cloning: Clonaid. At a press conference held in December 2002, Dr Brigitte Boisselier, a Raëlian Bishop and CEO of Clonaid, as well as a former research chemist from France, announced the birth of "Eve," the first child born through human reproductive cloning. The choice of name, also the title of a cloning episode of television series *X-Files*, is significant as an indicator of a new race of beings, setting it apart from the normality of Louise Brown's birth in 1978. Eve was reported as being "the

³⁸ Raëlians argue that banning the swastika because of its Nazi connections would be like banning the Christian cross because the Ku Klux Klan used to burn them as symbols of their own hate (Beyer, "Official").

genetic double"³⁹ of her thirty-one-year-old mother, created using the same technique as Dolly (Marsh and Utton). Though she provided no evidence to back her claims, Boisselier said a panel of independent scientific experts would be allowed to carry out DNA tests within the next eight or nine days. This offer was later withdrawn, with Clonaid claiming it went against the family's rights to privacy.

Amongst Clonaid's many critics was the man who in 1994 was responsible for the world's oldest mother (age 63), and is the next "mad scientist" to emerge on the cloning scene. The Italian gynaecologist Severino Antinori blamed the media for negatively clouding public opinion on cloning, claiming it as a viable opportunity for infertile couples to have children. Unlike Raël, whose eccentricities placed him at society's margins, Antinori made his presence felt amongst the mainstream, seeking to "bring society with [him], and persuade people it is right in rare cases to help infertile couples" ("Profile"). Antinori sought to present a more acceptable side to cloning, which is reflected by his public persona. While Raël wore hippy clothes and talked of extra-terrestrials, Antinori presented a more sober image:



Fig. 5. Italian embryologist Severino Antinori (Sloan).

³⁹ Use of the term "double" has sinister connotations connecting it with the Gothic.

There is, however, a hint of eccentricity implied by this widely distributed image of Antinori, with his glasses becoming the focus of the shot: on the one hand a symbol of studiousness, on the other giving the effect of doubling through their link with the disparaging term "four-eyes." As with the reddened image of Seed shown earlier, the media sought to highlight the maverick status of these scientists. In an interview with the *Sunday Herald*, however, Antinori stated that the UK government "want to block scientific research – as if they were the Taliban," claiming that a ban on human cloning was denying people their human rights ("Fertility Doctor"). While the government and more reputable scientists sought to blacken his name, Antinori turned the tables by claiming the moral high-ground for himself. Boasting more than a thousand messages of support from the UK, Antinori declared his intention to visit Britain to campaign for the right to have children, and to start producing the world's first human clones, taking advantage of a legal loophole he had found. Wilmut himself entered into the argument, commenting that given the difficulties experienced from cloning,⁴⁰ Antinori was unlikely to successfully clone a human, but feared that through his attempts he may harm women and destroy embryos. The Roslin Institute's Harry Griffin expressed frustration at the amount of media attention surrounding Antinori: "When Antinori says something everyone in the press, including yourself, seems to be unable to resist writing about it"⁴¹ (Meek). Despite the scepticism expressed by other scientists, Antinori generated enough fear to prompt the House of Lords to introduce an emergency bill making human cloning a specific criminal offence. Serbia called for a similar cloning ban after he visited Belgrade around a year later. Claiming that

⁴⁰ Nearly six years of furious experiments around the world have shown that making replicas of animals is hard and gets no easier (Meek).

⁴¹ This emphasises public interest in the subject, the press wrote about it because they felt confident that doing so would help to sell their papers.

more than 1,500 couples had volunteered for his research programme, Antinori announced in November 2002 that cloning had successfully induced pregnancy in three women, with the first child expected in January 2003. Once again, his claims remain unproven, but his presence has been felt across the world.

Working closely with Antinori following Dolly's creation was the American fertility expert Panos Zavos. He and Antinori vowed to bring about the first human pregnancies through cloning before the end of 2001. Marketing himself as a "world class doctor" on his website "The Zavos Organization," Zavos uses the strapline "where people are our business," emphasising the commercial potential infertility problems can bring ("Intro"). The website's lavish introduction provides a lengthy biography detailing the doctor's impressive credentials⁴² and also lists numerous affiliate fertility companies and pages. His copious media appearances⁴³ have revealed him to be surprisingly ordinary, even showing him injecting occasional humour and light remarks, such as a quip during his interview with National Geographic about his daughter⁴⁴ which makes him appear more accessible through his role as father. During an interview with Bill Goodman on *One to One*, Zavos describes himself as a "good friend" of Louise Brown, once again making himself appear more personable through the positive association, as well as seeking to normalise cloning through its connection with the now broadly accepted IVF treatment (Zavos). Unlike Seed he does not claim to be God, but rather suggests he is doing God's work, stating he seeks to help people who have exhausted all other avenues to have children by using "therapeutic

⁴² Zavos has a PhD in Reproductive Science, Biochemistry & Statistics, a Distinguished Alumnus award from Emporia State University, Student Leadership Award from the University of Minnesota and an Honorary Professorship from the China Academy of Science.

⁴³ Zavos has appeared on 60 Minutes, The Connie Chung Show on CNN, BBC World, Fox TV, CNN News, National Geographic, TV Asahi (Japan), ZDF TV (Germany), Nine Network TV (Australia), National TV (Israel) and other radio and TV programmes across the world. He also has a Facebook page.

⁴⁴ Zavos comments his daughter suggested dressing a cloned baby girl in "hot pink" (Nicolahoffman).

cloning." Therapeutic cloning is a term which refers to medical research using cloned embryos which are prevented from coming full term. Zafos, however, distorts the term by using it to refer to reproductive cloning, in a likely attempt to soften the response by suggesting it will be used for beneficial purposes rather than merely to reproduce. Zavos attempts to present himself as an accomplished doctor and morally rational man, dressing in a conventional way in business suits, though in the profile picture shown on his website he nonetheless adopts a confrontational stance:



Fig. 6. Richard Seed (zavos.org).

The media, on the other hand, sought to emphasise his contentious status. In 2001, BBC2 broadcast a *Horizon* documentary entitled "Cloning the First Human Being" which emphasised the "catastrophic illnesses" which are likely to result from any attempt to clone a human.⁴⁵ Zavos countered such arguments by stating he had found a way of screening embryos for abnormalities. However, embryologist Lorraine Young, from the Roslin Institute laboratories in Edinburgh, responded to this by calling them "ludicrous and irresponsible claims" ("Cloning the First"). Wilmut backed Young's misgivings, emphasising that we simply do not know the possible risks involved in human cloning and that the resultant abnormalities and suffering could be horrific. In early twenty-first-century

⁴⁵ The programme emphasises that cloning humans would result in 70% being born mutated ("Cloning the First").

culture, a split has been established between conventional scientists and mavericks, with Zavos's own voice suppressed.⁴⁶ *Horizon's* narrator described the laboratories in which Zavos worked as "secret," creating the impression that his work is underhand and shrouding it in an air of mystery and intrigue ("Cloning the First"). This places Zavos in the "mad scientist" role, for he, like Frankenstein, seeks distant locations to carry out his "secret toil" (Shelley 53). In 2002, Zavos announced that three women in Beirut, and the same number in Britain, had been implanted with cloned embryos. A live interview was conducted in January 2004 with Zavos by Alex Thomson, presenter of *Channel Four News*. During this interview, Thomson made stringent efforts to differentiate Zavos from reputable scientists, destabilising his credibility and firmly categorising him as a "maverick" scientist (Haran et al. 77). Though it was later revealed that the women failed to become pregnant, Zavos vowed to continue with his work. In the same month, the *Evening Standard* ran an article entitled, "The Truth about Dr Clone," suggesting Zavos was guilty of a number of health and safety and financial offences, including being sacked from one hospital for "unethical and illegal behavior" (Langton). He raised more controversy in 2009 when he announced cloned embryos had been transferred to four other women who were prepared to give birth to the world's first cloned babies. Again, none of the embryo transfers led to pregnancy, though Zavos emphasised - in language suggesting he saw himself as protagonist of a fiction - that this was only the "first chapter" of his attempts (Schlesinger).

These figures in contemporary science resonate with fictional characters in interesting ways. The mad scientists of Gothic fiction, such as Frankenstein, Jekyll and Moreau, much like the modern-day maverick scientist, are portrayed as characters who

⁴⁶ For legal reasons, Zavos was not interviewed for the programme.

relentlessly pursue a scientific goal, frequently endangering themselves or others in the process. The mad scientist shows signs of insanity, like Seed declaring himself equal with God, or eccentricity, such as Raël suggesting aliens gave him cloning instructions, and is egotistical, deemed irresponsible by the outside world. The creation of Dolly proved the catalyst for the emergence of the real-life mad scientist in a time which *Horizon* described as "dawn of the clone age": the race to clone the first human began. Governments, the broader scientific field and even the media sought to paint these scientists as "mavericks" who are more like fictional characters than legitimate experts. Patrick Dixon, a British expert on the ethics of human cloning, declared: "We need an anti-cloning global summit agreement that human cloners will be outlawed, made pariahs of society, hounded from place to place and never allowed to work in science again" (Borger). The backlash against the cloners was intense, with desperate attempts to portray them negatively. Indeed, it was not a difficult picture to paint. Either through their words, actions or presentation, each of these scientists represented themselves, and were represented, in a way that fits the mad scientist mould. Their expertise and self-confidence ensured their opinions were heard – they sought out their own publicity, each carrying out numerous interviews and welcoming the media spotlight. Now the technique of cloning had reached the point where cloning humans was possible, their claims were not so easily dismissed. This proved enough to generate speculation and fear, and it is in this way that these scientists contributed directly to the discourse. The more sidelined the scientists became, the more anxieties they produced.

The fear that unscrupulous individuals could manipulate cloning for their own gain, that fictional scenarios could become real, appeared to be fulfilled through the public

personas of these scientists. Their presence increased the mystery and intrigue surrounding cloning, elevating public fear. The impression created was that no one was quite sure what advances were being made in the background, as shown by the team of South Korean scientists who claimed in *Science* in February 2004 that they had cloned thirty human embryos and harvested stem cells from one of them (Hwang). However, when these claims were exposed as fabrications in 2006, the once celebrated Professor Hwang Woo-suk was charged with fraud, suggesting even apparently reputable scientists have the potential to move beyond acceptable limits.⁴⁷ The "mad scientist" was no longer restricted to the pages of fiction but had become a part of scientific reality. These men who vowed to stop at nothing to achieve their goals appeared more frightening to the public by their link with fictionalised characters, inducing widespread alarm. The more publicity they courted and the more eccentric they appeared, the more fear was generated. The public had already demonstrated a mistrust of science, and the presence of these scientists served to justify it.

THE TRADITIONAL MAD SCIENTIST IN FICTION

These scientists conform to a trope developed through a number of fictionalised portrayals of mad scientists, most particularly in nineteenth-century Gothic portrayals. The nineteenth century saw the emergence of the mad scientist as a new villain within Gothic literature, as fears concerning the rapid progress of science came to the fore. Following *Frankenstein*, as Maggie Kilgour states, revealing fascination as well as fear, the mad scientist has become "one of the most popular of the gothic's bag of tricks" (40). Science became the new supernatural, as horror began to focus not so much on ghosts of the past, as on ghosts of the

⁴⁷ This was seen as one of the greatest frauds in scientific history. However, his separate claim to have created the world's first cloned dog, an Afghan hound named Snuppy, was validated (Ingham).

future. Isolating themselves from mainstream society, these fictional characters occupied hidden, gloomy spaces serving as outward projections of their inner selves. The recollection of fictional characters like Frankenstein, Jekyll, Raymond and Moreau – all of whom artificially create using science – were collectively instrumental in fuelling the alarm caused by real-life cloning scientists, and Frankenstein in particular is alluded to repeatedly. This chapter analyses these characters and later also analyses cloning scientists in 1970s fiction, demonstrating how they relate to Gothic paternity. It then focuses on contemporary cloning fiction, arguing that, as the mad scientist emerges into real life, the fictional trope becomes less villainous by being merged with the father figure.

The significance of the father figure within early Gothic literature has been demonstrated by Dale Townshend in *The Orders of Gothic*, in which he shows paternal authority to be seldom naturally or biologically derived, but rather based on a complex process of metaphorical substitution (98). With cloning narratives in the twenty-first century, this "metaphorical substitution" is replaced by cloning, as the scientist takes on the role of father. Moving beyond the mad scientist's portrayal as an amoral man, he is frequently portrayed as a misguided father instead, lured into misdeeds by the corruptive influence of science and a twisted form of paternal love. In this way, contemporary cloning fiction softens and complicates assumptions about the mad scientist trope, with the seeds for this transference evident in earlier fictional portrayals.

THE ENDURING MYTH OF *FRANKENSTEIN*

Frankenstein has come to be seen as the epitome of the mad scientist trope – significantly responsible for the "artificial creation" of a living being – and the character most readily

brought to mind in relation to it. In his influential book *Frankenstein's Footsteps: Science, Genetics and Popular Culture*, Jon Turney declares cloning to be "the best evidence yet for the advent of Frankenstein science" (179). The news that a scientist had used electricity to create life from inanimate matter immediately recalled the Gothic tale. *TIME* magazine opened their special report on cloning with the comment: "one doesn't expect Dr. Frankenstein to show up in wool sweater, baggy parka, soft British accent and the face of a bank clerk..." (Krauthammer). Wilmut may not neatly fit the traditional mould of "mad scientist," but the similarities are nonetheless clear, even to the extent of using "the nice Frankenstein touch of passing an electrical charge" through the cell to induce growth⁴⁸ (Krauthammer). Science is generally acknowledged as an optimistic field, one that repeatedly surges forward in the name of progress. This has obvious benefits for society, with Wilmut seeking to emphasise that the cloning breakthrough opens doors for the study of genetic diseases. It opens more doors than this, however. Wilmut proved through the creation of Dolly that life could be created from adult body parts, as Frankenstein had produced his creature, acknowledging that there is "no intrinsic biological reason" that a human could not be cloned now too (Kolata, "Scientist").

Frankenstein presents a scientist whose thirst for knowledge has blinded him to everything else. Recent critical analysis of the text has shifted from a focus on the absent mother to paternity.⁴⁹ The lack of restraint exercised by his father, Victor suggests, leads him to the lofty ambition of creating a new race of beings who would turn to him in worship. He exclaims:

⁴⁸ Electricity is used in film versions of *Frankenstein*, but it is not explicitly specified in the text.

⁴⁹ This link is often interpreted biographically: see Maurice Hindle's 1985 introduction of the text and Chris Baldick's *In Frankenstein's Shadow* (1987). Dale Townshend extends this to consider the "conflicting discourses of fatherhood" at the time (136).

A new species would bless me as its creator and source: many happy and excellent natures would owe their being to me. No father could claim the gratitude of his child so completely as I should deserve theirs. (52-3)

Frankenstein seeks both to play God and be worshipped as him. Not only does he hold this godlike vision, he also envisions himself as an earthly "father," expectant of receiving "gratitude" from his "child." This notion is played out during the "birthing scene" in which his child reveals "yellow skin" and a "shrivelled complexion" (56), much as a child born with jaundice. Frankenstein's first act as a father is not one of affection, however, but a rejection from birth comparable with a form of post-natal depression, or more than that, revulsion. Victor is repelled by the physical deformity of his created being, viewing him not as his child but as a repulsive threat as he shrinks from his child's outstretched hand. In Kenneth Branagh's 1994 film adaptation, Frankenstein appears interestingly reluctant to accept the role of parent. It is left to the creature himself to acknowledge at the end, "he was my father" (*Frankenstein*). In Stuart Beattie's 2014 film *I, Frankenstein*, in contrast, the connection between the creature, given the name Adam, and his creator is made explicit, with Naberius telling Adam: "We are all the sons of our fathers."

The role of "creator-father" played by Frankenstein is developed in later cloning fiction. Shelley's own neglect by her emotionally distant father, to whom she is described as having an "excessive and romantic attachment" and to have viewed as a "God," is reflected in the text by the creature's own sense of neglect (Hindle xi). As his language and knowledge increase, his focus turns to an internal examination of the self: "where were my friends and relations? No father had watched my infant days, no mother had blessed me with smiles and caresses" (117). In understanding his own wretched place in the world, it is

significantly the role of father the creature feels the loss of first. Frankenstein continues to view his creature as beneath humanity, seeking to exercise his paternal right to kill, despite being "moved" (141) by his eloquent appeal:

You, my creator, detest and spurn me, thy creature, to whom thou art bound by ties only dissoluble by the annihilation of one of us. You purpose to kill me. How dare you sport thus with life. Do your duty towards me, and I will do mine towards you and the rest of mankind. (96)

Townshend suggests Victor is torn between a sense of paternal responsibility and a broader sense of duty towards mankind, ultimately taking a course of action which would have been approved by Shelley's own father, Godwin, in ensuring his utilitarian concerns override his paternal duty (150). Rather than being torn, however, Victor uses these as haughty excuses to justify his self-interested actions. He fails in his duty of paternal care. While Godwin had previously expressed reservations about loving a monstrous child, Shelley, in contrast, famously declares "affection" for her monstrous creation in her 1831 introduction: "I bid my hideous progeny go forth and prosper. I have affection for it, for it was the offspring of happy days" (10).

THE VICTORIAN MAD SCIENTIST AND GOTHIC PATERNITY

Victorian Gothic replaced supernatural terrors and distant landscapes with biological horror, culminating in the figure of the "mad scientist" who, like the Victorian father, sought to wield ultimate control. Darwin's theory of evolution challenged notions of human development being fixed, leading, in the latter half of the century, to fears it could degenerate into "primitive" forms. Such fears were picked up by late Victorian Gothic

writers through their representation of mad scientists such as Jekyll, Raymond from Arthur Machen's *The Great God Pan* (1894), and Moreau. These characters adopt a rational approach in this increasingly secular age, but produce malign and threatening offspring expressing primarily a fear of degeneration. These narratives, like *Frankenstein*, focus on illegitimate procreation, and can be seen as precursors to cloning fiction. Unlike *Frankenstein*, the Victorian mad scientists do not aspire to be gods; instead they become them.

The novel which most clearly exemplifies these ideas is Robert Louis Stevenson's *Strange Case of Dr. Jekyll and Mr. Hyde* (1886). It presents the uncomfortable portrayal of a well-respected, apparently ordinary,⁵⁰ middle-class man's degeneration into a monster, and undermines the social and professional respectability of science emerging during the nineteenth century. The traditional mad scientist is seduced by science; like Prometheus and Faustus his focus is on overreaching, refusing to be constrained by conventions or moral concerns. Before revealing his mystery to Lanyon, Jekyll declares that his secret will open up "a new province of knowledge and new avenues to fame and power ... your sight shall be blasted by a prodigy to stagger the unbelief of Satan" (119). Yet as Jekyll's experiments with his double identity increase, he falls "before the assaults of temptation" (141) as "the power of the drug" (136) takes hold. Responding to Darwin's evolutionary theory, which emerged during the late 1850s, the animalistic nature of Hyde tapped into fears of species degeneration, that human identity is neither stable nor fixed. It is the fear that science has the power to bring about such detrimental change. While in earlier Gothic narratives the menacing villain persecuted innocent victims, as the Gothic moves towards

⁵⁰ It is the reflection of the everyday in the novel – both through the respectable Jekyll and reasoned narrator Utterson as well as their various acquaintances – which made this such an uneasy read for the Victorians.

science fiction the scientist becomes the new villain, persecuting life itself. Nineteenth-century Gothic novels like *Jekyll and Hyde* reacted to scientific theories such as evolution and degeneration in much the same way as late twentieth and early twenty-first-century culture has responded to cloning (Doniger 115).

Daniel Pick and Gillian Beer have discussed some of the ways in which theories of degeneration and evolution have influenced nineteenth-century writers. However, the ways in which these theories have come back to the fore in contemporary cloning narratives have been thus far under-examined. The roots for this progression lie in texts such as *Jekyll and Hyde*. Darwin argued that "man still bears in his bodily frame the indelible stamp of his lowly origin" (619), and this is mirrored in Stevenson's description of Hyde's inferior stature and unformed nature: Hyde was "less robust and less developed ... so much smaller, slighter and younger than Henry Jekyll" (128). Jekyll has unleashed a "child of Hell" (143), and indeed, as with a child, he observes how the body of Hyde had "grown in stature" (136). As Frankenstein with his creation, Jekyll is repulsed by his baser self, yet he also accepts ownership of him as a father would his wayward child: "Jekyll had more than a father's interest; Hyde had more than a son's indifference" (137). When Utterson inspects Hyde's room, he finds it "bore every mark of having been recently and hurriedly ransacked; clothes lay about the floor, with their pockets inside out; lock-fast drawers stood open..." (62): a room resembling that of an unruly teenager. Jekyll describes Hyde as "the evil side of my nature" (128), admitting "I bore the semblance of Edward Hyde" (128), as a father may recognise a former version of himself through his child. The creation of Hyde is at first, for Jekyll, a means of acting "like a schoolboy," enabling him to "strip off these lendings and spring headlong into the sea of liberty" (130). It enables him to re-experience

youth, as a father may seek to re-experience youth through his son. As time passes and Hyde increasingly takes control of Jekyll's life, Jekyll turns to God in despair, recalling his own childhood: "when I had walked with my father's hand" (139). Jekyll resolves in desperation to bury "the brute that slept within me" (144), the child of his soul, but that child refuses to lie dormant, to be disowned. Hyde remains to him "closer than a wife ... caged in his flesh, where he heard it mutter and felt it struggle to be born" (146). Jekyll describes the transition as a form of "suicide," and acknowledges despite himself a form of parental bond: "I find it in my heart to pity him" (146). Hyde is an acknowledged part of Jekyll at the same time as Jekyll sees him as someone "other than myself" (148). Jekyll ultimately rejects his "child of Hell": "He, I say – I cannot say, I" (143).

Raymond in *The Great God Pan* similarly rejects his feminised "child of Hell." Raymond forces Mary – whose name signifies virtue – to submit to him for the benefit of science, declaring, "her life is mine to use as I see fit" (Machen 11). Seeking to move beyond "the shadows that hide the real world from our eyes," to lift "the veil" (8), Raymond opens up her mind. He uses her, experiments on her, and leaves her face "hideously convulsed," her soul seemingly "struggling and shuddering within the house of flesh" before she falls "shrieking to the floor" (16). Despite the disastrous results, the scientist remains "perfectly cool" (15) throughout his experiment, while his witness Clarke "felt sick and faint; his knees shook beneath him, he could hardly stand" (16). The child that results from his experiments with science is, like Frankenstein's creature, abandoned by the only parent she has known and as such represents a female version of Frankenstein's monster. As Raymond explains, the child he calls "it" was "for me a constant, an incarnate horror, and after a few years I felt I could bear it no more, and I sent Helen Vaughan away"

(82). As with his fictionalised predecessors, Raymond is lured by the power of science, devoting himself entirely to the pursuit of "transcendental medicine" (8) for more than twenty years. Yet, once again, his act of creation results in the horror of degeneration and the dissolution of the self.

Moreau displays similar devotion to science, revealing another power which science holds: to mould and manipulate matter. Moreau, a "notorious vivisector" (35), gains a reputation in scientific circles "for his extraordinary imagination and his brutal directness" (34) in making "crippled and distorted men" (35). As with Raymond, Moreau feels unmoved by the horrors he creates, describing without emotion: "each time I dip a living creature into the bath of burning pain, I say: this time, I will burn out all the animal" (78). It is the torment suffered by their companions Clarke and Prendick which provide a more human voice: as Prendick listens to the crying of the puma he observes: "it was as if all the pain in the world had found a voice ... it is when suffering finds a voice and sets our nerves quivering that this pity comes troubling us" (38). Neither Raymond nor Moreau show recognisably human feelings, and they are not troubled by empathetic feelings for the beings they create. These stories emphasise the danger to society of science being controlled by amoral men. Moreau shows himself to be intoxicated by science, declaring his mind "truly open to what science has to teach" (74). The result, however, is a man apparently devoid of humanity, at the mercy of excessive pride or hubris. Blinded by ambition and a thirst for knowledge,⁵¹ Moreau is no longer able to see his creations as living beings: "the thing before you is no longer an animal, a fellow-creature, but a problem" (74). In much the same way, later narratives reveal how the clone is not seen as a

⁵¹ Such traits are central to the mad scientist trope and recall earlier non-creationist mad scientist such as Faustus.

sentient being either. For Moreau, it is this which earns him the label "mad," with his actions resulting in Prendick questioning the humanity of every person he subsequently meets.

Moreau, "a white-faced, white-haired man, with calm eyes," an air of "serenity" and "magnificent build" (79),⁵² also clearly resembles traditional images of God the father. His calm and gentle exterior forms a contrast with the sadistic nature that lies within. Yet his sadistic nature presents him more as a Satanic figure than a holy one. Moreau suffers from delusions of grandeur, displaying – a common trait associated with the mad scientist trope – a God complex. Moreau teaches his creatures to worship him, forcing them to obey his Law. "Eat roots and herbs – it is His will," (60) declared the Ape Man, with the capitalisation of "His" further emphasising his deified role. Any association with God would be restricted to the wrath of the Old Testament God. As a father figure, Moreau represents the tyrannical father who rules by fear and not love. Yet he offers a degree of nurture to the gorilla-man, describing "educating the brute ... made the thing read the alphabet," acknowledging, "I was conceited about him" (76). He describes almost paternally how he "was quick to learn, very imitative and adaptive, and built himself a hovel rather better, it seemed to me, than their own shanties" (76). Yet despite the interest he takes in trying to humanise this creation, he remains a "thing" to him, a "brute." He does not nurture him as though a child, and experiments with him "to write an account of the whole affair to wake up English physiology" (76). When the creature reverts to his former self, "squatting up in a tree gibbering" (76), he loses any semblance of paternal interest. Moreau remains morally detached from his creations, his vision and control channeled to

⁵² Moreau can be seen as a literary precursor for the real-life "mad scientist" Dr Richard Seed who was described by *TIME* as resembling "an Old Testament prophet" (Nash et al., "Cloning's" 58).

the progression of science. A typical mad scientist, he crosses moral boundaries and serves as a warning against the blinkered pursuit of science, as a reminder of the need for it to be accompanied by moral constraint.

The traditional mad scientist trope was derived and developed during the nineteenth century, and it is fictional characters from this period which are most frequently recalled in relation to the mad scientist, as well as to cloning, as the Wellcome report and media headlines reporting Dolly, which are discussed in the introduction, show. The emergence of cloning as a literary topic occurred primarily during the 1970s, when reproductive medicine was under scrutiny due to the controversy surrounding IVF, and some of the texts from this period are discussed in the next section.

1970s CLONING NARRATIVES

Rather than focusing on the immoral nature of the mad scientist, 1970s cloning texts bring creation into a family setting. The association of the mad scientist trope and father figure is central to Pamela Sargent's *Cloned Lives* (1976), where astrophysicist Paul Swenson fathers clones in his image. These clones consider themselves to exist outside applied human laws, with cloned siblings embarking on an incestuous affair. Cloning is portrayed here as incompatible with a traditional family unit, an incompatibility which is discussed in more detail in the final chapter in relation to other narratives of the period: *Where Late the Sweet Birds Sang* (1976) and *Solution Three* (1975). Nancy Freedman's *Joshua Son of None* (1973) and *The Boys from Brazil* (1976), again reveal the consequences of introducing clones into a family unit. These texts explore attempts to resurrect historical figures, suggesting that the progress of science not only results in an uncertain future, but

also an uncertain past. In keeping with the Gothic tradition, the past seeps into the present, with the figure of the mad scientist initiating their merger. Freedman's "Uncle Thor" (101) is motivated by lofty ambitions, using cloning to "fight the serpent" (18) and conquer death, and yet he presents a gentler mad scientist figure than those of the nineteenth century, achieved by nurturing his creation, playing more of a paternal role than his adopted father. Even the infamous Mengele in Levin's text reveals a paternal side. A man of contradictions, this doctor inflicts pain rather than producing cures; he is portrayed as an angel of death who creates life. Mengele, played in the screen version by Hollywood hero Gregory Peck, is bathed in whiteness: a colour associated with purity, but also linked to the traditional mad scientist image of the laboratory coat:



Fig. 7. Mad scientist (S. Miller). Fig. 8. Gregory Peck as Mengele, scene still (*Boys from Brazil*).

Like the mad scientists who preceded him, Mengele displays a ruthless tunnel vision, with the screen character proudly declaring the achievement of a "scientific miracle" which has "turned the whole world into a laboratory." And yet, he also displays a fatherly affection for his creations: "Your well-being," he tells his Hitler-clone Bobby Wheelock, "is all that I consider. You *must* believe that. I have consecrated my life to you and your welfare" (217-8). Such associations between the mad scientist and father point the way for contemporary

treatment of the mad scientist trope in cloning narratives, in which the role of father becomes increasingly prevalent.

THE NEW-AGE FATHER

The creation of Dolly brought into focus the increasing vulnerability of traditional family roles again, strengthening fears of the family unit's eventual dissolution. At the same time, late twentieth-century society constructed a new-age father mould: a man who is meant to be loving and caring, a "hands on" dad (Garbarino 13). According to this construct, the father should neither shirk from his parenting duties nor abandon his primary breadwinning role. He should bring to his role of father both strength and dependability – central virtues of masculinity – while leaving behind such traits as aggression also typically associated with men (Marsiglio 99). Change is largely dictated by shifts within society, in particular in the economic sphere. With more women working, men have been forced to play more of a hands-on parenting role, sharing many of the nurturing duties previously taken on by mothers, while continuing to provide financially for their family (Burghes, Clarke and Cronin 10). This constructed ideal of fatherhood is not necessarily favoured by women⁵³ and contrary to consistent portrayals of masculinity. Fathers appear pulled in opposing directions, powerless to control their own destiny and confused about differing perspectives on their role. The new-age father should be a careful combination of gentleness and strength, as epitomised in an iconic poster of the late 1980s:

⁵³ Women appear split. Some believe the "new-age father" is a step towards gender equality, others feel it is men taking over, encroaching on what has previously been their domain and source of power. Some feel it represents a failure on their own part. See Marsiglio 271.



Fig. 9. The new-age man (Rowell).

This vision of manhood is arguably impossible to uphold, yet one thrust upon men by the power of the media and, to some degree, social policy. A number of films around this time promoted this ideal of the sensitive new-age man as father. *Kramer Vs Kramer* (1979), for example, challenged the assumption that a child belonged with the mother following divorce, and more portrayals of the "hands-on father" followed: *Mr Mom* (1983), *Three Men and a Baby* (1987), and *Mrs Doubtfire* (1993), which was adapted from Anne Fine's popular children's book, *Madame Doubtfire* (1993). In 1995, *Jack & Sarah* depicted a man left "holding the baby" after his wife died during childbirth, with a common theme emerging that men are initially left with their children through misfortune rather than choice. Though *Jack & Sarah* emphasises a man's potential to be a good father, it also suggests that the successful combination of fatherhood and a career can only be achieved with the support of a female counterpart (Lupton and Barclay 71). While parenting is generally portrayed as natural for women, these films suggest it must be learned by men. Research into masculinity supports this, revealing a lack of information concerning fatherhood, suggestive of it as a role played by men rather than an essential part of them. Issues dealing with sporting prowess, work and sexual activity are portrayed as far more

⁵⁴ This poster is regarded as a defining poster of the decade and was sold at an auction early 2007 for several thousand pounds (Heald).

central to masculinity than the experience of fatherhood. By the same token it is hard to imagine a book on femininity virtually ignoring motherhood (Lupton and Barclay 4). A possible explanation for this is that the new virtues of fatherhood clash with the construction of masculinity (which focuses on domination, power, assertion and emotional distance) which society has ingrained in men as the appropriate way to behave. The two constructions of fatherhood and masculinity appear to be in conflict.

While parenthood for women, according to sociologists, is tied to their essential biological role of bringing children into the world, fatherhood appears "intrinsically ambiguous and relies upon cultural prescription" (Garbarino 13). Accompanying the ambiguity is an anxiety over the new father model, as culture dictates that men perform a different fatherhood role from their own fathers, showing themselves to be a more committed presence in their children's lives (Marsiglio 40). They are expected to nurture their children rather than merely provide for them. The anxieties facing men as fathers today are worked through in fictional form by many contemporary cloning texts, where the father is merged with the more obviously sinister trope of mad scientist. This has a dual effect: it both softens the traditionally menacing image of the mad scientist, and reasserts the authority of the father, who assumes a paternal role over society as creator-father. It is a merger which realigns the scientist, and indeed the father, with God. The role of creator allows a sense of distance which alleviates some of the pressure within the new-age father model, and aligns him more closely with the construction of masculinity. Contrary to Ferreira's suggestion that cloning leads down a path to men becoming biologically and sexually redundant,⁵⁵ the creator-father role brings back masculine tendencies lost through the new-age father model, enabling fathers to reassert their masculinity. Rather than

⁵⁵ See Ferreira, 71-108.

cloning narratives "prioritising the feminine," as Ferreira has argued (73), the opposite appears true, with contemporary cloning texts merging the scientist and father, while also portraying women such as Miss Emily in *Never Let Me Go* as phallic mother figures, "masculine feminine" women (Hoeveler 114). With society pushing for equality for women, men - or more specifically fathers - were likewise expected, to some degree, to replicate the role of women, as James Garbarino suggests (19). This change was most clearly reflected in the direct nurture they showed their children, a responsibility previously predominantly carried out by women.

THE NURTURING MAD SCIENTIST

The changed construction of fatherhood is reflected in fictional portrayals of the mad scientist trope. The creator-father is expected to succeed where Frankenstein failed: he should nurture the beings he creates. For the created being, the creator takes on a "substitute father" role, but is absolved of some of the guilt and condemnation that absence may cause a biological father. Despite that, and in contrast to the traditional mad scientist image initiated by Frankenstein, the creator-father in contemporary cloning narratives repeatedly shows willing to nurture his creation, accepting a degree of responsibility. Moreover, some of these fictionalised figures embrace the opportunity to offer nurture, to take on a fathering role.

Cloning not only enables the recreation of a living being, it also enables the recreation of a role. *Double Identity*, *A Number*, *Blood Ties* and sequel *Blood Ransom*, and *Godsend* all explore men experiencing a "second shot" at fatherhood as a result of cloning. Those characters who also combine it with the role of the scientist – such as Walter Krull,

Richard Wells and Davis Moore – are able to reclaim a sense of authority and control lost by the new-age father role. These men take an active interest in their creations' lives; they feel and act upon a sense of responsibility for the actions they have taken.

The young adult novel *Double Identity* reinforces the normalcy of the family setting even after a clone is introduced, unlike depictions in many 1970s cloning narratives. The novel counters concerns that cloning would break down the family unit and promotes a more positive outlook⁵⁶ by closely aligning the reader with the clone and linking cloning with the now largely deemed acceptable IVF. Walter Krull lives up to contemporary expectations of fatherhood by nurturing his creation. And yet, significantly, the story begins with an act of abandonment. Bethany is left in a state of alarmed confusion, with "darkness where my parents used to be" (11). Krull's actions as a scientist draw him away from his role as father, suggesting the two are in conflict. Due to his role as scientist, he is forced to conceal the past, bringing up his created child under a veil of secrecy. When the repressed past inevitably returns, Bethany finds herself without a father, his absence altering the image she holds of him to one akin to a mad scientist figure. She attempts to imagine her father as "a guy in a white coat or green scrubs" (79), turning to fictionalised images of the doctor or scientist. She questions Joss about theology school, linking her father's actions to those from science fiction plots: "did they say anything about parents creating little robots, preprogrammed to be exact copies of someone else?" (153). Indeed, her father himself appears to reinforce the deranged mad scientist trope through a frantically scribbled note: "NO REGRETS!!!" he writes, with "No" underlined six times (156). "We made a deal with the devil," (158) he confesses, in words which invoke

⁵⁶ Its more positive approach may be due to its target readership of young adults – looking ahead to a society in which human cloning is the norm, encouraging today's children to accept it.

Christopher Marlowe's *Dr Faustus* (1604). Many of the memories Bethany recalls of her father hold a darker edge, often linking him with death. When the over-protective father accompanies his daughter on Halloween, her friend jokes that he seems like a stalker, "or maybe an undertaker, with that scary face of his" (170). Walter, who brought his daughter back from the dead, naming her Bethany after the place Lazarus was born, has always, it would seem, been associated with death. Walter appears to be a divided man, his scientific past encroaching on and destroying his nurturing father role in the present. Ultimately, however, and perhaps appropriately for a young adult novel, it is the loving father image that appears to prevail, something achieved by bringing the darkness of the past into the light of the present, by both accepting and normalising it. The act of creation does not, the book concludes, necessitate the destruction of the nurturing father role, but should be secondary to it, the mad scientist appearing more human and gentle through its association with the father.

FROM HUBRIS TO GRIEF

The motivation behind the act of creation is one of the most significant changes from the traditional mad scientist trope. The potential cloning gives of recreating a dead child, a kind of Gothic resurrection, is one much speculated upon in the press, and is often seen as a more justifiable use of cloning than others.⁵⁷ It represents a form of haunting, a biological afterlife, and forms a natural progression for the Gothic. In this instance, rather than being a purely egotistical motivation, as in previous depictions of the mad scientist, the motivation is one of grief. In this way, the grieving father is often portrayed in contemporary cloning

⁵⁷ Such as Robertson in *The New York Times* who suggests the replacement of a child would be a "less reprehensible use of cloning" (Kolata, "With Cloning").

fiction, sometimes taking on the mantle of "mad scientist" himself. A grieving father who creates in a desperate attempt to assuage his grief, is a far less menacing figure than a scientist driven by hubris. And yet, by understanding and identifying with his predicament, by presenting him as more "human," he arguably becomes more sinister by being aligned with us. The man himself may be less villainous than the mad scientist of old, but frequently, the results of his actions are no less catastrophic. It is not so much the scientist who appears as the villain, but science itself which yields the ability to manipulate the most reputable of men.⁵⁸ The loss of a child renders a parent vulnerable, with cloning seemingly enabling the recreation of the child, the recreation of the past. By turning to cloning, these scientists are not so much striving forward as looking back, at the mercy of experiments they can no longer control, overcome by grief.

Davis Moore, the creator-father in *Cast of Shadows*, is not an obviously villainous character. On the contrary, his initial depiction is as a loving father who describes himself as not only proud of his daughter, but "bettered" by her (12). He also takes pride in his work as a renowned fertility expert, using the latest technique of cloning to assist infertile couples. His working environment denotes the respectability of "any successful professional" (6), suggesting openness rather than the secrecy traditionally associated with the mad scientist trope. Davis's role as a scientist does not appear to impinge on his role as father, except to the extent that its demands mean he is more absent than ideally suited to the new-age father model – a pressure felt by many modern fathers. Indeed, by presenting him and his nemesis – the anti-cloning activist Mickey who hopes "the sinner" Davis will "bleed out on the ground" (27) – as polar opposites, his image is tempered further,

⁵⁸ While this message was also conveyed in *Jekyll and Hyde*, it was a reputation based on prestige rather than a paternal one which would be esteemed today.

encouraging sympathetic judgement. Rather than an inherently evil man, Davis appears a father swept along by a tide of grief which initiates an "evil notion" (304). The grief caused by his daughter's murder "ferments into depression" (3), and leads him across the line from grieving father to mad scientist trope:

Rubbing the Baggie between his fingers, Davis conjured a diabolical thought. And once the thought had been invented, once his contemplation had made such an awful thing possible, he understood his choices were not between acting and doing nothing, but between acting and *intervening*. By even imagining it, Davis had set the process in motion. Toppled the first domino. (36)

Davis finds himself acting on a compulsion brought about by a "diabolical thought." It is a moment of madness during which he is not fully in control. The traditional mad scientist plans the act of creation; Davis acts spontaneously and helplessly, controlled by his "diabolical thought." His spontaneity has been made possible by advances within science, by the actions of the scientists who have gone before him. He is not experimenting with new forms of science, but following a tried and tested path. The act has followed naturally from the thought, and has taken less effort in his weakened state than "*intervening*." Though his motivation may differ from former mad scientists, like them, when power lies in his hands, Davis finds he is helpless to resist, heedless of the consequences his actions may bring. Cruelly stripped of the role of father, Davis turns to science and the power it yields.

While Davis's temperament does not neatly fit the traditional mad scientist mould, Richard Wells, played with characteristic menace by Robert de Niro, appears to revert to

the traditional mad scientist model in *Godsend*. Richard manipulates the emotions of grieving parents mourning the loss of their son, persuading them to turn to the illegal act of cloning in an effort to replace him, approaching them at the boy's funeral:



Fig. 10. Robert de Niro as Richard Wells, scene still (*Godsend*).

Rather than resembling a professional scientist in white coat, Richard's black appearance, albeit appropriate for the occasion, forms a striking contrast with the whiteness of snow and is suggestive of a darkened soul. The gloomy setting of his home is juxtaposed with the stark, clinical environment of his laboratory, revealing a darker undertone to his professional persona. As with Hyde, his caged beast comes out roaring when Richard crosses over from a morally dubious to a defiantly evil character, as the implications of their Faustian pact are made clear. "You think you can just open Pandora's box and close it again?" (*Godsend*), he cries, alluding to the Greek myth often associated with the mad scientist trope. His virtually supernatural evil aligns Richard with the mad scientist of old; he is responsible for the horror and melodrama which permeates the plot. And yet, like Paul Duncan, he is a grieving father seeking to recreate his son, a fact contrary to the stereotype. His motivation is not personal advancement; it is not his ego which drives him

to create, but a desperate sense of loss. Through this connection a parallel is drawn between the film's hero and villain, both of whom are motivated by the destructive power of grief.

THE ABSENT FATHER

In October 1995, Bill Clinton declared that "the single biggest social problem in our society may be the growing absence of fathers from their children's homes because it contributes to so many other social problems" (Baskerville 695). Indeed, the absent father is a role deemed shameful by twenty-first-century society. The new-age father is expected to be present in his child's life, both physically and emotionally,⁵⁹ in addition to providing financially for his family as the primary, if not sole, breadwinner. Society places a significant burden on the fathers of today, and these anxieties are often reflected in literature, with absent fathers generating some of the most intense narrative efforts (Garbarino 14). The moral condemnation of the absent father is lessened by its combination with the creator, which allows a sense of distance and adds a sense of legitimacy to the father's absence, as in many cases there is no biological connection. Characters such as Davis Moore and Richard Wells, for example, are not condemned for living outwith their progeny's home, and are able to maintain a balance between nurturing and maintaining a professional distance. The father figure is able to reassert his masculinity and authoritarian presence, both of which are largely lost in the new-age father model, through the godlike role of creating a child.

Theo, from *Blood Ties* and *Blood Ransom*, experiences childhood with a bodyguard as his sole male role model, a man whose detached, emotionless demeanor is far from the

⁵⁹ Past generations of fathers have been criticised by today's due to their emotional absence, with efforts made to better their attempts. The past weighs heavy for the new-age father, who often carries a burden of guilt when unable to fulfil expectations (Marsiglio 40).

new-age father ideal. In the absence of a father's nurturing influence, Theo rebels against his mother's tight control, constructing a fantasy image for himself of a father killed heroically in battle. Mirroring Bethany in *Double Identity*, he is subsequently forced to reconcile himself to the reality he faces, similarly turning to popularised images of scientists: "now the hero was a man in a lab, wearing a white coat" (McKenzie, *Ties* 26). In fact, his reality is even closer to fictional stereotypes than he may have feared, with absence seeming preferable to his father's presence. Not all fathers are heroes, as sensational newspaper articles depicting men as monsters readily show.⁶⁰ Theo discovers his father is not only a scientist, but seemingly also a "mad scientist" who is "cruel and cold and utterly self-deluded" (294). Elijah appears a neat fit for the traditional mad scientist mould: driven by hubris he abandons his creation, viewing him as "little more than a science experiment" (196). And yet at the same time he, like so many modern fathers, strives to be better than his own father, a Nazi who "did unspeakable things in the name of science" (294). He determines to "cancel out his evil" (294) by utilising the power of science for good; to help "parents who are desperate for a child" and use "stem cells to find cures for terrible diseases" (294). Yet like the mad scientists that precede him, Elijah is sucked into the corrupting influence of science.

By adopting a mad scientist persona, or as he would consider it, creator role, Elijah distances himself from any direct sense of responsibility as a father. Indeed, he does not even consider himself a father to Theo, morally justifying his absence in this way: "In this sense," Elijah rationalises, "you are my son: since you were born I have cherished you. Provided for you. Protected you. But genetically no, you are not my child. ... I am far more

⁶⁰ The depiction of "men as monsters" is one often perpetuated by the media, with a study of British newspapers in June 1994 showing the largest reported category of stories about men as fathers concerned those who had "bullied, abused or killed their children" (Whitehead and Barrett 314).

than your father. I am your creator. I gave you life in a way no father could" (183). Elijah adopts a superior air from the start, glibly telling Theo: "Call me Elijah ... I think I would prefer it to Daddy" (182). While Elijah does not play a direct role in his creation's life, he does retain an interest, albeit from a distance. While in his mind he is far more than a father, for Theo the realisation dawns that rather than having an absent father, "I had no dad" (193). Cloning has created instead the role of generational twin – neatly demonstrating how cloning confuses family roles, as the final chapter shows. More than this, Elijah's language suggests he struggles to view his creation as a child at all, describing him as a "fresh unit" (189) and a "successful genetic experiment" (239). Elijah justifies his neglect as for the greater good of mankind, echoing the sentiments of his literary precursor Frankenstein, like him valuing himself above his creation. Theo sums up his father with a heavy heart: "He's tried to be different, but he's ended up exactly the same. Prepared to play God and experiment with people's lives. Even to kill me to save himself" (396). For Elijah, the act of creation has been carefully planned and executed; it is not the one-off act of a madman. In this regard he also resembles Moreau, a man believing himself beyond the boundaries of conventional morality, and conforms to the traditional mad scientist trope. His final "grotesque" (*Ransom* 378) experiments draw him into an "elaborately secure unit" (369) with "three different kinds of security" (366). Within his hidden "bunker" (348) lies a darkened "secret room beyond the lab" which eerily forms "shadowy shapes" (376) around you. This Gothic space appears the outward projection of a darkened mind, separated from the outside world. Elijah embraces not only the mad scientist role, but the absent father as well, a figure just as vilified by contemporary society.

THE PHALLIC MOTHER AND THE RIGHT TO KILL

Although the mad scientist trope is traditionally associated with men, another Gothic figure which haunts contemporary cloning narratives is the phallic mother, a "masculine feminine" woman (Hoeveler 114) in a substitute father role. *The Secret's* Elizabeth is an example of this, but one which more readily combines with the mad scientist trope is *Never Let Me Go's* Miss Emily. Although Miss Emily was not responsible for creating the clones in the novel, she arguably takes on a mad scientist role nonetheless by "moulding" – a word which links her with the traditional mad scientist Moreau – her students into the "products" society expected them to be. As Moreau indoctrinates his hybrid creatures with his own philosophy, Miss Emily bestows her own principles on these hapless "pawns" (261), ensuring they remain sufficiently malleable to prevent thoughts of escape. She maintains the outward appearance of a nurturing parental figure, and is even considered as such by her "students," but beneath the surface lies a far more sinister reality. Miss Emily heads an educational establishment which is really a form of control, a means of colluding in an inhumane system. Their geographical knowledge, for example, is restricted to "the different counties of England" (64), with the notable exception of Norfolk, a place famed for its ferry port: the students' focus is narrowed to prevent any thoughts of escape. We have cause to wonder why the lunch queue "was one of the better places to have a private talk" (22) or why "it was a sort of rule we couldn't close dorm doors" (71). The students are clearly being watched. Miss Emily has her own agenda and is significantly spotted by Kathy "alone, pacing slowly, talking under her breath, pointing and directing remarks to an invisible audience in the room" (45), drawing the inference that she was "potty" (43). It is only in retrospect that it becomes clear she had a more renowned audience in mind than the

imaginary students Kathy assumes she is addressing. As Tommy and Kathy come face to face with their "maker," they discover that contrary to the caring, parental figure she presents herself as, she has in fact been undertaking an experiment to prove to "cabinet ministers, bishops, all sorts of famous people" (256) that clones have souls, a goal more important to her than the children themselves.

The distance between the two parties becomes uncomfortably clear during their confrontation. Miss Emily confesses to have recoiled from the students, explaining "I myself had to fight back my dread of you all almost every day I was at Hailsham" (264). Rather than a parental figure who views the clones as her children, to her they were not even students, but rather "lucky pawns" (261) who had been "reared" in "less deplorable conditions" (255) than their fellow clones. She even seeks their gratitude. Miss Emily is established here in the role of villain, as her nurturing façade is stripped away. To emphasise the gap still further, Miss Emily appears to the students as "a figure in a wheelchair" (250), drawing the chilling inference that she herself may be a beneficiary of the system she was supposedly fighting against.

Like the traditional mad scientist, Miss Emily considers herself above her creations, asserting her rights over them even to the extent of their existence. She sees them as less than human, enabling their death to be registered as annihilation rather than murder. In the case of clones being used as spare parts, the clone, like Frankenstein's creature, becomes an extreme version of Agamben's "homo sacer": an accursed man unprotected by law.⁶¹ The creator takes on the power and authority to kill as well as create, as Frankenstein declares: "I ardently wished to extinguish that life which I had so thoughtlessly bestowed" (Shelley 92). As Townshend has pointed out, the paternal right to kill is the logical extension of the

⁶¹ See Agamben's *Homo Sacer: Sovereign Power and Bare Life*.

role of creator (139). In line with altered perceptions of fatherhood, while Frankenstein feels no guilt about asserting his right to kill, Davis Moore in *Cast of Shadows* feels a far stronger sense of obligation towards his creation. For Justin, who is lacking a father figure, Davis fills that role: "To tell you the truth," he tells the doctor, "I like it that you're worried about me" (239). Davis's feelings for the boy are, however, closer to fear and loathing than paternal affection, but unlike Frankenstein he does not abandon his creation but rather acknowledges: "I was callous about bringing you into this world ... I take responsibility for that" (231). Yet, he also admits he "wasn't sure he believed what he was saying" (231). Davis ends his creation's life, though even this does not vilify his character. He grapples with his conscience, feeling "worse for having conceived Justin than he did for killing him" (307). Indeed, he believes it to be his right, concluding they are "the beginning and end of the same act" (307). Davis goes a step beyond Frankenstein in actually killing his creation, and yet retains sympathy despite this. He achieves this by nurturing his child, to some extent correcting Frankenstein's primary sin of abandonment. Any condemnation that may be held against Davis as mad scientist is tempered by the paternal actions he merges with it.

THE SINS OF THE FATHER AND PATERNAL GUILT IN *THE ANGEL MAKER*

Stefan Brijs's *The Angel Maker* is a modern reworking of *Frankenstein*, reappropriating the text in numerous ways, as Jerrold E. Hogle has demonstrated.⁶² What Hogle does not point to, however, is the extent to which paternity dominates the text and is adapted to twenty-first-century concerns about fatherhood. There are relatively few conventional biological-father figures in the novel, and those there are prove themselves lacking. The father is

⁶² See Hogle's "From Asperger's Syndrome to Monosexual Reproduction."

alternately presented in the role of priest, teacher, bereaved father, lesbian/ phallic mother figure, God the father and, in the case of the mad scientist himself, the creator-father. Karl Hoppe, Victor's own father, is the most prominent biological father in the novel and it is his own failure in that role – partly due to the sadistic influence of Father Kaisergruber who urged them "to be rid of the child" (157) – which sets Victor on the destructive course of cloning "in his own image" (*New International*, Gen. 1.27).

The novel opens with an air of mystery and intrigue as the close-knit village of Wolfheim speculate about Victor Hoppe's unexpected return. From the beginning, he is linked to his own father, formerly a doctor in the same village, with the first words relating to him suggesting he is "the spitting image of his father" (3). Victor is uncomfortable with the association, cringing when he hears of his father: "they don't make them like that any more" (22). The past encroaches on the present from the start and is a haunting presence. Victor is rejected by his parents from the moment of birth. Furthermore, as in *Frankenstein*,⁶³ it is a rejection based primarily on physical appearance: on discovering his son shares his deformity of a harelip, Karl Hoppe considers leaving his son to die, searching the child's body for deformity before taking the time to discover his gender. The rejection is compounded on passing him to his mother, who on seeing her child cries out: "Get it away from me!" (155). Victor's birth scene equates Victor not with Frankenstein, but with Frankenstein's creature, eliciting a reaction of pity rather than condemnation. Victor suffers the same fate as Frankenstein's creature: he is abandoned due to his physical deformity. It is his mother who responds to him in the cruelest way, referring to him repeatedly as an inanimate object - "I want it gone, Karl!" - and aligning her child with evil: "he has the devil in him!" (159). Rather than stepping into the traditional role of

⁶³ Frankenstein rejects his creation based on its physical deformity. He is repelled by its lack of beauty.

authoritarian father, Karl allows himself to be dominated by his wife, and later by another father substitute, the priest, showing himself an ineffectual father. He carries the guilt of his weakness with him, and is the person everyone seems most ready to blame. Father Kaisergruber concurs: "it's all his fault. He has passed on the evil. He should never have been allowed to bring any children into this world" (156).

Karl Hoppe is consumed by paternal guilt, ultimately proving himself unable to live with it. It is a guilt initiated by his own father's violence, prompting the fear of violence passed down from father to son: he recognises "with some consternation the trait he had always deplored in his own father: a violent nature" (232). A recurrent theme in the novel is how the sins of the father reflect on the child, a Gothic motif updated here through the addition of guilt. Karl's burden of paternal guilt leads him to take his own life, leaving a suicide note in which he finally opens up to his son, but in doing so inadvertently alters Victor's course:

You can do as much good as is in your power, yet in the end you'll still have to atone for the evil that you have done. To do only good, therefore, is not enough. You must also vanquish the evil. ... You don't need to forgive me. I do not deserve it. I should have accepted my responsibility, but I never did. That sort of thing is unforgivable. If you bring children into the world, you have an obligation to look after them. Never forget that. (308)

Rather than acknowledging the humility in his father's words, Victor fixates on the notion he must seek to "vanquish the evil" as well as strive to do good. He turns to cloning as a means of doing this, relentlessly pursuing science "to correct the mistakes which He in his haste has wrought" (332). Victor – who "in today's world ... would probably be diagnosed

as having Asperger's syndrome" (164) – sees no coincidences in life, believing his cleft palate was not a mere "freak of nature" but a conscious error of God which he sought to correct. He seeks to address the question posed by Roy in *Blade Runner*: "Can the maker repair what he makes?" In doing so, Victor equates himself with God. Victor categorises people as either good or bad, and his failure to recognise the complexity within everyone is a failing placed at the hands of his parents:

Had somebody – a father or a mother, for instance – given Victor more individual attention, he might gradually have been taught or have discovered for himself that every human being is made up of an entire palette of feelings. In that case he might have started to blossom himself. (250)

Denied parental nurture, Victor is instead subjected to the cruelty of a religious asylum which becomes his childhood home.

Victor's depraved upbringing leads him to develop an interpretation of Christianity similar to the Early Christian dualist belief system held by the second-century heretic Marcion of Sinope who sought to remove the wrathful Old Testament God. Marcion posited opposing gods: one a higher spiritual entity who was "good," the other lower, material and "bad." He depicted the Hebrew God of the Old Testament as a vengeful tyrant, an interpretation Victor assumes. "God unleashed wars, God destroyed cities, God sent down plagues, God punished, God killed" (253). The equation of God the father with punishment and abandonment forms a link for Victor between God and his own father. Adopting a dualist viewpoint, Victor separates the father as bad and the son who "did good things" (254), rather than accepting them as one. "God had deserted his own son," rationalises Victor, something which connects him with his own father, for "hadn't his own

father likewise abandoned him?" (254). *The Angel Maker* depicts a series of failed father figures modelled on the Old Testament's Abraham, who was willing to sacrifice his son as an offering to God. In the Gothic tradition, the mother is largely absent. The surrogate mother of Victor's cloned boys is significantly never named, nor her lesbian partner who is described as "her friend" (217). Neither have the opportunity to provide meaningful nurture, as Lotte Guelen – substitute mother figure of nun during Victor's formative childhood years – had been previously denied. The novel reinforces the belief that a man cannot act as primary caregiver alone, firstly by introducing retired schoolteacher Charlotte Maenhout, another self-sacrificing figure who "could easily have been taken for a nun"⁶⁴ (126); and secondly by showing the rapid deterioration of the boys' care following her death, demonstrating appropriate care by reintroducing the surrogate mother. Both these mother figures end up sacrificing themselves for the cloned boys, adhering to Victor's early model of parenthood equating motherhood with sacrifice and love – as demonstrated in the story of Solomon read to him during his early years at the asylum – and casts blame at the hands of the father.

Victor turns to cloning as a means of setting himself up as adversary to God, of proving himself a better father to humankind than God. His arrogance and obsessively narrow focus align him with the traditional mad scientist trope, and yet he also adheres to the advice of his father and employer: "it goes without saying that if you bring children into this world, you have an obligation to look after them" (304). He offers as much nurture as his depraved childhood will allow, asking Maenhout to sing a Dutch lullaby to his boys, the same song that comforted him as a child. He defends himself as father: "I take good care of

⁶⁴ He possibly chose a woman resembling a nun as that was the closest he ever came to finding a mother figure as a child.

them," he claims (17). From his own skewed perspective, intensified by Asperger's syndrome, he does. Unlike the traditional mad scientist, Victor's intent is "to do good" and ultimately accusations levelled against him would be reduced, according to English law, due to diminished responsibility. Because of the sins of his own father, he knows no better. Victor displays no warmth or affection towards the cloned boys: their bedroom consists of "three metal cots on wheels" with "no children's toys or paraphernalia on the floor" (40). Their room "radiated anonymity" (40), pointing towards the unconventional status of the clones. It is a room representative of a mental institution, such as where he was brought up. It is all he knows. And so it is in the Hoppe family, that parental failure passes down the male lineage from father to son.

Brijs not only parallels Victor's scientific achievements with his upbringing, he also mirrors those achievements with real life. Like real-life scientist Karl Illmensee in 1979, Victor Hoppe "astonished the scientific community again by cloning mice" (147) in 1980, gaining prestige for himself in the process. Yet in another real-life parallel he is later discredited by his refusal to demonstrate his methods. He feels "offended" and "humiliated" (190) by the insistence he proves his results, anxious instead to press ahead to the next stage of scientific achievement. Unlike science, there is no necessity for proof in religion, the dean realises, and in this respect Hoppe fails as a scientist. While Wilmut suggests in the real-life case of Illmensee that his refusal to demonstrate his methods was due to his inability to replicate his results, *The Angel Maker* offers an alternative explanation. As Hogle suggests, *The Angel Maker* highlights the difficulty "of determining where the line is to be drawn between experiments promising scientific breakthroughs with wide human benefit, and the pushing of experimental data toward unreproducible and even morally

questionable conclusions" ("From Asperger's" 11). This difficulty raises another concern as to whether scientists can be trusted both to draw that line and then maintain it. It is a concern of direct relevance to the cloning discourse, as shown in real life by Illmensee and the discredited South Korean scientist Hwang Woo-suk. Victor Hoppe, however, does not seem troubled by such concerns, rejecting efforts by his colleagues to tie his methods down, something which would build on his credibility and increase his prestige. He poses a challenge to Cremer, who toys with his conscious where Victor is concerned, posing a question of uncomfortable relevance to the discourse on cloning: "should he halt a genius because that genius was showing signs of madness?" (363). A fine line is drawn between an act of genius and an act of madness – a line the mad scientist does not fail to cross. And yet, by juxtaposing the tragic story of Victor's childhood with his obsessive pursuit of science, Victor stands apart from the traditional mad scientist trope.⁶⁵

Victor's actions stem from the failing of the father, his motivation not that of hubris but of correcting such failings. When he himself fails through the premature death of his cloned boys, he vows to try again, treating them as no more than an experiment: "It was a mutation. Simple as that. Now that I know about it, I can look for it next time, at the embryo-selection process" (332). "By correcting those congenital errors, we correct ourselves," he continues, "that is the only way to beat God at His own game" (332). The boys are eventually "returned to the womb" (428) following their death, order restored by their return to the mother. Victor moves on in his confrontation with God, "his adversary in war" (363), as the Old Testament Job challenged God in the bible: "who is this that darkens my counsel with words without knowledge? Brace yourself like a man; I will question you, and you shall answer me" (38.2-3). Opportunity arises for him to try again in the form of

⁶⁵ Nineteenth-century mad scientists such as Frankenstein in contrast enjoyed privileged upbringings.

another failed father figure, Lothar Weber, whose deaf son has tragically died. Guilt that his wife was more grief-stricken than he, that "he had seen Gunther's disability more as a burden" (354), prompts Lothar to accept Victor's offer of cloning his son, enabling the father to create again. Like Victor, however, he seeks to use cloning to better his son, in Victor's words "to correct the mistakes which He in his haste has wrought" (332).

The Webers' choice of name for their son is revealing. Not only was Isaac bestowed upon Abraham and Sarah, a couple beyond natural childbearing age, God tells them that through a descendent of Abraham the whole world will be blessed, with Isaac being the first step. This aligns Victor both with Abraham as the father of Isaac, and God the father: as God's genealogy is complete through Isaac in the bible, so too is Victor's in the book through his final venture into cloning himself. Victor "vanquishes the evil" through his own Christ-like sacrifice, positing himself as the redeemer of all evil. He concludes he must "*offer up* his life. He would do it for mankind" (437). While Victor Frankenstein suggests he is serving the broader interest of mankind in order to justify his actions and render himself less culpable, Victor Hoppe truly believes that he is. He attempts to act as father to humankind, embracing the goodness of Jesus and power of God.

GOD THE FATHER

"Cloning is against God's will" declared 74% of Americans in a CNN poll taken shortly after the news broke of Dolly's creation.⁶⁶ The notion of humans playing God is one of the most widely voiced public fears in relation to cloning, and aligns the mad scientist figure with society's most powerful father figure: God. In the nineteenth century it was an

⁶⁶ The CNN poll, taken in 1997, was conducted amongst 1,005 American adults and also showed that 69% are scared of the possibility of cloning humans (Ali).

association Shelley was anxious to reprove, stating in her 1831 introduction: "supremely frightful would be the effect of any human endeavour to mock the stupendous mechanism of the Creator of the world" (9). In today's more secular society, writers have greater freedom. Nearly all cloning narratives at least mention the association of the mad scientist and God, one made explicit by Seed when he declared that through cloning we are going to "become one with God." This view is later modified by another real-life maverick, Zavos, who claims that rather than replacing God he seeks to carry out His work. "God said to Adam and Eve," Zavos confidently reasons, "go out and populate the world. He did not say how to do it. Therefore I am doing God's work. ... There is no doubt that He approves. He says nothing about 'thou shall not clone'" (Derbyshire and Poole). The freedom to interpret God's words betrays an arrogance fitting the mad scientist model, and it is a view harshly countered by religious leaders who continue to actively voice their opposition to reproductive cloning. Zavos's sentiments are nonetheless echoed by the fictional mad scientist Patrick Finch from Malcolm Rose's *Clone* (2002), a father depicted through the eyes of his son. Patrick challenges religious opposition to his quest to be the first to clone a human:

Are you so sure God's down on cloning? If you take the Bible literally, the first two human clones were Adam and Eve. To a lot of people, the prospect of having a genetically perfect baby in their own image is the bee's knees. If it was good enough for God when he made Adam and Eve, it's good enough for my clients. (39)

Patrick is careful to reinforce his argument by emphasising his is not a lone voice: "to a lot of people...", "my clients." By presupposing the will of God, Patrick would be accused by

some of blasphemy, but his tone is one of reason rather than arrogance. He suggests the arrogance of others in forming their own interpretations of God, challenging the position held by society at large. Finch is not claiming to be God, as Seed has done, he is rather suggesting, like Zavos, that he is carrying out God's work.

The image of mad scientist as God the father, the creator of "a new species" (Shelley 52), is particularly apt in relation to cloning. As Patrick claims, God created humanity in his image, creating Eve from Adam's rib. This is a link made explicit in the earlier *The Boys from Brazil*, when Mengele takes "a cutting of skin" from Hitler's rib to recreate him in *his* image, joking "we were in a Biblical frame of mind" (207). In so doing he lessens the divide between good and evil. Hitler "denied himself children," Mengele continues, "because he knew that no son could flourish in the shadow of so ... godlike a father" (207). The link between cloning and religion is strengthened when it is considered that Jesus was both the son of God *and* God himself, reborn in his image: he was in effect a generational clone of God the father (W. I. Miller 85). The comparison between the mad scientist cloner and God the father appears in this way apt. Elijah uses the code name "Zeus" in *Blood Ties* and *Blood Ransom*, wryly declaring himself "the father of heaven" (*Ties* 194). Bethany from *Double Identity* asks in earnest, "were my parents defying God – or did they think they were God?" (153), with either possibility seeming a disturbing prospect for a child to digest. The fear that cloning usurps the role of God is one repeatedly raised in the discourse on cloning and cloning narratives alike. It is not necessarily, however, a view specifically linked with religion, but rather an expression of the fear that the mad scientist will push the boundaries of science too far, defying nature if not God himself. It realigns the mad scientist with an authoritarian, godlike-father role, undermined

by the new-age father construction. While society purports to have moved beyond this, UK fathers continue to be viewed as head of the household for census purposes (McCarthy, Ribbens and Edwards 95). Rita Nakashima Brock, research associate at Harvard Divinity School, argues that religious doctrine intensifies the patriarchal nature of the family, suggesting that Christ's sacrifice on the cross was a form of "cosmic child abuse" which makes "acceptable as divine behavior" the neglect or even abuse of children at the hands of their father (56). The godlike father continues to haunt today.

Victor Hoppe is representative of such a man. He significantly names his triplets after the Christian archangels Michael, Gabriel and Raphael, whose suffix "el" translates as "God" ("Study Resources"). The archangels are traditionally said to be the guardian angels of nations and countries, appropriate for these boys given the location of their home where three borders meet, a Belgian hamlet "pinned between the sturdy thighs of Vaals in the Netherlands on one side and the German town of Aachen on the other" (3). The word archangel comes from the Greek word *archaggelos* which combines *archo*, meaning first, and *aggelos*, meaning messenger (Israel 29). Victor therefore names the first human clones after messengers of God, while taking on the role of God for himself through their creation. Rex Cremer realises the significance of Victor insisting the boys name him father: "as in God the Father, of course. How could it be otherwise? Victor wasn't their natural father; he was their creator" (362-3). As with Elijah, Cremer observes how he "talked about them as if they were research specimens, even when they were standing right in front of him" (346). He does not clone in order to be a good father, but in order to correct the mistakes of nature – in order to play God. He is more than an overprotective father, his clones "were being kept prisoner" (68) and eventually starved when it becomes apparent his experiment has

failed. Victor brought the children into the world in defiance of God, in a conscious effort to usurp the role of God. He reasserts his own authority through the act of cloning, an authority missing from his own father and in the new-age father model of today.

CONCLUSION

The traditional mad scientist trope, drawn upon with relish by the press and media, intensifies public fear relating to real-life scientists Seed, Raël, Antinori and Zavos. It is a trope developed from the literary canon of mad scientists such as Frankenstein, Jekyll and Moreau, depicting eccentric and egotistical characters willing to "play god" with human life. It is a link made more apparent through Mengele, who is both "real" and fictional, as the boundary between fact and fiction is once again disturbed. While the press and media drew from the literary past, however, contemporary writers on cloning adapted the trope by developing and centralising its association with Gothic paternity. This change was initiated through cloning narratives of the 1970s where the family becomes the central focus, and then developed in later cloning texts. These narratives combine the inherently negative and distant trope of the mad scientist with the softer and more immediate figure of the father, representing a transference from the mad scientist to the creator-father. The softening of the mad scientist trope is important in a society in which cloning remains a highly contentious issue, and developments within science are regarded by many with fear.

Scientists are quick to cast blame where fictional portrayals mislead or perpetuate fears. The US bioethicist Arthur L. Caplan reveals himself aghast by the marketing campaign surrounding the release of *Godsend*: "Thanks Hollywood. Just as people were beginning to understand cloning, you have put greed before need and made a movie that

risks keeping ordinary Americans afraid and patients paralysed and immobile for many more years" (Cormick 185). *Godsend* confused the divide between fiction and fact by fabricating a medical institute with a website address and hotline number as part of the film's promotion, which included testimonies from allegedly "satisfied customers" who had supposedly benefited from human cloning there. In addition, the film's marketing company set up a petition site entitled "Stop the Godsend Institute" which collected 650 signatures (Haran et al. 140). While the aim of this was to generate interest in the film, it also purposefully misled. By straying into the horror genre, *Godsend* consciously perpetrates fear, appropriate to its role of entertaining, as Crichton has pointed out. It also creates a sense of distance, however, through its link with the supernatural, a distance which is, at the same time, lessened through its association with the father.

The alignment of the mad scientist with God the father is evident in the majority of creationist texts. While in the traditional mad scientist trope, however, nurture fails to play a significant part, within contemporary cloning narratives it is frequently central. This is an appropriate change given society's altered views on fatherhood, from authoritarian head of the family to more of a "hands-on" role. The sinister nature of the mad scientist – who is motivated by hubris to create, but then abandons the horror created – is reduced through its alignment with the new-age father of today.⁶⁷ The mad scientist has become a more readily accessible trope, at the same time as the authority lost from the new-age father figure has been restored. While reducing the sinister nature of the mad scientist may appear, in turn, to reduce the fears associated with science, arguably the opposite is true. As Henry James said, bringing fears to "our own doors" shows them to be "infinitely more terrible" (Bernstein 292). Not only this, the more human the portrayal of the scientist, the more

⁶⁷ Zavos attempts to soften his own image in this way too by talking about his role as father.

alarming the consequences of their actions seem, emphasising the corrupting influence of science and building its sense of power. Now the cloning technique has been established, all it takes is one moment of weakness. Davis Moore, for example, is not an inherently evil man, but he is able to use his scientific expertise to carry out an evil act when motivated to do so by grief. Science, in this way, is personified as the true villain, through its corrupting influence over otherwise reputable characters. In the case of Victor Hoppe, the power science holds brings out his underlying madness. Rather than reducing fears surrounding science, contemporary cloning narratives can be seen to be increasing them by showing our helplessness before it.

Public anxieties are often reflected in literature, particularly within Gothic literature. During the nineteenth century in particular, the mad scientist figure embodied public fears, reflecting anxieties over science's rapid progression. Though the scientist has continued to be equated with God in cloning narratives, the trope has been softened, leaving space for a new villain to emerge. Appropriately for the consumer culture of today, the chief executive is emerging as the new villain in contemporary cloning texts, with cloning being used for commercial gain. While previously, fears over science related to its rapid progression, in the twenty-first century the potential cloning offers for treating the child as a commodity becomes a new fear, and is discussed in the next chapter.

Chapter 2

Manufacturing Humans

Our culture has made us all the same.
No one is truly white or black or rich,
anymore. We all want the same. Individually,
we are nothing.
Chuck Palahniuk

"Man," Foucault famously concludes in *The Order of Things*, "is an invention of recent date. And one perhaps, nearing its end. ... one can certainly wager that man would be erased, like a face drawn in sand at the edge of the sea" (387). Indeed, in what some cultural theorists have defined as the current "posthuman" age,⁶⁸ the human appears an increasingly unstable term, and this is one of the main anxieties lying at the heart of the cloning discourse. It is no longer sufficient to define the human by means of her rational intelligence, for this has been superseded by technological advances. In the 1930s, Julian Huxley described the human body as an intricately constructed machine, and asserted in *What Dare I Think?* (1933): "man is, from the external viewpoint of physical science, a bit of machinery" (46). "In so far as man is made of matter," he continues, "an indisputable if often inconvenient fact – he obeys the same laws as other material aggregations." The body is merely a vehicle for the "spiritual being," for what makes us authentically human (46). At the same time, alteration of the body inevitably destabilises any sense of fixed identity which, as Myra Seaman observes, is "integrally bound to physicality" (249). The world's first face transplant has recently taken place, pointing to the need to look beyond the

⁶⁸ See Haraway, Hayles, Halberstam and Livingston.

surface for the source of identity. The body and mind are repeatedly viewed as separate entities, and the notion of "downloading" consciousness has been anticipated (Hayles 1). The posthuman subject is "an amalgam," Katherine Hayles explains, "a material-informational entity whose boundaries undergo continuous construction and reconstruction" (3).

While previously the human could most readily be defined by what she was not (another earth-dwelling creature such as a plant or animal; an alien, god or other higher order of being; a machine) such binary oppositions used to define and confine the human are now being challenged, and it has become difficult to distinguish human from machine (Botting, "Aftergothic" 279). The cyborg "violates the human/ machine distinction; replacing cognition with neural feedback, it challenges the human-animal difference," argues Hayles, and "it erases the animate/ inanimate distinction" (84). Such breaking down of categories is taken a step further with the clone as, unlike with the cyborg, no visual difference enables her to stand apart. Our modern age has taken up Nietzsche's call for humankind to transcend its intellectual capabilities and reinvent itself as a super-species.⁶⁹ We are witnessing a Gothic reinvention of humankind. The clone challenges and undermines stable notions of the human: she is a figure of transgression which instigates public fear and alarm due to her uncanny similarity to, and yet perceived difference from, the self. Cloning is an act of duplication which allows for the human to be simulated and commodified, threatening the individuality of the self; it remains uncertain the extent to which duplicating the human body also duplicates the self. In this way the clone can be viewed as a Gothic trope. Cyberpunk writers, whose focus is postmodern science fiction, expel the "meat" as "the formless bodily excess of no use to machines" (Botting, "Future

⁶⁹ See Nietzsche's *Thus Spoke Zarathustra* (1883).

Horror" 150). This fiction can be labelled "cybergothic," a term which recasts familiar Gothic forms in line with technoscientific developments, and both reflects and produces anxieties about the human that focus particularly on the body. The clone, however, presents a more pressing issue related to the kinds of fears and anxieties being experienced about the body which are crucial to our understanding of selfhood and identity. Within the clone the "meat" remains central, the body being problematised rather than simply expelled, as the limit and basis of identity. The clone is a literal mirror image, as Baudrillard has argued, "the materialization of a double by genetic means" (116). From a biological perspective, a clone is no different from a human, and indeed nature is already producing clones in the form of monozygotic twins. Yet while some post-humanists may embrace the notion of change within humanity, the prospect of artificially producing humans has been met with a sense of panic by the public at large.

"Is there something about the individual that is lost when the mystical act of conceiving a person becomes standardised into a mere act of photocopying?" asks Dick Thompson in *TIME* magazine after the cloning of Dolly, expressing a fear held by much of the public that cloning will result in the loss of an essential human quality. Reducing the "mystical" act of conception to the "standardised" act of "photocopying" will, he suggests, result in the loss of what makes an "individual" human. The notion of manufacturing individuals as products is one fitting to the commercialised society of the twenty-first century, but raises unsettling concerns that something will be "lost" during the process of replication – something which, though essential to humanness, is also difficult to define. German philosopher Walter Benjamin describes the loss of "aura" resulting from the act of duplication, explaining, in his 1936 essay *The Work of Art in the Age of Mechanical*

Reproduction, that "the age where art became reproducible by technological means, in setting it free from its cultic roots, extinguished the light of its autonomy for ever" (15). His theory, when metaphorically transferred to the reproduction of humans, provides a bleak answer to Thompson's question in *TIME* magazine. Extending Benjamin's analysis in this way leads to what Baudrillard describes as "the hell of the same" (122). The notion of the original individual, still visible in the conflict between robots and humans, is now through cloning almost entirely lost, as duplication results in anonymity (Dietz 212). "A clone," Baudrillard explains, "is not a child, not a twin, not a narcissistic reflection; rather, it is the materialization of a double by genetic means – in other words, the abolition of otherness and of the entire imaginary sphere" (116). The traditional doppelgänger motif dramatises the conflict between self and other as the split within one individual, with the humanist ideal of a unified self being ultimately reasserted, the split being only temporary and inevitably leading to death. Cloning complicates this, replicating the whole person and undermining the original subject, the individual, the Cartesian self. Transferring the manufacturing process from inanimate objects to human subjects threatens the uniqueness of the subject, displacing its human form, and this is one of the most frequent fears expressed by the public in relation to cloning.

Looked at from a different perspective, cloning represents "the ultimate triumph of mass production: the mass production of human beings" (Dietz 212). This notion of the "commodification" of the individual is one emphasised by *The Independent* when it envisaged the future as a "bizarre world in which people can be copied and animals are 'made' on a production line" (Arthur, "First"). The author and science critic Jeremy Rifkin, founder of the Foundation on Economic trends, a biotechnology watchdog in Washington,

declared reproductive cloning a "horrendous crime" which would put humans "into a genetic straitjacket." It would be taking, he states, "the principles of industrial design – quality control, predictability – and [applying] them to a human being" (Thompson). The prospect of humans being "manufactured" taps into the fear that cloning would result in the loss of our essential "human" quality; that we would collapse into what William Ian Miller describes as "a grey undifferentiated mass" (85) and Baudrillard calls a "bland eternity of the same" (114). This chapter explores the portrayal of clones within contemporary fiction, whether this is as a manufactured being, copy, double or human. It considers the extent to which cloning has become commercialised, and the way in which the representation of cloning in fiction moves away from the mad scientist trope to the chief executive as villain. This happens due to a shift in perception from early cloning narratives to contemporary texts, a shift brought about through the cloning of Dolly. The interest of contemporary narratives is not focused on the humanness of clones, but rather their exploitation. In order to establish this change, the chapter begins by discussing pre-Dolly cloning narratives, texts in which the notion of a clone as human is directly challenged.

"O BRAVE NEW WORLD/ THAT HAS SUCH PEOPLE INT!"⁷⁰

Humans become machines in Aldous Huxley's canonical cloning text *Brave New World*, where humans are manufactured for optimum productivity.⁷¹ Huxley's cautionary tale observes and predicts trends within modern society to categorise individuals for convenience (politicians, employers and advertisers, for example, will often stereotype in relation to class, race, work and education), and takes this to extremes. Current public

⁷⁰ William Shakespeare. *The Tempest*. V.2.

⁷¹ Echoing and literalising the views of his elder brother, Julian.

anxiety that cloning will dehumanise individuals largely stems from here, as Huxley takes the principles of mass manufacture established by industrialist Henry Ford⁷² in the early twentieth century and applies them to humans. With a focus on uniformity, Fordism promotes the production of standardised goods through the use of an assembly line, with each worker repeatedly carrying out the same task. This cost-effective mode of manufacture becomes a form of religion in Huxley's text, in which each individual is produced to fulfil a specific function in support of a totalitarian state.

Brave New World conveys a society in which humans are stripped of their individuality, programmed and controlled by an authoritarian state. It portrays a population devoid of their unique "human" qualities, prevented from thinking for themselves. It is a dystopian nightmare that has come about through a combination of social conditioning and the act of cloning. Huxley does not use the terms "clone" or "cloning" directly, describing it instead as "Bokanovsky's Process":

One egg, one embryo, one adult – normality. But a bokanovskified egg will bud, will proliferate, will divide. From eight to ninety-six buds, and every bud will grow into a perfectly formed embryo, and every embryo into a full sized adult. Making ninety-six human beings grow where only one grew before. Progress. (17)

It is a society organised to ensure maximum efficiency, with "ninety-six identical twins working ninety-six identical machines," a population consisting of "standard men and women; in uniform batches" (18). Though not specifically stated, the "bokanovskified" egg has in fact been cloned. In this way, *Brave New World* can be regarded as the first cloning classic, a connection clearly demonstrated following Dolly's creation, as the introduction

⁷² Ford becomes a messianic figure in the novel, with "Our Ford" being used in place of "Our Lord."

shows. As with *Frankenstein*, *Brave New World* has become a "shorthand expression" indicating that we are moving rapidly in the wrong direction (Klotzko 9). *TIME* magazine's article reporting the first cloning of human embryos states: "A Brave New World of cookie-cutter humans, baked and bred to order, seemed, if not just around the corner, then just over the horizon" (Elmer-Dewitt). Jeremy Rifkin also alluded to the text when he envisioned "the dawn of the eugenics era" which will see "standardized human beings produced in whatever quantity you want, in an assembly-line procedure" (Elmer-Dewitt). The concerns raised by this classic novel back in 1932 remain as relevant, if not more so, today. They are concerns that have come one step closer to fruition following the creation of Dolly.

The humanness of the characters in *Brave New World* is undermined repeatedly by the imagery of the book. Death pervades from the opening page, where the workers' hands are gloved with "corpse-coloured rubber" and "the light was frozen, dead, a ghost" (15). Animal imagery is rife, with the student workers described as appearing "like chickens drinking" (21), and later "like aphides and ants, the leaf-green Gamma girls... swarmed⁷³ round the entrance" (59). John recalls "long rows of identical midgets at the assembling tables, those queued-up twin-herds... those human maggots swarming" (178). Such associations are linked to the central characters too, with Henry suggesting in relation to Bernard that "some men are almost rhinoceroses" (78). Rather than fully individualised humans, we are presented with animalised, even robotic products, uniformly manufactured to most effectively serve the needs of the state. They are denied freedom of choice and capacity for original thought, categorised instead for optimum productivity. A "Brave New World" is one in which the state has taken control, portrayed in the book as manipulating

⁷³ Imagery recalled in *Never Let Me Go* when the students "swarm" around Madame.

science to design its citizens from the embryo stage to ensure they fit desired criteria. Huxley adapts Ford's manufacturing principles: the use of unskilled workers to assemble uniform products to meet consumer demands,⁷⁴ to not only show humans enslaved to a life of productivity, but humans who have themselves become the product. Furthermore, Huxley adapts Marxist principles through his presentation of a society whose citizens serve "from each according to his ability, to each according to his need" (Marx 27). It is a connection Huxley makes explicit through his central protagonist's name: Bernard Marx. Cloning takes creation out of the hands of random choice or nature, out of the hands of God, and places it under the fallible control of humans. It also opens up the possibility of genetic engineering – the artificial manipulation of genetic material to enable an embryo to develop with desired characteristics, and a technologically advanced form of eugenics. It would enable the form of control described by Huxley in *Brave New World*. Cloning draws frighteningly close to a world in which science fiction has become fact, to the "Brave New World" Huxley warned about many years ago.

THE HELL OF THE SAME: SCIENCE FICTION NARRATIVES OF THE 1970s

Mitchison introduces a gentler, feminine perspective in *Solution Three* than Aldous Huxley, her childhood friend, adopts in *Brave New World*. Susan M. Squier, in her afterword to the novel, warns against comparisons with Huxley's dystopian vision, and Ferreira likewise comments it can be read as "a feminist response to and critique of Aldous Huxley's *Brave New World*" (180). Yet both depict societies in which humans have become commodities, stripped of their individuality through social conditioning: in Mitchison's

⁷⁴ Charlie Chaplin satirises this process in *Modern Times* (1936). The film's opening shot is of a herd of identical sheep.

case, a painful "strengthening" process which reproduces the stresses of "His" and "Her" life (35), initiating a set of conditioned responses. The Council show ambitious but benevolent intentions for curbing aggression and overcoming the population crisis that has taken hold of their society. Him and Her, who remain unnamed as "power shouldn't have a name" (63), and yet are honoured with capitals as though gods,⁷⁵ are to be "forever multiplied" (23) in a "rising forest of genetic excellence" (24). The text portrays a new Adam and Eve, the symbols of perfection from which the population has been "reborn," with – in an interesting reversal of most clone narratives – the clone being awarded superior status for "they had the future" (71). The original subjects have ceased to exist as "separate individuals" (8), replaced by a population who are all "admirably alike" (27).

Where Late the Sweet Birds Sang similarly portrays an alternative approach to life based around Utilitarian principles of protecting the community at the expense of the individual. The clones are valued for the contribution they can make to the whole, working together as "one organism" (116) experiencing "the same thoughts, the same longings, desires, joys" (82). This manufacturing of clones as parts within a greater whole removes their individual potential, removes their "humanness." The Sumner family, who clone themselves in an attempt to save humanity, create instead a new species that they come to recognise as "inhuman monstrosities" (45) set to take over eventually and find their own path.⁷⁶ Hilda resorts to strangling her clone, and this act is met with understanding by her family who comment: "it's a bit spooky to walk into a crowd that's all you, in various stages of growth. They do cling to their own kind" (48). Indeed, encountering your clone would be uncanny: the family see themselves "with something missing ... a dead area" (59). The

⁷⁵ They are shown the same honour as Ford in *Brave New World*.

⁷⁶ This fear of clones "taking over" humanity is common to clone narratives of the period, for example Evelyn Lief's futuristic *The Clone Rebellion* (1980).

humans amongst them become "pariahs" (61), admired for what they have done, and yet ultimately redundant. As with *Solution Three*, the original has been lost, replaced by a stream of doubles set to find their own path of survival.

These novels tap directly into public fears that cloning will lessen the individuality of humans. Lilac observes of her surrogate child in *Solution Three*: "He might have been a marvellous painter or a musician or a scientist" (62) but any such potential is stifled as "they've got to be Him – just the same!" (63). The Council's rigid vision and tight control creates a group of children that are indistinguishable from one another, requiring "ankle tags" (28) to enable humans to differentiate. Likewise, in *Where Late the Sweet Birds Sang* numbers are painted on each baby's forehead (151). Rather than being viewed as a positive thing, any expression of individuality is deemed a "community threat" (84). When Thomas shows signs of insanity during a trip away, his companions are aware that such lack of uniformity will not be tolerated on their return. Barry articulates their philosophical approach:

"Psychology is a dead end for us," he said. "It revives the cult of the individual. When a unit is functioning, the members are self-curing. ...it is our duty to safeguard the well-being of the unit, not the various individuals within it. If there is a conflict between those two choices, we must abandon the individual." (119)

Their community promotes the "functioning" of each "unit" over the needs of "the various individuals within it." Based on Utilitarian principles, it is an approach which stifles the individual, advocating the sacrifice of one for the good of many.

Molly becomes a threat to the equilibrium of her unit. She suffers recurring nightmares, in one envisioning herself as a "golden statue" (85) which her sisters were unable to grasp, and in another seeing her sisters as grotesque caricatures of herself (91). Her individuality is developed through separation from her unit, leaving her feeling disconnected, observing her sisters as "look-alikes, she thought, like dolls" (109).⁷⁷ Ben notices a light within her, a beauty missing from her sisters: she is embracing her own humanity. She shows Ben a drawing of Sara, but changed: "Beside her, mirrors reached into infinity, and in each mirror was another woman, each Sara but none exactly like her..." (114). In a Lacanian encounter, Molly comes to know herself only through an act of misrecognition in the mirror, and yet in doing so yearns for her lost wholeness. She has become a missing part from the whole organism, one that "like an amputated limb, caused phantom pain" (116). The Utilitarian doctrine they have adopted, made possible thanks to cloning, rejects human individuality as detrimental to the community.

As in *Brave New World*, the clones are inhuman parts, commodities, manufactured to optimise the functioning of the community as a whole. To use Walter Benjamin's term, the "aura" of the clones is eventually lost, their "human" core, with younger generations proving unable to "think for themselves" (231). They recognise the need for "constant replenishment of our stocks" (158), treating each fertile woman as "a thing, an object, press this button and this is what comes out, all predictable, on cue" (141). One of the breeders, describing the consequences of being ostracised from their unit, states: "my sisters and I were like one thing, one creature, and now I'm a fragment of that creature" (230). These texts portray an alternative approach to society based on valid principles, one made

⁷⁷ Such alienation is also expressed by the eponymous Mary in Damon Knight's short story, first published in 1964.

possible through cloning but which is ultimately doomed to fail. *Solution Three* backs Gaylin's observation that cloning would destroy the evolutionary process, through multiple copies sharing the same genes. As Miryam elaborates: "supposing something went wrong with all of you clones? You see it would be all if it was any" (137). The same applies in *Where Late the Sweet Birds Sang*, where "it was impossible to hurt one without hurting others equally" (155), something which leads to vulnerability. These texts show cloning's potential to produce the kind of uniformity Ford champions, while also suggesting it is one step too far from nature, with mass production destroying random distribution and stifling the diversity necessary for survival. Such uniformity would distort the natural selection and adaptation that underpins evolutionary theory. These texts create a nostalgic yearning for a time before the days of cloning, presenting themselves as cautionary tales warning against progression down that path.

Ferreira expresses concern over Baudrillard's bleak depiction of clones as "inferior copies," suggesting he "seems able to think only in terms of hordes of robotically identical clones and unable to consider the human feelings of a single one" (155). Ferreira counter-argues that these narratives reveal cloned characters, including Bernard in *Brave New World*, who have the potential for individuation rather than being merely a "series of endless duplications of the same" (167). While characters such as Molly⁷⁸ support Ferreira's claim for the "human feelings" potential in clones, these texts suggest cloning primarily suppresses that potential. In contrast to Ferreira's analysis, the more humanity these individual clones reveal, the more "other" they become within their community: ironically, the more human they become, the more alien they are treated. These science

⁷⁸ Ferreira mistakenly cites Mark as an example of this from *Where Late the Sweet Birds Sang*. However Molly seems more appropriate as although living in the clone community, Mark is not actually a clone.

fiction narratives show cloning "manufacturing" a stream of doubles, leaving the door open for Baudrillard's desolate, dystopian vision.

SCREEN PORTRAYALS PRIOR TO DOLLY

During the same period, depictions of clones and other "manufactured" beings became a feature of many science fiction films. The horror of human bodies being taken over by soulless creatures, of the loss of individual power and control - fears closely linked to cloning - featured in two other cinematic hits of the 1970s: Forbes's *The Stepford Wives* was released in 1975, an adaptation of Ira Levin's 1972 text; and Kaufman's *Invasion of the Body Snatchers* was released in 1978. Both deal with concerns over diminished or devalued humanity and tap into the debate as to whether a clone would contain a soul and form a part of the human race. It was shortly after this, in 1982, that Ridley Scott released the science fiction classic *Blade Runner*, a film which brings directly into focus the debate over what it means to be human, with the acclaimed director's cut being released in 1991. While in earlier science fiction films⁷⁹ the human was distinguished by virtue of her feelings, *Blade Runner* complicates this premise by inverting it to "what has feelings is human" (Bukatman 69). Even more than twenty years after the release of the director's cut, over 66,000 results are generated by entering "is Deckard a replicant?" into a search engine, demonstrating the cult status of the film. The doubt surrounding this taps into a deeper issue, forcing a consideration of precisely what it might mean to be human, and where the borders of the construction of the human should be drawn. *Blade Runner* portrays the self as

⁷⁹ Such films include *I Married a Monster from Outer Space*, *The Thing from Another World*, *Invaders from Mars* as well as *Invasion of the Body Snatchers* and *The Stepford Wives*.

manufactured – "I designed your eyes"⁸⁰ says Chew at "Eye Works" factory – memories are implanted and commodified, false biographies bestowed. All memories are constructed, and so too, the film reminds us, is the human. As a threat to humanity, the replicants are "simply defined right out of existence," much like the creature in *Frankenstein* (Bukatman 76). Like Frankenstein's creature, they resort to violence precisely because they have developed "human" feelings (Klotzko 12). They are designated "other," branded with a genetic flaw that restricts their lives to just four years, yet precisely how or if they are "other" is never resolved. So it is with the clone, whose lifespan, the discourse suggests, is limited, as the next chapter discusses. Indeed, the shortened lifespan of the replicants forms a tentative connection with clones whose own lifespan has been widely debated, with speculation over premature ageing heightened by Dolly's development of arthritis and sexual maturity, which the next chapter shows. The issues raised by *Blade Runner* directly relate to the debate on cloning, and the discourse on cloning has been influenced by it.⁸¹

In 1993, shortly after the release of the director's cut, a cult science fiction drama, *The X Files*, was released on the small screen. Investigating the darker side of life, FBI agents Mulder and Scully encounter clones early on in the first series, most memorably in the eleventh episode: "Eve." The "Lichfield experiment" was a government run programme raising genetically controlled children as "supersoldiers." As the first of a new kind, the girls are named Eve and the boys Adam. Appearing as though they are "just little girls," they prove themselves anything but, as "Eve" poses the uncomfortable question "can evil

⁸⁰ Eyes and vision are a central focus of the film.

⁸¹ *Blade Runner* was one of the films most frequently referred to in the 1998 Wellcome Trust report: "Public Perceptions on Human Cloning."

be genetically passed on?", and seems to respond: yes.⁸² "Eve" portrays clones as psychological monsters, genetically engineered beings. This depiction accords with the general portrayal of clones in texts prior to Dolly as being less than human.

The same year as Schaffner's *The Boys from Brazil* was released, one of the strangest cloning narratives of the 1970s emerged: David Rorvick's *In His Image* (1978). While cloning was designated a topic for science fiction texts, Rorvick produced a book that he claimed to be fact. Rorvick described a cloning experiment in which an eccentric millionaire enlists the help of a scientist to clone himself, with Rorvick playing the role of journalist and intermediary. The book caused an instant scandal, with scientists quick to express their scepticism. Deryck Bromhall,⁸³ a scientist whose work on rabbit cloning was cited in the endnotes and who feared he may be mistaken for the scientist described, sued and a settlement was reached. While the story was eventually discredited, Rorvick succeeded in stirring up debate on the issue and continues to maintain his book was not a hoax (Klotzko 13). He forced a consideration that cloning humans may not be merely science fiction, introducing a sense of mystery and intrigue that became a feature of the cloning discourse as it developed.

A CATALYST FOR CHANGE: COMMODYING THE CLONE

The cloning of Dolly in the late 1990s transformed the clone from a fictional concept to flesh and blood. As the clone became real through the birth of Dolly, fictional portrayals humanised her, and cloning narratives moved away from a science fiction focus to become more mainstream. Since Dolly, cloning has become a more marketable topic, evident in the

⁸² In this way the episode can be seen to address the central question raised by Ira Levin's *The Boys from Brazil*, which is discussed in more detail in the next chapter.

⁸³ Bromhall was also the scientific advisor for the film version of *The Boys from Brazil*.

interest taken by Hollywood in the subject, as well as pet cloning. Not only has the humanity of clones become more established in most contemporary texts, or deemed unimportant, the majority also encourage sympathy for the clone. This is in line with altered views on monstrosity, whereby identification with the monster is encouraged, which the next chapter explores. Society is instead the monster, a society in which clones are frequently victimised and enslaved. The consumerist nature of twenty-first-century society is reflected in cloning texts in which the commercial potential of cloning repeatedly recurs. This issue is taken further through the adoption of consumerist language in some contemporary texts, most notably *Cloud Atlas*, which is discussed later in the chapter. The commercial potential of cloning was highlighted in 2005 when South Korean scientists, including lead researcher Hwang Woo-suk, produced the world's first cloned dog, stating their objective was to learn about the root causes of diseases (Mott, "Dog"). The same team, however, progressed to cloning a family pet, Missy. The world's first clone of a family dog was born on 5 December 2007, taking a step toward what Andrea Dworkin describes as "turning life into a museum, a set-piece, a site of archaeology and misplaced time" (77). Pet cloning has proved particularly popular in America. With the capability to clone humans now a viable possibility, the future prospect of private companies exploiting parents' desperation for their own commercial gain, no longer seems so very implausible. As *The Daily Mail* says, "there is a market out there" (Derbyshire). The market also extends to the food industry. "The Beijing Genomics Institute produces 500 cloned pigs a year," *The Independent* reported in January 2014, and many "have been genetically modified in some way" and some are "clones of clones" (Saul). One of the central aims of the Institute is to produce "better tasting food" (Saul). The devalued status of the clone

initiates the dynamic between master and slave: a two-tiered system. The clone's treatment as a commercial product has opened the door for the portrayal of a new villain in contemporary cloning fiction.

THE CEO

With the mad scientist becoming a less villainous character, as the last chapter discusses, space has been created for a new one to emerge. Appropriate to twenty-first-century consumer culture, the figure of the chief executive (CEO) has become the new villain in modern cloning texts. By portraying the CEO rather than mad scientist as the main villain, cloning narratives transfer the fear associated with science elsewhere. A motivation of financial gain, or greed, is likely to generate little, if any, sympathy. The CEO in these texts recognises and exploits the commercial potential of cloning, and in so doing lessens the humanity of the clone. The more commercially viable cloning is deemed to be, the more the status of the clone is reduced, as human clones come to be viewed as little more than consumer products. The real-life representative of the CEO is Brigitte Boisselier, the peculiar head of Clonaid, someone who has shown herself willing to manipulate science for financial gain.

In December 1998, Clonaid placed a monetary value on the human, contrary to the 1997 Convention on Human Rights and Biomedicine (Council of Europe) which stipulates that "the human body and its parts shall not, as such, give rise to financial gain" ("Convention" Article 21). Clonaid, contrary to this, stated that people can order a duplicate of themselves for \$200,000, further emphasising the commercial potential of cloning (Weiss). Indeed, in September 2000 it was revealed that a wealthy American

couple were willing to pay \$500,000 to clone their daughter who had died following a medical error. Marketing themselves as "the world's most exciting business venture," Clonaid continues to seek investors and has received support from a former West Virginia state legislator who hoped to clone his dead ten-month-old son, enabling state of the art lab equipment to be bought. Distancing themselves from their eccentric Raëlian roots, Clonaid markets itself as a reputable company. It is advertised as "the world's leading provider of reproductive human cloning services" whose "team of highly skilled scientists" can help ("Services"):

- Sterile people who have lost hope of having a child
- Homosexuals who deeply desire a child who would carry their own genes
- Those who have just lost – or are about to lose – a beloved family member and would like to see an identical twin of that person begin a new life
- HIV positive people who want to have a child that would be a genetic twin of themselves – without infecting the baby or your partner with the virus
- Anyone who simply wants to be cloned, whatever the reason may be...

They actively prey on vulnerable consumers, and have made numerous claims of cloned humans, none of which has been substantiated. At their helm, Boisselier is a charismatic individual. *The Guardian* reported that the press conference announcing Eve's birth was "made all the more surreal by the dramatic orange and white colour scheme of Ms Boisselier's hair..." (Borger):



Fig. 11. A flamboyant Boisselier (Serota).

While the Raëlian Movement appears unafraid of seeming different from the norm, this has pushed it further away from mainstream society and the likelihood of being taken seriously. In an apparent attempt to rectify this, Clonaid has more recently toned down the image it presents, something demonstrated by the official website photograph of Boisselier (see fig. 12). Clonaid's connection with the Raëlian Movement is only mentioned briefly in its history section and there are no suggestions on its website that it is connected with extra-terrestrials. Boisselier's website photograph does, however, acknowledge her connection with the Raëlian Movement through her necklace showing the Raëlian symbol of a swastika embedded on the Star of David, making the connection visually explicit:



Fig. 12. Boisselier's webpage image ("History").

Clonaid's website affirms the company's policy of "strictly respecting the privacy of each of its patients" enabling them to legitimately dismiss unanswered questions. In April 2003,

it was revealed that Clonaid had no address or board of Directors and *CBS News* reported that it was not a company, with Boisselier admitting Clonaid was, in the strictest sense, really only a brand name (D. Collins). Their website acknowledges this, again clouding the company in mystery with the claim: "the company name under which we operate is different and is not revealed for obvious security reasons" (Homepage). Despite ridicule and scepticism, Clonaid remains "operational" to this day. Boisselier has been designated to take over from Raël as leader of his cult on his death. Famed for her extreme and unsubstantiated claims, she is an unsettling figure on the cloning scene, with a noticeably disconcerting smile.

FICTIONAL PORTRAYALS OF THE CEO

In *The Secret*, Iris's attempt to establish a genealogy leads her to a starkly corporate setting. She is confronted by the corporate giant "Rosen, McPherson & Park" whose commercial services include "genetic modification; disease and ageing prevention; parts replacement; image implants; memory enhancement; personalized pet cloning; species revivification; human cloning" (90). This uncomfortable glimpse of the possible future highlights the commercial potential of reproductive cloning, reinforcing the message presented by Clonaid. Iris is not introduced to a mad scientist caricature, an eccentric genius locked away in a dark and dingy laboratory, but rather shown into "a splendid reception room, parquet-floored and discreetly dim, aside from a single spotlight over a large granite-topped desk and serene pools of light over the tawny leather couches in the waiting area" (89). The surroundings radiate openness and wealth, a stark contrast to the hidden Gothic space more typically associated with the mad scientist trope. Iris's creation was, for Dr Park

at least, a straightforward business transaction acted out for the purposes of financial gain. In this way Park aligns himself more closely with the CEO than doctor or scientist, despite his repeatedly used title of "Dr" in the text, and through his commercial motivation for creation sets himself up in a villainous role. As Ian Malcolm tells the billionaire head of Jurassic Park: "You stood on the shoulders of geniuses to accomplish something as fast as you could, and before you even knew what you had, you, you've patented it, and packaged it, you've slapped it on a plastic lunchbox, and now ... you're selling it" (*Jurassic Park*). Richard Attenborough's John Hammond may not be a conventional villain, but it is a portrayal back in 1993 which paves the way in cloning fiction for more sinister CEOs to come. Cloning is predominantly associated with grief in contemporary texts, and as such the man who seeks to profit from the grief of others, and who is willing to use reproductive cloning for financial gain, appears a more definitive villainous character for the twenty-first century.

Bernard Merrick, the powerful head of a corporate empire in *The Island*, is one such villainous character. Developing the plot of *Spares*, *The Island* depicts a society in which clones are manufactured as an insurance policy for wealthy sponsors. Merrick, played by Sean Bean, presents a clean-cut image appropriate to a professional CEO:



Fig. 13. Sean Bean as Bernard Merrick, scene still (*The Island*).

He inspires the trust of the clones he creates, as shown by Lincoln Six-Echo opening up to him about his disturbing dreams. Yet beneath this façade lies a sinister core: "I have discovered the holy grail of science," he proudly asserts. "In two years, I will be able to cure a child's leukemia. How many men in the world can say that?" (*The Island*). The inevitable response, "I guess just you and God," aligns him with the traditional mad scientist trope, appropriately updated and harnessing more power by being combined with the CEO. He considers his clones "products" created to meet commercial aims, and asserts his right to kill them: "I brought you into this world, and I can take you out of it" (*The Island*), he tells Lincoln Six-Echo with no hint of remorse, asserting godlike control over him. The power his character asserts is derived through the combining of the tropes of mad scientist and CEO: he controls both the technology and the money.

While in such instances, and also in the case of Richard Wells who heads up the Godsend Fertility Clinic, the CEO and mad scientist trope are combined, in others the CEO stands alone as a character willing to manipulate and corrupt the scientific genius whose technical expertise will enable him to achieve the wealth he seeks. In these cases, by moving the blame away from the scientists towards the commercial institution, science is portrayed in a less threatening light. In *The 6th Day*, for example, Robert Duvall plays a scientific genius who is consumed with anguish over his wife's illness, resorting to cloning as a means of keeping her alive:



Fig. 14. Robert Duvall, scene still (*The 6th Day*).

Dressed in a white lab coat to confirm his role, Weir comes across as both misguided and weak, but not a manifestly evil character. That role is taken instead by Michael Drucker, the billionaire head of a corporate giant whose ruthless ambitions prompt him to manipulate scientists for his own commercial gain. The illegal nature of his operations ensures the scientist is once again hidden away, but it is significantly in a commercial laboratory space that he works (Haran et al. 82), with the scientist playing the pawn in a much larger game. It is the scientist whose conscience prompts him to assist the clone in the end, while the CEO retains his evil stance throughout. Rather than science being seen as dangerous, fear is transferred to unscrupulous individuals whose greed prompts them to manipulate it for their own immoral purposes.

One such unscrupulous CEO is Dalton Van Dyne in *Double Identity*. His response to Dolly's cloning is reminiscent of the hubris displayed by many traditional mad scientists:

Human cloning's the real deal. The first person who can show off a human clone – with proof – will be hailed as a modern god. He'd replace God. I'd do it in a heart-beat. You know me – I love adulation. (182)

He asserts control and ownership of his team of scientists, stating how he wished "some of my boys had figured it out" (182). His narcissistic motivation is to recreate himself, and he

designates Walter Krull, whose less dubious motivation is to replace his tragically lost daughter, in charge of his "secret lab" (212). Yet by the end of the novel, significantly aimed at younger readers, even the CEO – an "ex-con embezzler" and "former billionaire" (211) who had stalked Bethany and her family – displays a moral backbone and "turns his life around" (211). Through its alignment with IVF, reproductive cloning is almost normalised in this text, with Bethany hearing from a classmate at school: "I was a test-tube baby. I don't think anything could be weirder than *that*" (216). *Double Identity* portrays reproductive cloning as a realistic prospect for the future, appearing to adopt a consciously didactic approach showing children an appropriate way to respond. Cloning fiction serves to warn adults, and prepare children for the reality of human cloning. The clone, *Double Identity* implies, is no different from anybody else and this sameness, rather than disturbing, serves a normalising function here.

DEHUMANISING LANGUAGE

Not all works of young adult fiction, however, portray a future with cloning in a positive light. El Patrón, a feared drug lord and tyrant, expresses no misgivings about using humans as "bloody lab animals" (189) in *The House of the Scorpion*. The clone is repeatedly described in derogatory terms and, as with *Brave New World*, is often associated with animal imagery. This association implies the clone is considered more closely linked to the animal than human. Matt is often referred to as a "beast" (23) and is imprisoned in chicken litter (55). A clone is described as a "bad animal" (27), considered "as vicious as werewolves" (30). Even those who care for him consider him little more than a "dumb beast" (85), and he sees himself as "a very intelligent pet" (120). In *Never Let Me Go*, Miss

Emily discusses how the clones have been "reared" (255), similarly associating them with animal imagery. In *Cloud Atlas*, clones are dismissed as "dumb fabricants" (240) who have been "hatched" (199) and then condemned to a life of slavery. In *The Angel Maker*, the cloned boys are described as being "like sardines in a tin" (19). In an attempt to explain how "normal" a clone would be, *Clone's* Patrick Finch compares her to a commercial product: "like any normal baby, it's a blank tape" (19). "The clones of a single parent," he explains, "would be like a box of rewritable discs – all the same but they will each store a large, different, fantastic and unique set of experiences. End result? On playback, each one is totally individual" (20). While attempting to emphasise the normality which would result from clones, Patrick's language unwittingly betrays him. He creates an analogy associating them with manufactured goods: "rewritable discs," continuing to "store" information prior to "playback." Even those attempting to promote cloning, it would seem, struggle to differentiate the clone from commercial stock.

Language itself has been commercialised in *Cloud Atlas's* "corpocracy," with a film being described as a "disney" and a coffee a "starbuck," terms used throughout the novel. The suffix "ex" is translated to "x," an abbreviation that calls to mind X-rays as well as the X chromosome, which serves as a reminder of their origins. Clones are treated as commercial slaves, as "servers," with their enslavement viewed as "merely like owning the latest mass-produced six-wheeled ford" (191). Their status as less than human is crucial to their place in society – a society made up of "consumers" rather than citizens – as to "enslave an individual distresses the conscience," but not so in the case of a manufactured product. These clones are treated as less than human, considered as less than human, and

yet Somni-451⁸⁴ asserts their right to humanity, claiming, "all fabricants, even same-stem fabricants, are singular as snowflakes" (191). Their consumer culture has closed its eyes to this, both for the sake of convenience and their conscience, but the propensity for individual thought expressed by Somni-451 attests to its validity. Enslaved "fabricants" end up on a "slaughterhouse production line" (359) at the end of their service, treated as no more than cattle, their bodies "recycled" to supply "protein," some of which is used "to produce Papa Song food" (359).

The language of consumerism also dominates *A Number*. Salter describes his cloned sons as "things" (10), as "copies" (11) made up of "the same raw materials" (31). He talks in monetary terms, suggesting they should "sue" (12) as "there's money to be made out of this" (29), but struggling to determine a value as they are "priceless" (13), but then doing so by suggesting "it's more like half a million each person" (14). He proved a failure in bringing up his son, and so has decided he "wanted you again" (31): he reproduces the same son as a means to try again, as a consumer may replace a bicycle that is past its best.

Cloning enables humans to be supplied in a "batch" (17), a notion expanded upon in *Moon*, which depicts the commercial enslavement of clones. Lunar Industries is a successful corporate firm which extracts helium-3 from lunar soil to produce clean energy back on earth. Cloning supplies an economical way of optimising productivity: the firm produces a bulk supply of clones to be used as required, hiding them in an eerie basement, reminiscent of a morgue. As the new Sam observes:

It's a company, right? They have investors, they have shareholders, shit like that. What's cheaper: spending time and money training new personnel, or

⁸⁴ Somni's name recalls Ray Bradbury's *Fahrenheit 451*.

you just have a couple of spares here to do the job? It's the far side of the moon. (*Moon*)

He appropriately uses monetary terminology to describe its motivation, talking about "investors" and "shareholders," while speculating on what would be "cheaper." He also refers to himself, and fellow clones, as "spares," acknowledging their inferior status and the fact they are expendable. Both Sams are presented as fully fleshed-out characters, as human, yet to the company they are little more than by-products of the original Sam, there to be used and disposed of as required. In a society as commercially orientated as the twenty-first century, it is not a difficult prospect to comprehend. The clones are treated as machines, with their memories downloaded before they are "reawakened" by the paternal Gerty. They are trapped in a time warp: watching recorded episodes of *Bewitched* for entertainment and Mary Tyler Moore's ironically labelled "Aspirational Lifestyles" which was originally aired in the 1970s. The sparse dialogue and haunting soundtrack add to the desolate feel. Each Sam is condemned to a half-life of monotony, a life in limbo, while the world outside races ahead due to their labour. It is an existence forced upon them by the company which controls them, however, rather than due to an inability to live a human life. As Sam asserts prior to his escape: "Gerty, we're not programmed. We're people, do you understand?" (*Moon*).

Clone narratives consistently demonstrate the usefulness of clones, be that as suppliers of spare parts or a commercial product. Both *Cloud Atlas* and *The House of the Scorpion* expand upon the potential of the hapless clone. Mitchell depicts a world where "Soulless, hatched clones" (199) are "genomed for service" (232), forced to live a life which is "as uniform as the fries we vended" (187). El Patrón creates a work-force

consisting of "eejits": former illegal immigrants who are transformed to virtual zombies through the insertion of a micro-chip which ensures they repeat the same mindless task endlessly, mirroring the manufacturing model championed by Henry Ford, while also lacking the capacity for creative thought. These clones are "programmed" – a word repeatedly used when describing clones – to "do only simple things. They pick fruit or sweep floors or ... harvest opium" (Farmer 81) and serve only as a "mindless army of slaves" (171). They are living what Hogle describes as "simulated life" ("The Gothic" 159). They are enslaved for the wider benefits of their society, treated as "homo sacer" to be used and abused, as spares or copies. The clones are treated as less than human, at the same time as the texts show their potential for being just that.

DISCOVERING THE SELF

Part of the natural process of individuation, Jerng suggests, is the process of maturation and separation which comes about from the parent-child relationship (370). In the case of the clone, socialisation is compromised by the disfiguration of human relations, which the final chapter demonstrates. The consequences of introducing a clone to the family unit are played out in *The Secret*. Brought up by the woman who was "not quite a mother and more than one" (15), Iris is unable to achieve the separation necessary to form her own unique identity, finding herself instead submerged by the overpowering influence of her mother/twin. Like the students in *Never Let Me Go*, Iris describes how she "knew and didn't know" (1). This results in a sense of confusion which is revealed in *The Secret* through Iris's intimate and confessional style which amounts to an exploration of the self. The narrative style enables the reader to experience the same turmoil felt by the clone, and is an approach

frequently used in contemporary cloning texts, offering insight and even identification with the other. On discovering the truth, Iris jumps immediately to an impression of herself as "a manufactured thing": "I was nothing more than a Xerox of her cellular matter, an offprint of her genetic code" (61). She is unable to process the revelation, declaring herself "a superfluity, a technical non-being" (65). The inferior status of clones in contemporary fiction is not only revealed through their treatment by society, but also in the way they feel about themselves.

Matt's entry into, to use a Lacanian term, "the symbolic order"⁸⁵ is both confusing and painful for him in *The House of the Scorpion*. Tam Lin attempts an explanation to help him discover his own identity:

A long, long time ago some doctors took a piece of skin from El Patrón ...
The skin was what you might call a photograph. All the information was
there to grow a real copy – skin, hair, bones, and brain – of a real man.
You're exactly like El Patrón was when he was seven years old. (80)

It is an explanation, given by Matt's protector and friend, which equates Matt with a manufactured product, a "photograph." He is a "copy" of another man, with all the connotations that holds. He contains "all the information" of the original El Patrón, but as Benjamin points out, a photograph is merely a mass-produced object, and a duplicated copy is not equal to its original. Matt concludes he is no more than a captured image, something that would "lie forgotten in drawers for years" and could be "thrown away" (84). It is a comparison which devalues him as a human. Rather than discovering his identity through a mirror image (and indeed the "mirror stage" described by Lacan is virtually abolished through cloning), Matt realises that for El Patrón he represents a means of

⁸⁵ See Lacan's *Écrits*.

returning to the imaginary realm he left years ago. The notion of clone as mirror image recurs in *Cloud Atlas* which provides an explanation for clones' enslavement: "fabricants are mirrors held up to purebloods' consciences; what purebloods see therein sickens them. So they blame the mirrors" (231).

Mirrors and reflections are recurring features of clone narratives. Iris confesses to becoming obsessed with them as a child, believing her true identity would be revealed there. A child's identity is formed, Lacan suggests, by recognising the body's external image through an other, be that a reflection in a mirror or representation through the mother. Iris's identity is formed through the image of her double, and the development of her ego is compromised as a result. The image of her mother is not a contrast to her own, but her original self. She describes looking at her mother as like "an enlarging looking-glass, into which I entered through her eyes and in which I dissolved, becoming indistinguishable from her, becoming her" (6). Looking into a make-up mirror, Iris recalls they both gazed "at something just beyond the mirror" (27), the vanishing point of desire. Iris turns to the mirror in a Lacanian quest for wholeness, but her mirror image instead shows another version of herself. When asleep, her "dreams were of reflections and watery mirrorings" (74): she is seeking to know herself through an illusion, through no more than a reflection, which is also how she comes to see herself. In *Never Let Me Go*, "mirrors and reflections frequently show the clones what they are in the eyes of the world, although what is revealed is shielded away from or misunderstood" (Byron and Ogston 454). When Kathy visits Ruth as her carer, her impression of the recovery centre reveals more than she realises:

Everything – the walls, the floor – has been done in gleaming white tiles, which the centre keeps so clean when you first go in it's almost like entering a hall of mirrors. Of course, you don't exactly see yourself reflected back loads of times, but you almost think you do. When you lift your arm, or when someone sits up in bed, you can feel this pale shadowy movement all around you in the tiles. (17)

In this sterile environment, clones are reduced to their functions. The gleaming tiles, reflecting Kathy's self back to her, show only shadows, endless copies to be used.

THE COPY

The notion of the copy emerges frequently in contemporary cloning texts, and is often intricately linked with attempts to form an identity. The connection between the clone and the copy was emphasised by the media storm following the announcement of Dolly's creation. *The Sun's* subheading announced Dolly as "first mammal 'copied' from adult animal," while *The Daily Mail* described her as "a perfect copy," further speculating that cloning meant dictators could create "exact copies" of themselves (Derbyshire). *TIME* magazine's article "the age of cloning" labelled Dolly "a carbon copy" (Nash et al.), while *The Independent* stated cloning "opens up the possibility of a bizarre world in which people can be copied" (Arthur, "First"). While by comparison the BBC's reporting was less sensational, it nonetheless emphasised that Dolly is "an exact genetic duplicate" ("1997"). Ten years after Dolly's creation, *National Geographic News* ran an article with the headline: "Ten Years After Dolly, No Human Clones, But a Barnyard of Copies" (Mott, "Ten Years"). Wilmut himself makes such a connection when expressing his revulsion at

human cloning, stating, "if there was a reason to copy a human being, we would do it, but there isn't" (Ross). The association with a copy is significant as it infers the clone holds inferior status, as western society implies we should prize an original – artwork, manuscript, recording – over a copy which is of less monetary value and carries less status. As Doug Kinney #3 states in Harold Ramis's comic *Multiplicity* (1996): "sometimes, when you make a copy of a copy, it's not as sharp as... well... the original" (*Multiplicity*). However, although clones may be treated as inferior in contemporary texts, as manufactured beings or copies, may even consider themselves as such, it is simultaneously shown they are not. Rather than a figure to be feared, the clone is moving instead towards more of a tragic figure.

Clones are referred to as copies at some point in nearly all cloning narratives. In *Womb*, clones are specifically referred to as copies. Even the central clone himself, before discovering his own identity, speculates as a young boy to a friend: "copies have a weird smell... like window cleaner." Nor is it a prejudice restricted to children, as Rebecca is subsequently warned by other parents that "we don't want our children coming up against these things first hand" (*Womb*). *A Number's* Salter, while falteringly acknowledging them as "people," confidently asserts to his son that the clones he has seen are "copies of you" (11). *Cast of Shadows's* Davis Moore justifies his decision not to clone his daughter to his wife as, though a clone would be "real" to a new family: "to people who knew the original, she wouldn't be real at all. To them, she's a doppelgänger. A smudged copy. A ghost with no memory. Would AK be AK without that scar across her knuckles?" (58). Moore makes a living out of cloning and is proud to do so, and yet he also recognises the risks it entails, finding himself referring to a clone as a "smudged copy," and suggesting she would not be

"real." *Double Identity's* Bethany discovers she is a clone from her mother's explanation that they set about making "an exact copy. A clone" (126). It is a word that alarms the young girl, who stammers, "stupidly," "a ... copy?" (126). Describing someone as a copy relegates them to inferior status as a result of its cultural inferences. Copies of documentation, such as a passport or driving license, will often not be accepted to avoid the risk of fraud: a copy may have been altered and is not a legitimate form of identification. It is a derogatory term, implying the clone is less than other people, and moreover less than human. Although contemporary texts imply the clone is human, the implication behind the term clone and its association with the copy give the characters reason to doubt.

In contrast, for *Never Let Me Go's* Kathy who has been told she has been "copied" at some point "from a normal person" (137), the copy holds a particular value and significance. It comes into prominence in relation to a cassette tape, made special because of "one particular song" (69) which shares the novel's title. Kathy speculates this "was originally an LP – the recording date 1956 – but what I had was the cassette" (66-67). It is difficult to pin down at what point the song could be considered an "original": whether the LP would count or if it is necessary to trace back to the recording. The value of the cassette for Kathy was not based on its status, however, but the meaning behind the object, the feeling of nostalgia it generates. Its value increases for Kathy after it is lost, with Ruth's alternative replacement also becoming: "one of my most precious possessions" (75), despite the fact she does not like the music. During their trip to the "lost corner" (65) of Norfolk, Tommy purchases a replacement "copy of that tape" (64) for her, exclaiming as he does so: "Do you think it could be the same one? I mean the *actual* one?" (170). It seems unlikely, but even if it is the same one, that still would not make it an original. Yet that is

not important to Kathy, and in her analysis of the tape's meaning the whole idea of "original" is brought into question. Like Kathy we have cause to wonder what makes these cassettes amongst her "most precious possessions" (64), and the answer comes "it was mainly a nostalgia thing" (171). It is a means for Kathy to hold on to the past, and its significance is drawn from the meaning she has attached to it, with each cassette valued whether it is original or not.

Kathy's philosophy counters the lessons she learnt at Hailsham, where she was taught to value the original above all else. This is most clearly evidenced at the Exchanges where they prize books of poetry written by other students: poems made up of "funny little lines, all misspelt" (17). Kathy is intrigued by this: "if we were so keen on a person's poetry, why didn't we just borrow it and copy it down ourselves any old afternoon?" (17). Such issues trouble Kathy, who wonders why they should want the poems in the first place. Tommy's "densely detailed" (184) animal drawings further complicate the issue of copies and originals. Kathy comments with disappointment that they "looked laboured, almost like they'd been copied" (237), and her initial impression is that it was like when "you took the back off a radio set: tiny canals, weaving tendons, miniature screws and wheels" (184-5). He has created his animals as though they were machines, so as at first glance it is difficult to tell that they are animals at all, similar to how clones are considered less than human. Tommy is consciously using drawing to reveal his inner self, and interestingly does so by portraying life in a mechanical form. Kathy is initially unable to credit them with any originality, suggesting instead it was as though they had been "copied." It is only on closer inspection that she describes "becoming genuinely drawn to these fantastical creatures" (185):

For all their busy, metallic features, there was something sweet, even vulnerable about each of them. I remembered him telling me, in Norfolk, that he worried, even as he created them, how they'd protect themselves or be able to reach and fetch things, and looking at them now, I could feel the same sort of concern. (185)

These "fantastical creatures," as Eluned Summers-Bremner observes, are created in his image (157). They reveal an insecurity concerning his own form, suggesting Tommy views himself as less than fully human. He portrays his creatures with "metallic features" and "mechanical" in form, and yet with an innate vulnerability and desperate need for protection.

The insecurity that the students feel concerning their role, status and how they should behave, is revealed at the cottages where the veteran students copy their mannerisms from the television. When Ruth follows suit, however, Kathy confronts her: "it's not something worth copying ... it's not what people really do out there, in normal life, if that's what you were thinking" (121). Kathy, by comparison, attempts to act spontaneously, to display original thought and action, in the possible belief that is what being human is all about. Rather than suggesting the students are not fully human, however, such fascination with how they should be acting reveals instead a preoccupation with their own identity and place in the world. The clones' search for an identity involves a journey into the past, a search for the people they term "possible," their original self. The clones become "fascinated – obsessed, in some cases" with finding the person from whom they had been "copied" (137). It is not so much the search for a parent figure as for their own identity, a way to "glimpse your future" (137), to use the past to reveal their future.

Jerng comments that "we work out who we are through a deep fear that we *are not* identical to someone else" (386) which may explain the students' need to find their "original." The danger for the students of looking too closely is shown, however, in the search for Ruth's possible. It leads only to a realisation of their own worthlessness, to despair. "We're modelled from *trash*," cries Ruth, "Junkies, prostitutes, winos ... if you want to look for your possible, if you want to do it properly, then you look in the gutter" (164). Their fantasies of the possible are revealed to them as no more than an illusion. The students are not able to achieve proper socialisation, to progress naturally from childhood into adulthood as in healthy human development. They have not been accepted into society as equals, but instead placed at the bottom of the hierarchy, if indeed they are included on that hierarchy at all. Hailsham creates for them an artificial sense of belonging, and it is possibly for that reason that Kathy clings to it so desperately after she has left. Kathy defines herself not through an original but through her community, throwing herself into the role of carer. Whilst a carer, she collects desk lamps, four in different colours, but all the same design. These lamps, like the "little tribe" of balloons (208) she sees "securely twisted together" in a clown's grip, suggest "she defines herself not as an original but through her community" (Byron and Ogston 456). Her fear is that "one of the strings would come unraveled and a single balloon would sail off into that cloudy sky" (209). While the other students vainly seek singularity, Kathy's fear is being rendered alone.

Isolation is associated with helplessness in *Never Let Me Go*, but in contrast, isolation from his original results in Matt establishing a position of power at the end of *The House of the Scorpion*. The law of Matt's society states that clones should not exist as: "you can't have two versions of the same person at the same time" (267). As such, the "copy"

must be "declared an *unperson*" (267), a status to which many clones in contemporary narratives resign themselves. Matt, however, regains his status when his original dies, as his law states that in such cases the copy is able to reclaim the identity of their original. It is in this way that Matt is able to establish his status as hero, a role which does not come naturally to clones (Battaglia 506). The notion of clone as hero has been increasingly depicted in film through the casting of A-list celebrities as clones. Their portrayal has developed into a perception of them as vulnerable, romantic figures which elicit sympathy rather than fear. Celebrities such as Arnold Schwarzenegger (*The 6th Day*, 2000), who, as the Governor of California, goes on to play a significant role in real-life cloning debates; Sigourney Weaver (*Alien Resurrection*, 1997); Samantha Morton in *Code 46* (2003); Charlize Theron in *Aeon Flux* (2005); and Ewan McGregor and Scarlett Johansson in *The Island* (2005), all serve to flesh out the individuality of the clone (Haran et al. 59). In more recent films, Sam Rockwell is cast as *Moon's* Sam Bell, and Mark Romanek adapts *Never Let Me Go*, showcasing the talents of up-and-coming young actors in the title roles – Carey Mulligan, Keira Knightley and Andrew Garfield – all playing the part of clones. Rather than being equated with a cyborg, the clone has been "humanised" and a shift can be seen away from fear towards sympathising with their plight, a shift which materialises after Dolly. As well as stirring debate, the interest from Hollywood is inevitably motivated by financial gain, showing the topic itself to be increasingly commercialised.

SEEING DOUBLE: THE CLONE AS TWIN/ DOUBLE

Cloning, as Gaylin's article showed back in 1972, brings the twin directly into focus. Biologically, the clone is the same as a monozygotic (identical) twin, described by Gaylin

as "nature's clones," a link often made in an attempt to "normalise" the clone. Klotzko, for example, reminds us that twins are distinct individuals who develop in different ways, make different choices and die of different diseases. One is not merely a replica or shadow-self of the other (Klotzko 118). In recent years, nurture is broadly felt to be as significant, if not more so, than nature in shaping the way we all turn out. Yet Klotzko also acknowledges that twin studies examining identical twins raised separately, reveal they share many unexplained similarities, proving that genetic factors determine more than previously believed (137). The nature versus nurture debate⁸⁶ which brings twins directly into focus, is also of direct relevance to the discourse on cloning. The more significant the part played by genetics in determining who we become, the more realistic the prospect of achieving duplication through cloning. The press proved eager to emphasise the implications of this, with *The New York Times* quoting the sociologist Alvin Toffler who in his 1970 book *Future Shock* remarked: "Cloning would make it possible for people to see themselves anew, to fill the world with twins of themselves" (Kolata, "With Cloning").

Twins have a long historical association with mystery and taboo. The symbiosis and empathetic feeling they often share, seeming in some cases virtually telepathic, was initially deemed distinctly unnatural. The first set of conjoined twins, where the mirror-symmetry can be almost supernatural, was exhibited in a side-show of freaks (Lash 29). Twins, Slethaug observes, are also the most ancient and pervasive version of the double (8). These dark origins of the twin, far from normalising the clone, emphasise her

⁸⁶ While in the first decades of the twentieth century nature was felt to be more significant than nurture, such prominent figures as Freud sought to demonstrate the significance of nurture in determining how an individual develops and the debate swayed the other way. The recent Human Genome project, also known as "the vampire project," has prompted a re-evaluation of this, suggesting that genes are not merely the carriers of heredity but are active and respond to the environment, being both the cause and consequence of our actions (Ridley).

unsettling role in culture. Baudrillard describes the clone as "the materialisation of a double by genetic means," ultimately resulting in "the abolition of all otherness" (116). Clones, who have the identical genetic make-up of a single ancestor, are the ultimate double – a literal mirror image. Cloning creates doubles artificially: it "manufactures" them, prompting the bleak response presented by Baudrillard. The visual spectacle of "sameness" is repeatedly used in media reports relating to cloning, most notably, perhaps, in a series of covers by *TIME*:



Figs. 15, 16 and 17. An uncanny duplication (*TIME* cover; Hochstein; Hochstein and Gentieu).

Through these covers, *TIME* presents a visual display of the uncanny: showing familiar images made different through their duplication. They are using images which provoke unease, in this way encouraging a negative response to cloning, feeding into and causing the fear which is already prevalent within the discourse. While science attempts to allay our fears by providing a culture of control and rationalism, representations of that science work against this, seeking instead to disturb and unsettle. Much of the fear is based on an instinctive feeling which is hard to articulate, a feeling these covers are likely to promote. In their "Special Report on Cloning," *TIME* speculates that cloning provides the opportunity "to raise your exact biological double, to guide your very flesh through a second existence" (Krauthammer). Tabloid coverage of Dolly's creation proved eager to

highlight the link, with *The Sun* inaccurately reporting that the cloned lamb was "Dolly's exact double" (Coppie).⁸⁷

THE DOUBLE

The double, whether associated with a reflection, shadow or mirror image, is invariably linked to the dark side.⁸⁸ A central feature of the Gothic, the nineteenth-century double dramatises the conflict between original and double as the split within one individual, a split which is only temporary and leads inevitably to death. Through death, order is restored and along with it, the humanist ideal of a fixed, Cartesian self. Cloning complicates this by duplicating the whole person, frequently resulting in the loss of the original altogether. The postmodern double, Slethaug argues, rejects the existence of a consistent personality and psychological wholeness, undermining the notion of a Cartesian self (5). More than this, while the traditional double is viewed as evil and a threat to the self, in contemporary cloning narratives the horror has been transferred away from the double which represents the product of evil rather than evil itself. Sara Wasson has recently outlined this move in relation to organ harvesting, commenting that within cloning narratives such as *Never Let Me Go* "originals devour their doubles" (73). This transference is not, however, restricted to organ harvesting. The clone has become a tragic, even heroic, figure.

The Island, for example, depicts the conflict between original and double in which the hero is clearly established as the double. Lincoln 6 Echo – with the name "Echo" being

⁸⁷ Dolly herself was in fact the double not the progenitor.

⁸⁸ William Ian Miller emphasises doubling's link with horror by commenting that even God was nervous about it and feared and prohibited images of himself. His concern, Miller asserts, was not idol worship but that He would be subjected to soul capture: be seen by followers as indistinguishable from representations, or worse a pale reflection of them (84).

given to a whole generation of clones, forming a telling link with the myth of Narcissus⁸⁹ – introduces himself as "your insurance policy" (*The Island*) in a film which portrays health as the ultimate consumer good. While difference is clearly established at first, due largely to the naïve, childlike nature of the clone, as the film progresses so too does Lincoln 6 Echo's individuation, to the extent it becomes unclear who the original actually is. This is brought to a head when the pair are cornered in a warehouse by armed police prepared to shoot to kill. The police find themselves faced with the uncanny spectacle of identical doubles. "I'm Tom Lincoln," confidently asserts the double, taking over the identity of his progenitor (*The Island*). In Dostoevsky's *The Double*, Golyadkin's similarly finds his identity taken over by his double. Yet while in Dostoevsky's narrative it is the double who is clearly established as the malevolent force, as with traditional double narratives in general, Michael Bay reverses this to ensure his audience sides with the clone, establishing sympathy for the "other." It is the manufactured good, the insurance policy, the double and clone who is the hero of the film, and he establishes himself as such, as he does his own humanity, through an assertion of the self. In the same way as Matt gains acceptance through the death of his original, Lincoln gains humanity by becoming singular and unique, something confirmed through the "adult" expression of love (Jerng 379). Lincoln justifies his actions and further confirms his humanity by stating: "the only thing you can count on is that people will do anything to survive. I just want to live" (*The Island*). The instinct for self-preservation is a central concern of double narratives, as emphasised by Freud's contemporary Otto Rank.

⁸⁹ In the Greek myth Narcissus cruelly rejects the nymph Echo and is punished for his self-love by falling in love with his own reflection. Both Dostoevsky's Golyadkin and Wilde's Dorian Gray represent versions of Narcissus.

Rank published his influential study of the double, *Der Doppelgänger*, in 1925 (written in 1914), in which the German term "doppelgänger" refers to the ghostly double of a living person. He considers the use of the literary double the result of an author's unconscious influence in giving voice to a universal human problem – "the relation of the self to the self" (Rank xiv). Rank sees the double as a displacement of the "powerful consciousness of guilt" in which the hero feels overwhelmed to such an extent that he is no longer able to accept responsibility for certain actions of his ego, instead placing it on another ego, a double, either personified by the devil himself or the result of a diabolical pact (76). The desire to retain beauty and youth, and fear of old age and ultimate death, is rooted in the self-preservation instinct and the desire for immortality. His theory applies to such traditional double narratives as *The Picture of Dorian Gray*, in which the narcissistic hero is driven to an eventual loathing of his soul, as represented by his portrait. Dorian's self-obsession and defective capacity for love are features, Rank continues, shared by almost all double heroes (72). To slay your double, Rank contends, was to kill yourself, as the double serves as embodiment of the soul (79). This feature of traditional double narratives is most clearly demonstrated in Poe's *William Wilson*. "Don't they say you die if you meet yourself?" (16), asks one of the clones in Churchill's *A Number*, echoing Rank's theory. Yet contemporary cloning texts challenge this assumption by showing the possibility of individualising the clone.

Cloning does not result in a splitting of the self, as portrayed in traditional narratives of the double, but in its duplication: the manufacturing of doubles. In this way it is possible for the clone to live on after the death of the progenitor. Repeatedly, however, in these cases clones are shown to be haunted by their original self. Once again this shows a

reversal of the traditional double, where the other haunts the self: this time, it is the original doing the haunting. The double, rather than original, becomes the focus of sympathy and identification in cloning narratives, and is the character which is most clearly fleshed out. This is shown most prominently in instances where the original has died, in particular the young adult novel *Blood Ties*. Rachel is repeatedly compared to her sister/original Rebecca, who died in a road accident at the age of sixteen, and continuously judges herself for falling short of expectations. Her development as an individual is hampered by this, and it is not until she recognises and acknowledges who and what she is that she is able to individualise as a person in her own right, and the ghost of her sister ceases to haunt.

The haunting by an original not only occurs, however, in cases where the original has died. *Moon* dramatises such a haunting, as it probes the merging of identities from original onto doubles. From the isolation of a lunar module where he has spent almost three years alone, Sam's mind starts to play tricks on him as he hallucinates the figure of a woman. It is a woman he knows and yet does not know, for it is a vision of his daughter now grown up. Sam has unwittingly tapped into the consciousness of the original he was copied from but never met, revealing the kind of symbiosis often associated with twins. The same thing happens during vivid dreams in which Sam fantasises about his wife: his memories are not his own but rather a testimony to his close connection with the original Sam. Each cloned Sam is forced to relive the experiences of his original self, and is haunted by him. It is a haunting accentuated through Clint Mansell's evocative soundtrack. The clones are not able to individualise until they acknowledge their situation and achieve emancipation from it.

THE QUEST FOR WHOLENESS

The quest for wholeness recalls the classical Greek philosopher Plato's theory that humans are searching for a unity of self. His *Symposium* (380 BC), which narrates a set of speeches by men attending a dinner party, introduces the idea of the double in Aristophanes's speech, which suggests men are halves of original wholes, having been bisected by Zeus as a punishment for excessive pride. Each half, he describes, "yearned for the half from which it had been severed" (62), and the desire and pursuit of the whole is essentially an attempt to regain "our primitive condition when we were wholes" (64). Drawing on Benjamin's theory, Baudrillard suggests that through the act of duplication there is something lost, and this is a fear often raised in relation to cloning. He suggests, as Plato has done in relation to all humans, that a clone is no longer whole as a result of duplication. "The subject," Baudrillard asserts, "is gone, because identical duplication ends the division that constitutes him" (115). Early cloning narratives generally concur with this, suggesting wholeness is not achievable through cloning, or at least is made more difficult by it, urging a return to traditional ways. Texts such as *Brave New World*, *Where Late the Sweet Birds Sang* and *Solution Three* all deal with the broader implications of cloning for society in general. They portray dystopian visions which warn against cloning as resulting in a loss of wholeness, a loss of humanness.

Contemporary cloning texts, in contrast, frequently focus on the implications of reproductive cloning on a smaller scale, often in relation to the family unit. Describing herself in Platonic terms as a "flat, halved creature" (193), *The Secret's* Iris is only able to achieve fulfilment in the presence of her double, her other half. "My mother was sufficient for me," she confesses, "when I was with her I felt no other needs" (4). Together they make

up a whole, sharing a "special atmosphere" within which was a "connecting passage or cord, along which silent sounds and messages" passed (16). They moved "in tandem" (16) never having severed the "umbilical cord" (25) that joined them from birth. Such a connection recalls *Where Late the Sweet Birds Sang*, but by depicting it on a smaller scale, within a family setting, the concept appears more immediately accessible, encouraging identification rather than seeming distant and remote. Like the clones in the earlier narrative, the intensity of their bond prevents Iris from forming an identity of her own. Rendered no more than an "echo chamber" (36), she struggles to assert herself within the awful intimacy of their relationship. Iris's identity as an individual, her sense of being an independent whole, is smothered by her original's presence. Elizabeth creates her clone out of "vanity or self-love" (225) – out of narcissistic desires. She has become obsessed with her own reflection, confessing: "I've loved you as myself and almost beyond myself" (228). She has viewed her daughter as an extension of herself, stifling in doing so the healthy maturation of Iris.

The result is Iris's degeneration into a malevolent double typical of traditional double narratives. Portraying herself as confused victim, Iris attempts to free herself of accountability by virtue of her status as clone, suggesting: "even if I do something for real, it doesn't really count, since it's an action committed by a simulacrum" (195). As such, she succumbs to her own oedipal fantasy. Having slept with the man she considers her father, Iris confronts her mother, seeking violent retribution. Reverting to traits of the traditional double narrative, Iris seeks to usurp the place of her original. "She was still the mirror, I the reflection," Iris declares, and thus "the mirror had to be smashed..." (165). Through the death of her original, Iris seeks to claim her own life and assert her individuality, as both

Lincoln 6 Echo and Matt achieve in other contemporary narratives. Yet, unlike in traditional doppelgänger narratives, confrontation between the self and double does not lead to death, either of her or her original. *The Secret* suggests it is possible for them to co-exist, although they can only achieve independent wholeness by remaining apart. Once again, it is through the adult expression of love that Iris asserts her humanness, and declares herself "an individual of the species" (260) who is able to display "real feelings, spontaneous, sudden, irrational and undeniably mine. The proper human response" (261).

CONCLUSION

The concept of the clone as a manufactured being, something less than human, is a central focus of the cloning narratives which preceded Dolly's creation in the late 1990s, from *Brave New World* onwards. These science fiction texts serve as a warning against human cloning, suggesting there would be something missing in the beings which result, an inability to fully individualise. Dolly's creation fleshed out the concept of the clone, and marked a turning point in literary portrayals of them. While contemporary texts continue to stress the manufactured nature of clones, and more than this their commercial potential, they are no longer depicted as robotic, less than human forms, but are developed substantially enough to merit sympathy. The language of contemporary texts, however, continues to link clones with manufactured products, and indeed many of the clones themselves consider themselves less than human, which is clearly shown in both *The Secret* and *Never Let Me Go*. With the commercial potential of cloning becoming a prominent feature of contemporary texts, a new villain has emerged in the form of CEO. Yet while earlier texts directly question the humanness of the clones, contemporary texts move

beyond this. Although the clone disrupts humanist notions of the self as a fixed, stable and unique individual, while at times simultaneously seeking to reaffirm them through the pursuit of individuality, and critics and the public alike have widely speculated on whether clones could be considered human, contemporary texts move away from this as a central issue, turning to issues of indoctrination and entrapment instead. The term "human" has become contentious in this "posthuman" world, and ultimately the texts conclude that regardless of whether the clones are human or not, they undoubtedly deserve to be treated as though they are. The clone, portrayed generally as "other" whether that is as a photograph, copy or double, has become a victim: a tragic, identifiable figure.

The shift in the clone's portrayal was initiated by Dolly's creation, which signaled not only a move away from science fiction and mainstreaming of cloning as a literary topic, but also towards a more sympathetic portrayal of the clone. This can be seen in the case of Dolly herself. As the initial hype surrounding her creation abated, sympathy began to be felt. Dolly was given "celebrity status," with *The Guardian* commenting in their 2002 article, "Tears of a Clone," that Dolly displayed "affectionate resignation at the prospect of the photographic ordeal she has learned to associate with visitors. She is a pro" (Meek). As the title of the article suggests, underneath her placid exterior, Dolly was in fact a tragic and exploited creature. Literary portrayals of the clone in contemporary texts frequently portray exactly that. The clone is variously degraded, abused or enslaved in the majority of these texts. They are treated as less than human, at the same time as revealing the capability to individualise if given the freedom to do so. The focus is no longer on the monstrous nature of clones, but rather their monstrous treatment at the hands of society, and the next chapter explores this.

Chapter 3

A Monstrous Duplication of the Same

Whoever fights monsters should see to it that
in the process he does not become a monster.

And if you gaze long enough into an abyss,
the abyss will gaze back into you.

Friedrich Nietzsche

For I am every dead thing,
In whom Love wrought new alchemy.

John Donne

The term "monster" is no easier to define than "human." It generally evokes an image in the mind, usually brought to life by film or the media, of someone – or something – uncomfortably different, often provoking a reaction of horror or fear. "Monsters exist," explains film critic Peter Hutchings, "where boundaries have become permeable – where it is no longer clear where dreams, fantasies and memories end and the real begins" (103). They reside on the fringes of society, outcasts who threaten all that has come to be known as "normal" and safe. From as far back as Classical times, monsters were understood as a warning of impending danger. The term originates from the Latin *monere*: *to warn*, associating it with "abnormal birth" (Huet 6). In this way, it is directly linked to the cloning discourse. The monster is a "breaker of category, and a resistant Other" (J. J. Cohen x) – just like the clone. Though humans openly strive for individuality, most just want to be accepted, to be considered "normal." We establish ourselves as normal by constructing "monsters" as other, something to define ourselves against. It is a term used loosely in today's society, describing those who are morally degraded, who have stepped outside the

boundaries of "acceptable behaviour." It is also used as a label for anything felt to be "unnatural," or different from the norm. Yet the process of constructing a monster reveals the term "normal" to be no more than a construct. Monsters, Jeffrey Jerome Cohen explains, embody our anxieties "about identity, about our very humanity" (xii). They challenge, and break down, binary oppositions, revealing us as closer to the monster than we would like to think, none more so than the clone.

The clone terrifies because there is no way, visually or biologically, of differentiating it from the norm. It encroaches on the notion of a human as unique, challenging this humanist ideal, and is feared not for being different, but for being the same. In this way it stands apart from traditional depictions of the monster, which largely focus on visual dissimilarity, and has been defined by Cohen as "difference made flesh" (7). In the twenty-first century, a time when Western society appears to be outwardly accepting of those who are different or strange, it is not difference which provokes fear, but sameness. The clone instigates the uncanny prospect of meeting our biological double, of "sameness" made flesh. The binary oppositions used to help define and confine the human are being increasingly challenged, and cloning takes this one step further, resulting in "anonymity" (Dietz 212). The clone presents the monstrous vision of sameness made flesh.

Throughout this chapter, I discuss ways in which the clone and monster are aligned, drawing on cloning narratives to support my case. In recent times, interpretations of the monster have changed, and I consider this in relation to *Frankenstein* before focusing on the clone. As the previous chapter shows, the consumerist nature of society is frequently brought to the fore in relation to cloning, and the chapter also considers the extent to which society has become the new monster. One of the obsessions of consumer culture is the

retention of youth, and with cloning, the opposite can result, something highlighted in the case of Dolly herself: the clone embodies the uncomfortable prospect of being born old. The monstrous hybrids that can result from splicing genes are discussed in relation to *Alien Resurrection* and Vincenzo Natali's *Splice* (2009). The moral transgression often linked to the monster, particularly in the press, is discussed in Ira Levin's *The Boys from Brazil* (1976), a canonical cloning text, before drawing a comparison with *Cast of Shadows*. The chapter then goes full circle, returning to the notion of the monster as victim, and considering the way in which contemporary fiction often focuses on the clone's voice. It begins with the ancient legend of the golem, a being without a soul: a description often levelled against the clone, both in fiction and real life.

A SOULLESS BEING

The monster, just like the clone, is consistently the product of artificial creation, a concept which evokes the ancient Jewish legend of the golem. The golem is one of the first known stories conveying attempts to asexually produce a human, resulting in a human form without a soul, "a primitive version of ourselves" (Huet 243). Golem is a biblical term, used in Psalms 139.16 to describe Adam before he is touched by God, as "an unformed mass without a soul" (Huet 239). The golem lacks a soul because God has not "breathed into his nostrils the breath of life" (Gen. 2.7). Moreover, the golem continues to feature in contemporary literature: in 2011, Alette J. Willis won the Kelpies Prize for new Scottish writing for children with her novel *How to Make a Golem and Terrify People*. Aimed at younger readers, Willis's novel reduces the fear associated with the golem, observing, "when it came to monsters, golems were remarkably tame" (ch. 11).

Despite the increased secularisation of Western society, one of the most widely raised concerns expressed by the public following the cloning of Dolly was the fear that, as an artificial creation, the clone would lack a soul. Speculation that a clone would be a soulless being, a golem, was fuelled by the Vatican who claimed a soul cannot be produced through cloning. It called for a total ban on human cloning, declaring people "have the right to be born in a human way and not in a laboratory" (Hester).⁹⁰ Debates about cloning repeatedly bring religious terminology to the forefront, particularly the concept of the soul. This is emphasised by the title of one of *TIME*'s articles on cloning: "Can Souls be Xeroxed?" (Wright). The soul became a term blandly used within the cloning discourse, and not always in a religious context. The whole question of the soul, perhaps inevitably, is addressed in rather vague and abstract terms, with little attempt to define precisely what is at issue. The same *TIME* article ambiguously concludes: "then again, in a sense, you share the same soul with everyone" (Wright). President Clinton called for a five-year ban on cloning humans, claiming this would "reaffirm our most cherished beliefs about the miracle of human life and the God-given individuality each human possesses" (Sullivan). These are concerns, moreover, not only felt in religious quarters, with the fear in secular terms being of tampering with nature. Exactly how cloning threatens people's integrity and individuality is, however, a question rarely addressed, and little interest was shown in the issue of what it actually "means to be human" (Petersen 86). The cloning discourse brings up a myriad of unanswered questions which are rarely directly addressed, with reporting instead elaborating on the intrigue surrounding cloning. This intrigue opens up possibilities within fiction, and speculation over whether clones would contain a soul features in contemporary texts as well. Most notably, in *Never Let Me Go* the students' art is removed not merely to

⁹⁰ Originally reported in an editorial in *L'Osservatore Romano*, the Vatican's semi official newspaper.

"reveal" their souls, but to "*prove you had souls at all*" (255). Similarly, in *Cloud Atlas*, cloned "fabricants" are told they are "soulless" and unable to operate lifts as "no elevator functions without a Soul aboard" (189). They are treated as though they lack a human core, and the form they take becomes central: be that human, golem or monster.

FRANKENSTEIN AND ALTERED VIEWS ON MONSTROSITY

It was the visual difference of the "golem" in *Frankenstein* which initially aligned him with the monster. He suffers rejection from his creator on account of his deformity and is only able to find acceptance, albeit temporarily, from a man who is unable to see. Early stage and screen adaptations exploit the creature's physical grotesqueness by denying him the voice Shelley had bestowed on him,⁹¹ emphasising instead his monstrous characteristics. The image of Boris Karloff playing the creature in James Whale's 1931 adaptation remains one of the most enduring, conjuring up images of the monster:



Fig. 18. Boris Karloff, scene still (*Frankenstein* Dir. James Whale).

Yet our notion of what a monster is has also changed. Gothic critics such as Fred Botting have often argued that in the later twentieth century "monstrous others become sites of identification" ("Aftergothic" 286). "Instead of being repulsive," he elaborates in *Limits of*

⁹¹ Mary Shelley's *Frankenstein*, unlike most other eighteenth and nineteenth-century Gothic texts, was probably the first to invite sympathy for the monster (Punter and Byron 265).

Horror, "monsters attract; instead of being destroyed, they must be loved" (13). This can be seen in recent depictions of Frankenstein's creature where his voice is restored, notably depicted by Robert de Niro in Kenneth Branagh's 1994 adaptation and more recently in Danny Boyle's 2011 stage production, in which Jonny Lee Miller and Benedict Cumberbatch alternated the roles of Frankenstein and his creature, emphasising the notion of the creature as Frankenstein's double. By depicting him as having thoughts and feelings of his own, the monster is more closely aligned with the human, and identification is elicited.

In a similar way, depictions of other traditional monsters have changed in the twentieth and twenty-first centuries. Most notably, the fear associated with the vampire has relinquished, with the *Twilight* franchise turning the vampire into a heart-throb, and even the grittier TV adaptation *True Blood* depicting its heroic qualities. Vampires are now the content of teenagers' dreams rather than nightmares. The 2011 TV series *Being Human* increased the sense of identification with the monster through its depiction of the ghost, werewolf and vampire, and in 2013, Jonathan Levine's *Warm Bodies* humanised the zombie. With traditional monsters becoming less monstrous, a space has been created for a new monster, a space which the clone is ready to fill. And indeed, the uncanny prospect of a human clone has been met with horror by most of the public, as the 1998 Wellcome Trust report has shown. Participants claimed to have "a vivid image in their mind" of what a clone would be like, a vision drawn largely from fictional portrayals such as *Frankenstein*, *Brave New World*, *The Boys from Brazil* and *Blade Runner* (14). Yet in contemporary fiction, as has been shown, it is not so much the clone who is the new monster, but rather the society responsible for creating her. This is consistent with altered views on the

monster in general, as Botting explains: "excluded figures once represented as malevolent, disturbed, or deviant monsters are rendered more humane while the systems that exclude them assume terrifying, persecutory, and inhuman shapes" ("Aftergothic" 286). Society has come to be seen as the new monster.

MONSTROUS CONSUMERISM

One way in which society reveals its monstrous nature, is through its obsessive desire to halt the ageing process. While the quest to retain youthful looks has a long history, in the twentieth century, due to the development of anti-ageing drugs and techniques, it is rapidly becoming a cultural obsession. The industry is set to grow, declared *The Guardian*, into "one of the biggest money-spinners of modern medicine" (Browne). The cosmetic industry is repeatedly using the lure of defying ageing as a means of selling its products, with Olay's Regenerist being awarded best performing "anti-ageing" cream by a consumer association in 2006. The search for the best anti-ageing or anti-wrinkle cream is widespread, while at the same time the cosmetic surgery industry is thriving. Entering "look younger" in a search engine prompts pages of results, and not all are from the cosmetic industry. Magazines and newspapers frequently run articles on the subject, as demonstrated through a brief internet search. *The Telegraph* published an article on New Year's Day in 2009 entitled "50 ways to look younger" (Hart-Davis); *Good Housekeeping*, which is marketed at the more mature woman, frequently addresses the issue; and across the globe *Fox News* ran a piece in May 2013 entitled "5 foods that make you look younger." It is considered a compliment to suggest someone looks younger than their actual age, and thanks to medical

and scientific advances, opportunities for achieving this are gradually meeting demand if, indeed, such a demand could ever be met.

Cloning may seem to some to satisfy such desires, providing the opportunity of quite literally "creating a new you." A fear raised from the cloning discourse is that it may appeal to those seeking to erase difference rather than accepting it, as expressed by Lori Andrews, a Professor at Chicago-Kent College of law specialising in reproductive issues, in *The New York Times*: "I can imagine new crimes," she said, speculating on the prospect of surreptitious cloning. The article continues, "people might be cloned without their knowledge or consent. After all, all that would be needed would be some cells. If there is a market for a sperm bank selling semen from Nobel laureates, how much better would it be to bear a child that would actually be a clone of a great thinker or, perhaps, a great beauty or great athlete?" (Kolata, "Scientist"). *The Sun* similarly speculated on the possibility of "showbiz moguls cloning dead stars" (Coppie 4). The role of nurture in determining an individual's development may undermine those who argue that cloning would result in an exact duplication, but its potential for the recreation of beauty is nonetheless clear. This notion of enhancing the population based on physical attributes, which the fourth chapter explores in relation to Margaret Atwood's *Oryx and Crake* (2004), raises the spectre of eugenics. With the introduction of Dolly in 1997, *The Washington Post* suggested the existence of "man-made" Dolly "implies that we can control the biological destiny of humans" (Glassman). This is a theory backed by molecular biologist Lee M. Silver, who states that were cloning and genetic engineering⁹² to be combined, which this chapter later discusses in relation to human hybrids, the human species would "gain control over its own

⁹² Silver explains that without cloning, genetic engineering (the alteration or addition of specific genes to choose characteristics) is merely science fiction. With cloning, it moves into the realms of reality. Cloning by itself is not genetic engineering (129).

destiny" (130). In January 2008, a Vatican official condemned cloning as "the worst type of exploitation of the human being," claiming that justification based on its therapeutic value was invalid as it was unacceptable "to use the human being as a medicine" (Thavis). Despite such conjecture that cloning could enable the retention of youth, the clone holds a darker potential to achieve the opposite: the monstrous prospect of prematurely ageing.

DOLLY'S PREMATURE AGEING

The fear that a clone would age prematurely, would in fact be "born old," is one initiated by the fate of Dolly herself. In January 2002, it was reported that Dolly developed a lame leg due to arthritis at the early age of five,⁹³ with Wilmut admitting that it "may have arisen because of genetic defects caused by the cloning process" ("Cloned Sheep"). Speculation grew that cloned animals – and potentially humans as well – age prematurely as their cells are effectively "older" than those developed from fertilised embryos⁹⁴ (Arthur, "Early"). Science remains unable to offer satisfactory answers, making it clear that through cloning, science has entered the realm of the unknown. Nick Harris, Senior Researcher at the pro-life charity *Life*, commented following the revelation of her arthritis: "We already know about Dolly's abnormal telomeres, which means crudely that she is ageing prematurely, so we are not surprised to hear of more defects resulting from the cloning procedure" ("Dolly the Sheep"). It is also significant that Dolly was sexually mature: she gave birth to six lambs the old-fashioned way, all "epigenetically normal." Colin Stewart, an embryologist at the National Cancer Institute, commented after Dolly's creation became known, "she

⁹³ *The Guardian* reported that Dolly's arthritic limp drew more worldwide media attention in 2002 than Beckham's broken foot (Meek).

⁹⁴ Tests carried out in 1999 showed that Dolly's cells were already showing signs of ageing more typical of an older animal.

came from a six-year-old cell. Will she exhibit signs of ageing prematurely?" (Nash et al., "The Age"). The evidence of Dolly's life seems to suggest this may be the case. In 2003, Dolly died of a lung infection, and though it was an infection that spread across cloned and non-cloned sheep alike, it served as a further reawakening of cloning anxiety following media coverage of her death.⁹⁵ Professor Rudolf Jaenisch, a leading cloning researcher from Massachusetts Institute of Technology, who co-wrote an article with Wilmut entitled "Don't Clone Humans!" for *Science*, stated that Dolly's death "is exactly what we expected: clones will die early"⁹⁶ (Arthur, "Early"). It appears to confirm the concern expressed in *The Guardian* prior to Dolly's death that "even apparently healthy clones are doomed to suffering and an early grave" (Meek). The prospect of premature ageing is one met with horror by the beauty-conscious consumers of twenty-first-century society; it is a notion which clearly aligns the clone with the monster.

BORN OLD

The clone, then, taps into one of consumerist society's most prevalent fears: that of ageing prematurely. At the age of one, tests carried out by the team at Roslin and PPL Therapeutics revealed that Dolly's telomeres⁹⁷ were 20% shorter than would have been expected from a sheep of her age. When she later developed arthritis during the autumn of 2001, the concept that a clone would prematurely age became fixed in the public's mind. The degree of uncertainty accompanying the cloning process heightened fears. *The*

⁹⁵ Dolly's post-mortem confirmed evidence of arthritis, though no evidence was found to link this ailment or her respiratory illness to the cloning process. Dolly's body is now displayed in a glass cabinet in the Connect Gallery of National Museum of Scotland in Edinburgh.

⁹⁶ The notion that a clone would have a shortened life span parallels *Blade Runner*.

⁹⁷ Telomeres are sections of DNA at the end of each chromosome. When chromosomes are replicated during cell division, a portion of the telomeres are lost. They get shorter and shorter as more cell division occurs during the ageing process ("Life of Dolly").

Guardian, for example, described Dolly's creation using language borrowed from fiction, inducing intrigue and suspense. It explained that a cell was taken from the mammary gland of an adult sheep and then "treated to 'forget' it was a specialised cell," continuing, "cells are mysteriously 'instructed' to become bone, or skin, or brain, or blood or nerve cells, and remain forever different from the cells of conception. What Dr Wilmut showed was that cells contained a 'clock' that could be reset" (Radford). The impression is given of scientists tampering with nature, in a process which has many unknown variables and questions not even scientists are able to address. As a result, a general acceptance of the ethical impossibility of human reproductive cloning has been acknowledged. Defects too subtle to be noticed in farm animals would be much more prominent in a human clone. At the same time, now that the technique necessary to carry out reproductive human cloning has been established, as the first chapter shows, there is a significant risk that a less ethically minded individual may attempt, or may already be attempting, to carry it out. Fiction speculates upon the consequences which may result from such action, while also shaping the wider debate about cloning, regardless of the scientific reality. It speculates on the monsters that cloning could produce.

An individual who shows premature signs of ageing would be considered monstrous by the beauty-obsessed consumers of the twentieth and twenty-first centuries. As Dolly has demonstrated, a clone holds such monstrous potential. While this is not a major feature of cloning narratives prior to Dolly, which largely emphasise the robotic nature of the clone, the publicity surrounding Dolly's struggle with arthritis and other health issues, have centralised it as an issue. This is reflected in contemporary cloning texts which not only portray the clone as a more tragic "human" creature, but also explore the potential

health difficulties which may arise. This is conveyed in *Blood Ransom* through the character of Milo, a boy whose "body is wearing out too fast" due to a "genetic weakness caused by the cloning process" (19). Three contemporary texts in particular reveal the prospect of a prematurely-ageing clone: *Cast of Shadows*, *Mary Modern*, and *The Angel Maker*.

The visually grotesque nature of Victor Hoppe's triplets is evident from *The Angel Maker's* opening pages. They are introduced as "disfigured" (4), with the villagers speculating that "their heads are split apart" (5). Those heads bulge and their skin is "flaky" (19), and when they cry "it almost seemed as if the wailing were emerging from a single throat" (22-3), as though a three-headed monster. This is an image reinforced later when they appear in unison "as if all three were attached to the same body" (75). The impression given by each character introduced to the boys equates them with the monster. Rex Cremer describes his encounter with the triplets:

The boys looked old, terribly old, largely on account of their skin, which seemed to be made of dried-out leather. They were emaciated, truly skin over bone. Rex took it all in at a single glance; he tried to look away, but he found his eyes were drawn back irresistibly. And it wasn't as a scientist that he was staring at them, but as a voyeur. (346)

The dried-out leather of their skin evokes the monstrous killer of *The Texas Chainsaw Massacre* (1974), who was known as "leatherface" as he wore masks of human skin. The triplets' skin is a second version of Victor's own skin: it is worn out, used, past its best.

Their appearance evokes the past; it provokes reactions of horror and shock and transfixes the gaze. They make a freakish spectacle. The attention the triplets warrant aligns them

with Dolly, and nor is this their only connection. Repeated references are also made to the age of the boys, not just by Cremer, but also by the handyman who observes: "they seemed to have grown much, much older ... big dark bags under their eyes ... as if all three were wearing masks, with just two round holes cut out for their eyes" (84). Charlotte comments: "it's as if every month they're another year older" (96). When she later looks at each of the boys, she imagines "she could see death in his eyes" (98). This aligns them with another monstrous creature: the zombie. "Eyes are windows to the soul," an Old English proverb states, and as such by seeing death, Charlotte is inadvertently implying the boys lack a soul. Externally, they appear inhuman: looking at them, with "an intricate network of blue veins," was like "looking at three huge light bulbs" (59). They are out of proportion: "Their heads were too big in relation to their bodies and the eyes were too big for their heads" (36), they have a "robot-like air" (37). Their faces are also stitched, something which, as Hogle points out, aligns them with Frankenstein's creature ("From Asperger's" 2). They are, undeniably, monstrous in appearance, and yet, significantly, "the sight of the boys didn't evoke disgust, only pity" (20).

Like Dolly, they are a spectacle, but one which comes to induce pity. Moreover, their lives parallel the fate of Dolly, as "the telomeres on some of the chromosomes are much shorter than normal" (329). *The Angel Maker* directly addresses one of the concerns raised in the cloning discourse: "what the actual age of the clone would be" (330). As Rex explains: "since the cell providing the donor nucleus had come from an adult, the clone's cells would, by definition, be much older than the cells arising from normal insemination" (330). In short, the novel suggests, a clone is born old, and the consequences are shown through the fate of the boys who "are ageing very rapidly" (331). Externally they have "the

bodies of toddlers, but the faces of old men" (128). "Their heads seemed to be made out of papier mâché," comments their surrogate mother shortly before their death (376). They are grotesque, showing "blue blood vessels" which resemble "the jagged veins running through certain types of marble" (83). They are grotesque, and yet they provoke sympathy more than disgust. Charlotte is extremely protective of the boys who are "at least six months ahead of other children their age" intellectually (50), and amongst the villagers in general there is a response of concern. Justifiably so, as the suffering they are forced to endure suggests their existence is an unnecessary cruelty. Even after death, as with Dolly, their bodies become spectacles: preserved and left floating in "two great, liquid filled glass jars" (407). Although visually monstrous, epitomising the etymological roots of the monster meaning to show or reveal,⁹⁸ they are also pitiful creatures. It is a monstrosity resulting from their premature ageing, brought about as a direct result of their cloning.

Like Victor's boys, *Cast of Shadow's* Justin shows premature signs of maturity. This manifests itself through his intellect: a psychiatric evaluation found he "has an extremely developed sense of self" (87), and he is moved up a grade at school; and also through his physical presence. When Sally Barwick photographs him she becomes transfixed by his eyes: "these were not a seven-year-old's eyes" (83). She describes him as "like a portrait" (83), suggesting he is somehow less than real, then later dreams about him as a grown man. During a routine medical, Davis observes he "possessed the sort of awareness around doctors that older sick people have," he is comfortable with the examination, even "of his privates" and he "welcomed the tongue depressor without gagging" (126). His responses are not what would be expected of an eight-year-old boy: he possesses an innate maturity which has developed from nature rather than nurture. Davis imagines "his bones growing

⁹⁸ See Chris Baldick's *In Frankenstein's Shadow: Myth, Monstrosity and Nineteenth-Century Writing*.

even as they sat there," thinking that, "if he could stare at him long enough and in just the right place he could see a change occur right here in the exam room" (127). Justin is not grotesque, but he is old beyond his years. There are glimpses of his former self within him, the adult cells he was cloned from influencing the manufactured child. He is considered "weird" (114), spending his time reading adult books rather than watching television as would be expected of a child of his age. He was a "wonder kid – clearly the smartest in the school" (290), and also possesses an unusually developed emotional sensitivity. When Davis confesses to Justin, the boy "allowed Davis to describe, to explain, to rationalize, to apologize. He seemed so sympathetic, so non-judgmental, Davis thought he could have cried in front of the boy, and almost did, twice" (206). He draws people to him as an adult would a child, encouraging their confidence and openness. Though it seems evident that Justin's maturity is due to genetic rather than to nurturing factors, there is no direct implication that this is due to shortened telomeres, as was the case with Victor's triplets and Dolly the sheep. Rather, the shadow of his former self appears to have lingered beyond the cloning process, influencing and haunting the younger self.

Camille DeAngelis goes one step beyond this in *Mary Modern* by suggesting that the memories of the original self not only haunt, but remain fully present in the clone. This notion of inherited memory is discussed in more detail in the final chapter. The novel exploits the uncertainty surrounding cloning by suggesting "the books are wrong" in their explanation of cloning. Rather than cloning resulting in "an infant with all the genes of the person cloned" (137), it suggests the ageing of the clone accelerates to the extent they are born the age from which they are cloned. The concept of a clone instantly becoming an adult is a misapprehension which has been used in fiction in the past – examples include

Danielle Steel's *The Klone and I* (1998) and the light-hearted comedy *Multiplicity* (1996) starring Michael Keaton. It is a sensationalising which may have been fuelled by Dolly's introduction to the world as a fully grown sheep, seven months after her birth, but is generally acknowledged as an impossibility. According to *Mary Modern*, however, "the B-movie scenario is pretty damn near the truth" (85), an assertion which is incorrect. Cloning does not produce a normal, healthy baby in this plot, something which helped to ease the anxiety related to IVF, but rather a monstrous-looking creature. "Were it not contracting and shuddering like some incarcerated animal," Gray conjectures, "it would remind him of a poached egg" (87). Gray's language reveals him unable to associate the clone with a human from birth, using the neuter pronoun "it," and forming a connection with an animal both directly, and through association with an egg. By using the term "incarcerated" he also emphasises her victimised status. *Mary Modern* taps into fears concerning the many unknown factors surrounding the technique of cloning. Mary is a clone brought back from the dead, a virtual zombie, a clone whose memories from a previous lifetime remain fully intact, a clone whose lifespan is severely limited and who has been literally "born old." On paper, Mary is a monster, and yet the narrative reveals her to be far from this. "I can say with utter certainty," Gray tells her, "that you're the sanest person under this roof" (129). Her moral outlook and approach to life, albeit old-fashioned, is admired. Rather than a monster, she is a monster's creation, a monster who ironically turns out to be a clone herself. Lucy not only resurrects her grandmother from the dead, she takes the step Frankenstein was unwilling to take, by resurrecting her grandfather as well and presenting a mate for the clone. "Has it occurred to you that you could enable an entire race of clones?" (190), asks an exasperated Gray on discovering her intentions, an anxiety which

had previously held Frankenstein back. It is a concern Lucy is quick to dismiss, reasoning that their children would be produced naturally and therefore be "normal" (190). Her logic, however, is refuted in the unsettling conclusion of the book when a rapidly ageing Mary discovers she is pregnant, the eternal return. Once again, the novel questions an unknown variable attached to cloning: whether the child of clones will develop "normally."

The development of Mary is evidently far from "normal." The novel suggests the age of a clone is determined by the age of the cells from which she is cloned. Megan explains that "if Lucy had wanted a perfectly normal baby, she'd have had to clone at conception" (85). Not only this, the lifespan of Mary is severely limited: by how much, appears unknown. "It's like handing down a death sentence," (232) realises Lucy, which is what she has done through the clone's creation. She has created "a monster" (218), suggests the monster herself, but that monster is one which invokes a sympathetic response. When Mary looks down at her hands "in misery" (298), she sees faint marks that are "unmistakable: liver spots" (296). Megan describes the clone as a "mimeograph," explaining that "our cloning technique still has its shortcomings" (289). Both Mary and Teddy, and later Lucy upon realisation, must face the distressing reality that their ageing process will be accelerated, their lifespan dramatically reduced.

For a society preoccupied with the retention of youth, and willing to pay millions to a cosmetic industry promising more youthful looks, the clone poses a disconcerting, even monstrous, problem. Dolly was the first mammal cloned from *adult* cells, and it is the precise age of those cells that causes the problem. Evidence proved that her telomeres were shorter than would be expected for a sheep of her age, and she developed arthritis at an unusually young age. While it is not certain this was the result of the cloning process, more

significantly there is no evidence to suggest it was not, and indeed it seems the most likely explanation. Prior to Dolly, the prospect of a clone was merely speculative, and the monstrous possibility a clone may prematurely age had not been fully explored in fictional accounts. Through Dolly the clone became real – the monster became realised. And while to some extent the normality of Dolly lessened the monstrosity associated with the clone, as has been shown, it also opened up the monstrous possibility of a reduced lifespan, and the premature onset of the ageing process. As a warning against progressing down the route of reproductive human cloning, for the image-conscious society of the twentieth and twenty-first centuries, premature ageing proves a compelling one. As this chapter shows, it is one fully explored in contemporary narratives such as, in particular, *The Angel Maker* and *Mary Modern*. A young boy resembling an old man; a young lady covered in liver spots: these are monstrous possibilities for the consumers of today.

SEEING YOURSELF OLD

While the prospect of prematurely ageing is profoundly unsettling for modern consumers, so too would it be to look ahead and see yourself as you will one day become. As the bioethicist William Ian Miller expresses, "what of the young clone looking up, knowing exactly what age and decay, what physical possibility holds in store" (83). Miller argues that "this is part of the job that disgust, horror and the sense of the uncanny do; they tell us when we are leaving the human for something else" (87), when we are moving towards something monstrous. A clone may genetically be the same as an identical twin, but – as the final chapter discusses – the generational gap complicates the issue substantially. This is explored in *The Secret*, in which Elizabeth decides to clone herself rather than

procreating in the traditional way. When Iris looks through old photographs of her mother, it is not a vague resemblance that she sees: "I was looking at myself and I was queasy with confusion that bordered on terror" (58). The realisation is more than uncanny for Iris: it provokes terror. Iris is caught in what Todorov has described as a moment of hesitation about "the nature of an uncanny event" (157). Unaware at this stage that she is a clone, Iris is presented with physical evidence which suspends her in uncertainty, causing her to experience what Todorov calls "the fantastic." The fantastic relates to "the hesitation of the reader," yet in *The Secret*, it is a hesitation experienced not by the reader, but by Iris herself. The prior knowledge of readers in this instance assigns them the role of voyeur, in a contemporary layering of the Gothic. The closeness Elizabeth and Iris share feels neither natural nor comforting for Iris; it rather stifles to the point of claustrophobia. This is a sense intensified through the first-person narration. As she reaches adolescence, the unsettling reality dawns on Iris:

I was becoming more and more like my mother. My predilections turned out to be her predilections ... I seemed to like the same foods. I was prone to the same illnesses, slight bronchial infections and earaches. I spoke with the same intonations; and, most of all, I looked more and more like her. It wasn't a resemblance – it was, for all the difference of age, an almost peculiar repetition, as if in me she was being herself once more ... by the time I was in my teens, we looked ... like identical twins who by some fluke were ageing at different speeds. (35)

The "fluke" which she mentions is, of course, no fluke, but rather the result of her cloning. She is genetically predisposed to share the same "predilections," aptitudes and illnesses as

her mother. She only needs to look at her mother to know how she will look in years to come: they share more than a mere resemblance, Iris represents "an almost peculiar repetition." Cloning has removed the mysterious aspect of life; the future has instead become a certainty for her through the experiences of her mother. She knows the foods she will like and the illnesses she will have: her future has already been mapped out. Iris is faced with a daily reminder of who she will become. She is living, *The Secret* suggests, with the monstrous reality of seeing herself old.

While Iris can gain some comfort from the knowledge that "like all women of her class, [her mother] looked much younger than she was" (35), the same comfort is not there for Theo from *Blood Ties* or *The House of the Scorpion's* Matt. Theo is forced to accept that he is genetically identical to a man he despises, a man he considers a "bully" (289). "How much of Elijah was really me?" (225), questions a young boy who longs for nurture to play a predominant role over genetic makeup, questions which should not be a concern during the maturation process. The young adult novel and its sequel *Blood Ransom* emphasise the potential for a clone to develop into a unique individual, something also speculated upon in the cloning discourse which warns against attempting replication through cloning: "a scientific genius who's beaten as a child might become a mad genius. An artist who's introduced to alcohol when he's young might merely become a drunk. A thousand track switches have to click in sequence for the child who starts out toward greatness to wind up there" (Thompson). *The House of the Scorpion*, another work of teenage fiction, draws a similar conclusion. Matt discovers his genetic duplicate is a man known as "the old vampire" (99) because he is responsible for sucking the life blood out of

people. Both Theo and Matt have to face the realisation that they have been cloned from men they would consider monsters; that such monstrous potential lies within them.

MONSTROUS HYBRIDS

The horror associated with the trope of clone is primarily manifested in the way in which it tests the limits of the human, and is derived not from its difference from the human being, but from its *similarity*. Human cloning results in a genetically identical individual, a monozygotic twin, yet it also opens up the possibility of altering an organism's genome through genetic engineering or gene splicing. This presents the possibility of creating more than a human replica: it enables the creation of a human hybrid through the merging of human DNA with animal or even alien DNA. While the human clone is not a visual monster, these hybrids differ in the visual spectacle of horror they present. They embody the monster, a term defined by Cohen as "disturbing hybrids whose externally incoherent bodies resist attempts to include them in any systematic structuration" (6). As such, they lend themselves well to cinematic portrayals: most notably *Alien Resurrection* – which was released in November 1997, shortly after the announcement of Dolly's creation – and *Splice*, both of which are discussed in this section. Both films progress from cloning to the production of monstrous hybrids. The literary concept of quasi-human hybrid creatures is not, of course, a new one and stems back as far as Greek mythology. The manipulation of science for the production of such creatures is possibly most memorably portrayed in *The Island of Doctor Moreau*. The difference between earlier depictions of hybrid creatures and contemporary versions of them is most notably shown through the reactions of other characters to them.

Moreau, as the first chapter demonstrates, is virtually inhuman in his unfeeling response to the "animal-men" (53) he creates. Instead, it is through the narrator Prendick that the appropriate response – that of horror and repulsion – is most clearly expressed. Believing at first that "Moreau had been vivisectioning a human being," Prendick denotes the creature a victim. He declares: "These creatures I had seen were the victims of some hideous experiment!" (52). He responds to the thought of experimenting on humans with concern for the subjects, but when he realises that they are in fact "humanized animals" (71), his concern turns to disgust. Instead of victims, the creatures become "monsters manufactured!" (71). The horror is derived from the realisation that the "Beast Folk" (120) – terminology which immediately brings to mind the concept of the freak show – are animals made human rather than the other way around: that the divide between animal and human has been eroded. By showing the human capacity of animals, Wells "questions the limitability of the human species" (McKechnie 256). Prendick is haunted beyond his experiences on the island, no longer able to distinguish animal and human when he rejoins conventional society: "I would go out into the streets to fight with my delusion, and prowling women would mew after me, furtive craving men glance jealously at me, weary pale workers go coughing by me with tired eyes and eager paces like wounded deer dripping blood, old people, bent and dull, pass murmuring to themselves and all unheeding a ragged tail of gibing children" (131). Having witnessed the capacity of animals to behave like humans, having discovered the possibility of such a concept, Prendick is no longer capable of recognising the divide between the species, and the reversion of humans to animals appears to surround him. The definition of a human as a non-animal – as the second chapter discusses, the human can most easily be defined by what it is not – is

brought into question through Wells's vision, and tortures Prendick, who comes to question what constitutes the human. Not only are the "Beast Folk" monstrous hybrids in his eyes, so too is all humanity.

The monstrous nature of humanity is brought to the forefront in most contemporary cloning narratives. The terror and fear associated with monstrous creations such as Moreau's "animals carven and wrought into new shapes" (71), gives way to sympathy, in the same way as the public's response to Dolly moved from horror and alarm to eventual sympathy for her plight. A similar transference can be seen within fiction, in which the terror and fear previously focused upon monstrous creations has moved outward. This is dramatically portrayed in *Alien Resurrection*. The film's opening credits reveal unsettling images of subhuman parts: stretched, pulsating skin within which is embedded a human eye and alien teeth. The familiar voice of Ellen Ripley then voices: "My mommy always said there were no monsters. No real ones," before the camera angle widens from her enclosed childlike figure floating in a jar to the gawping scientists surrounding it, the real monsters, and she finishes: "But there are" (*Alien Resurrection*). It is an unsettling opening revealing disturbing images that appear truly monstrous. And yet, the opening sequence shows it is not the failed genetic experiments that are truly monstrous, so much as the ghoulish medical-research team, contained within a military vessel, responsible for their production. A cloned Ripley acts as surrogate host to an alien child, and from the first it is made clear that she is expendable, kept alive merely because her medical statistics look good. The number eight is tattooed on her arm, suggesting previous failed attempts at her cloning. The military and scientific wings describe her as an "it," and discuss her usefulness as a "meat byproduct" before concluding that if she does not respond as desired

she will be "put down" as though an animal. Despite evidence of past memories, the cloned Ripley is considered in no way human, and their interest is not in her but rather in the alien queen extracted from her womb. Indeed, her enhanced strength and agility – the result of merging her DNA with alien during the cloning process – confirm her hybrid status as "other."

Despite the monstrous creatures which saturate *Alien Resurrection*, the real monsters are clearly identifiable as the military scientists, creatures undoubtedly human, though evidently far from humane. The extent of their depravity is shown by their treatment of fellow humans who they kidnap and use as alien hosts. The horror of this is made explicit through the pained expression on the female scientist, who turns her face in anguish at the scream of one of those human hosts. When Ripley encounters a lab filled with failed experiments – a scene which serves as an uncomfortable reminder of the 277 failed attempts to clone Dolly – the visual spectacle of deformed bodies induces, as much as horror, a sense of pity.⁹⁹ It is not fear but anguish which fills Ripley's face as she approaches a grotesquely contorted version of herself strapped to machinery and struggling for breath. The monsters are not the misshapen bodies, but rather those responsible for attempting to bring them to life. Although not fully human, Ripley shows herself capable of empathy – a trait often deemed to signify humanness, and the means by which replicants are distinguished from humans in *Blade Runner* – but it is an empathy which, understandably given their treatment of her, she does not seem to extend to humans. This is shown by her callous explanation to one of the terrified human alien hosts, to whom she calmly describes herself as "the monster's mother" (*Alien Resurrection*). The monster she

⁹⁹ Claire, herself a clone of Jekyll's maid, experiences a similarly horrifying spectacle of failed genetic experiments in the BBC's 2007 "sequel" to *Jekyll and Hyde* (*Jekyll*).

describes, the alien queen, is also revealed as a hybrid who has acquired the human ability to reproduce. Her offspring bears enough human traits to recognise Ripley as its mother, and human eyes stare at Ripley as she mouths the words: "I'm sorry," before regretfully condemning the alien to death. Its body deteriorates gradually, reducing it to parts: an alien form with pleading eyes and a human skull, sucked into a vacuum. The film presents a variety of hybrid and alternative forms which prompt a range of confused emotional responses. Yet although the necessity for the aliens' death is uncontested, the real monsters of the film are fully human.

More than ten years later, *Splice* was released, a film which presents a modernised version of *The Island of Doctor Moreau*. The opening credits, as *Alien Resurrection* had done previously, show distorted images of a living thing: a watery network of veins on slimy skin revealing rippling scales, provide no evidence of humanness. The angle pans out to reveal a young team of medical researchers overseeing the birthing of a creature. Significantly, however, the film does not demonise the scientists in the film, as was the case in *Alien Resurrection*: these scientists, if anything, stand out as overtly nurturing in nature. Rather than emphasising a monstrous disposition, *Splice* portrays the young scientists as distinctly unthreatening. They are undoubtedly ambitious, but not to the detriment of a caring temperament. The journey of the scientist from a feared and monstrous individual to an identifiable character is traced in the opening chapter, and in part accounted for by the creation of Dolly by scientists distinctive for being ordinary. The altered perception of the scientists from *Alien Resurrection* to *Splice* is concurrent with this change, as Joss Whedon's film script of *Alien Resurrection* was written before Dolly's existence was known. Yet, though appealing to watch, the scientists in *Splice* have

undoubted flaws. They display a youthful enthusiasm in their ventures which is also evidently naïve, a naïvety highlighted when their supervisors attempt to shut them down – endeavours the scientists willfully and recklessly disregard. The vigilance exercised by their corporate backers is one undoubtedly motivated by financial gain, however, and only serves to spur the ambitious scientists on with the quest they believe to be noble. The scientists are in no way villainous characters, however, and far from rejecting Dren, their hybrid creation, as Frankenstein rejects his creature, adopt instead a parental role, which the final chapter examines. The actions they take, however, and the consequences which result, are undeniably monstrous.

The young scientists combine DNA to create a monstrous hybrid, reverting to Moreau's vision of a humanised animal. While Moreau attempts to re-form a fully grown animal as a human, however, advances in technology allow these scientists to blend human DNA with that of animal, using molecular cloning methods to generate a DNA sequence to allow for genetic modification. Significantly, the resulting creature is ageing rapidly, dying from the moment of birth. Elsa demonstrates the rapidly multiplying cells, confirming, "it's ageing fast. Days within a matter of minutes" (*Splice*). As well as developing physically at an accelerated rate, her intellect also rapidly increases. She is in no way monstrous in the eyes of Elsa, who affectionately asks: "do you think they could really look at this face and see anything less than a miracle?" (*Splice*). That "miracle," however, constitutes an unsettling presence on the screen, in spite of the burgeoning affection of Elsa. Their obsession with Dren results in the neglect of their previous specimens, whose public slaughtering of one another builds the sense of foreboding and serves as a reminder of Dren's monstrous potential. Although her monstrosity is reduced by Elsa's response to her,

a sense of dread builds as the film develops, particularly when the clinical environment of the laboratory changes to the darkened isolation of a farm. The move from a controlled setting to the rural wilds of the countryside results in Dren's immediate attempt to escape. From being in control in their scientific work-place, the scientists find themselves at the mercy of uncontrolled nature, with Clive exclaiming, in words evoking *Frankenstein*, "this is the disaster that everyone warns about: a new species let loose in the world" (*Splice*). Her constraints removed, Dren's animalistic side takes precedence as her inhibitions are lifted, and she is found grotesquely devouring a wild rabbit. In this transitional space, Dren's childlike qualities revert to monstrous as her visceral nature takes hold. Dren appears at home in this Gothic landscape, removed from urban civilisation to a secluded, unkempt woodlands, encased in shadows and half-light. Power transfers here from her creators to Dren herself, and she matures rapidly, displaying abilities which make her more difficult to control. She learns to both leap and fly, but also develops increasingly human features. Dren begins to assert control, exerting dominance over her "parents" and manipulating and seducing a susceptible Clive. As in *Frankenstein*, their monstrous experiment has monstrous results. Typical of the "monster movie," Dren repeatedly appears dead before coming back to life: the monster never dies. Buried alive, she later rises from her grave as male, before raping Elsa and killing Clive. From this scene of confused, violent horror and death, the focus turns back to one of control. Another monster is revealed in the form of the pharmaceutical company willing to pay Elsa both for her silence, and agreement to take the experiment to "the next stage" despite the "personal risk" to herself (*Splice*). Ultimately, the coercive power of global capital is shown to be the true monster, willing to drive its scientists to find cures whatever the cost, which the next chapter examines in more detail.

MORAL TRANSGRESSION AND *THE BOYS FROM BRAZIL*

While the visual spectacle of the monster is brought to light through, in particular, cinematic representations of it, the media and tabloid press have broadened the definition, using it as a label for anyone whose behaviour is deemed morally unacceptable. "Monster' charged with kidnapping," headlined *The State* newspaper in August 2012, effectively declaring the accused guilty before trial, and ostracising him from civilised society (Phillips). A tribute to one of the soldiers killed in Woolwich similarly headlined in *One News Page* "Killed by Woolwich Monsters" (Layne). The declaration of monster effectively casts such individuals from respectable society, suggesting them to be unworthy of being deemed a part of it. Our prisons have been built to cage such monsters, and separate them from our midst. Lucie Armitt discusses how Gothic horror reveals itself most readily in the twentieth century through perceived threats to society's children. These are manifested, she explains, in "the monster narratives the media constructs around 'the paedophile,' 'the child abductor,' 'the child murderer,' 'the child abuser,' all of whom populate our diurnal and nocturnal fears" (3). Fear is in this way enforced upon society by the media, which encourages the labelling of deviant people as "monsters." The children of the men and women considered monsters will undoubtedly be tarnished through association, but would generally not be deemed monsters themselves. The clone, on the other hand, is a more unsettling prospect. The question of whether it would be reasonable to suggest that a clone of such a "monster" would also be a monster, recalls the nature versus nurture debate, and is explored in one of the canonical cloning narratives: *The Boys from Brazil*.

Together with *Brave New World*, *The Boys from Brazil* was quoted in almost every cloning debate during the nineties (Nerlich, Clarke and Dingwall, "Fiction" 41). One of the greatest fears raised by Dolly's creation has been that the technology of cloning is open to misuse, and this is a fear the media has been eager to exploit. *The Sun* sensationally reported Dolly's cloning by saying: "it is feared if the technology is used on humans, a dictator could replace himself," making the parallel explicit by continuing that this would "echo the nightmarish movie *The Boys from Brazil*, where mini-Hitlers were created" (Coppie). *TIME* magazine's article "Will We Follow Sheep?" comments that the notion of dictators being genetically duplicated was not new, with *The Boys from Brazil* depicting "a zealous ex-Nazi [breeding] a generation of literal Hitler Youth" (Thompson). Science has become the locus of power; when used ethically it could bring substantial benefits to society by helping to find cures for illnesses and disease, but there is also the frightening prospect it could be abused. The recreation of the man widely acknowledged as the epitome of evil, an undeniable monster, is undoubtedly the stuff of nightmares, and with Dolly's creation seems a prospect no longer restricted entirely to the pages of a book.

Ira Levin's novel differs from some of the other cloning texts appearing at the time in the way in which it accurately and explicitly details the science of cloning, while also addressing the implications of the nature versus nurture debate. In this way, the novel serves to counter, in part, the argument that cloning would not result in exact duplication due to the role played by the environment, for though it would involve careful planning, it is feasible to attempt to recreate that as well. It is feasible, in other words, to reawaken a monster from the past, arguably the most feared man in history. Ira Levin is famed for carefully combining real life with science or the supernatural, encouraging through his

realistic setting and accurate description an acceptance of the plot. He dramatises the possibility of recreating a monster through cloning, and makes it believable. Although the novel received critical acclaim, it was Schaffner's adaptation starring Gregory Peck and Laurence Olivier which secured its iconic status. The casting of the Oscar winning actor Gregory Peck as the notorious Nazi doctor of Auschwitz, Josef Mengele – the angel of death – was very much "out of type" and the sight of a Hollywood hero in the role of a monster provoked an initial response of shock. Such controversy increased interest in the film, helping to ensure it reached iconic status and was to become a crucial element of the cloning discourse which later developed.

Nazi ideology envisioned a "master race" and paid particular attention to eugenics as a means by which unwanted human traits could be eliminated through selective breeding. Cloning provides a natural extension of this, a means of duplication that could lead to the elimination of unwanted defects and traits, perfectly complementing Nazi ideology. While it is highly unlikely that Mengele had any practical knowledge of cloning, the infamous experimentation he carried out on identical twins would have provided appropriate groundwork for it.¹⁰⁰ Rapid advances in science have meant it is no longer easy for scientists to dismiss such texts as mere fantasy, but rather acknowledge them as unlikely "what if" scenarios. With their focus on progress and moving forwards, scientists are not happy with public misconceptions being heightened by "misleading films and books" (O'Riordan 148). These are misconceptions, however, that the press has been keen to impress. In reporting Dolly's cloning, *The Washington Post* used the premise of *The Boys from Brazil* to raise other nightmare scenarios such as "rich people cloning

¹⁰⁰ Mengele singled out twins as they entered Auschwitz, placing them in special barracks for experimentation. He carried out various twin studies before murdering them and dissecting their bodies. His motives remain unclear (Bülow).

themselves" or "movie studios cloning beautiful, talented actresses to be used in another generation" (Glassman). These are scenarios in which, as in *The Boys from Brazil*, the power given by cloning is exploited, placed in the wrong hands to meet selfish or evil aims. Fictional scenarios encourage people to stretch their imagination in order to envisage possibilities that may arise, to take things one step further than the facts alone may suggest. Silver points out that it is the use of the word "clone" that provoked such hysteria following the announcement about Dolly, that had it been expressed differently the same reaction may not have been felt (99). Through texts such as this, the clone has come to be associated with the monster: it is the literary associations connected with the term that have created the hysteria, presenting vivid spectacles of horror in the mind.

Taking as its premise the recreation of Hitler, *The Boys from Brazil* is a text overrun with monsters. The term is not only applicable to the clones, but rather the impression is given that monsters are all around and, worse, are indistinguishable. On interviewing a notorious former Nazi prison guard, Libermann casually remarks: "Some day, he thought, I would like to meet a monster who *looks* like a monster" (135). Indeed, the term "monster" could be applied to the majority of the characters in the text. Libermann himself is described as such by a friend: "he carries the whole damned concentration-camp scene pinned to his coattails. All those Jews wail at you from the grave every time Libermann steps in the room" (41). As with the clone, the unease Libermann provokes is not due to immoral behaviour, but rather to the association his presence presents. This is something he himself appears aware of, as shown by his "slight air of apology" (42). Even the hero of the story, it would seem, cannot fully disassociate himself from the term, despite his admirable moral stance. The monster can no longer be viewed as a comforting "other" on the outskirts

of society, but is rather all around, even within ourselves, an undoubtedly Gothic concern. As Cohen observes: "we are living in a time of monsters" (viii).

The Boys from Brazil represents the haunting of a monstrous past. Mengele is careful to ensure his "mini-Hitlers" are brought up in environments which echo that of the original as closely as possible. The book's biology professor stresses: "genes aren't the only factor in our ultimate development" (162), a notion backed by Julian Huxley's report that both heredity and environment "are essential" (82). Levin's elaborate plot interweaves features of the classic thriller, detection and the Gothic, while also merging fact and fiction. In Schaffner's climactic scene, acclaimed Hollywood actors Peck and Olivier physically attack each other while vicious black dogs - a Gothic element - enter and plunge their fangs into Mengele's arm. Into this highly-charged scene walks a young Hitler, calmly photographing the blood-strewn spectacle. The boy sets his dogs on a stranger without hesitation, calmly watching as they savage the man to death. As well as a sadistic streak, he is also ruthless, blackmailing Libermann to cover his own tracks. Yet despite all this, and contrary to expectation, the film shows a tear welling in the monster's eye and then slowly trickling down his face, complicating things through the reminder that this clone is, after all, just a boy.

The fate of the ninety-four Hitler replicas is the moral conundrum which preoccupies the aftermath of the creator's grotesque slaying. While few would deny Hitler the label monster, his clones pose a more complicated problem that taps into the disquieting fear someone could be "born bad," their fate prescribed from the moment of birth. The Rabbi is in no doubt of the next step, confidently asserting the necessity of tracking down the boys and killing them "before they get much older" (231). Yet despite

the weight of his family's brutal history at the hands of the Nazis, his lifelong ambition to rid the world of Nazi ideology and his first-hand experience of how callous and ruthless the boys could be, Liebermann provides a dissenting voice. "They're boys," he rationalises, "no matter what their genes are. Children. How can we kill them?" (233). The rabbi counter-argues: "God didn't make them, Mengele did" (233). At this point, although only briefly, the humanity of the boys is brought into question with the implication that as clones they are less worthy of life. Mengele, a modern-day Frankenstein figure, has usurped the role of God, and his monstrous creations are the result. The rabbi shows no qualms in declaring the boys inhuman outcasts, or concluding that it is justified to ensure they pay the price for the rashness shown by their creator.

While the rabbi cannot view them as children, showing himself paralysed instead by their monstrous potential, Liebermann adopts a more liberal stance. He destroys the paper that reveals the identity of the boys, determining that as well as a "Hitler like leader" (59) and the right social conditions, it would also be necessary for "people to follow Hitler" (233). This third condition, he concludes, would not occur as a result of the experience gained from the past. There is reason to question his conviction, however, when he decides to focus his next lecture tour particularly on the "young" (235), as a way of reaching out and influencing the next generation. If that in itself creates a sense of foreboding, the final chapter develops this ominous tone. In the "darkness" of his "ringed room" (237), a young boy who carries the identical genetic blueprint of Adolf Hitler, and whose social circumstances closely mirror them, paints a picture. This picture portrays a man who is both "loved and respected" and is received by a crowd who are "cheering, roaring; a beautiful growing love thunder that built and built, and then pounded, pounded, pounded"

(238). Levin denies his reader a comforting conclusion, but rather introduces an element of doubt through an image of that third factor brought to life. The text undermines Libermann's hope that people are "better and smarter now, not so much thinking their leaders are God" (233). Hitler's duplicate clearly sees things differently, painting a scene that was "sort of like in the old Hitler movies" (238). He is a gifted young boy with monstrous potential, and it is this unease that lingers.

CAST OF SHADOWS: RECREATING A MONSTER

The monstrous potential of a young boy created through cloning is a theme reworked in *Cast of Shadows*. Davis consciously clones a man whom he considers a monster, Sam Coyne, in an attempt to identify him as a murderer and bring him to justice. Unlike Mengele, his actions are not carefully premeditated, but are rather, as the first chapter shows, the rash actions of a grieving man. He does not believe himself to be recreating an original, nor does he bestow the identity of the original on the clone he creates, in contrast to the earlier text. Sympathy is clearly expressed for the boy, who is not held accountable for his origins, with Joan exclaiming: "I'm thinking about this poor little boy you just decided one day to carve out of a monster" (72). There is no attempt made to replicate the experiences of his original, and yet despite this, indications of a monstrous nature are apparent throughout. From the age of just three Justin is described as possessing a "potty mouth" (52). By seven he has started lighting fires and stealing things, and his mother even suspects he may have killed a neighbour's dog. "You read where serial killers, when they're young, like to set fires, torture animals, that sort of thing" (85), expresses a concerned Martha, fearful of her son's development. Justin obsessively plays a computer game known

as "Shadow World" which can at times be extremely violent. Martha's concerns about this appear validated by contemporary scientific research. A policy statement entitled "Media Violence," published in the journal *Pediatrics* in 2009, states: "Recent longitudinal studies designed to isolate long-term violent video-game effects on American and Japanese school-aged children and adolescents have revealed that in as little as three months, high exposure to violent video games increased physical aggression" (American Academy). It is a link, however, which is also strongly contested, and opinion remains divided.¹⁰¹ At fifteen, Justin "frightened" his mother who confesses she was "too scared" to confront him (218). His genetic origins appear to have a stringent influence on him, even to the extent of him committing murder. The realisation of this recalls Davis's speculation with Joan over who the boy would become, and to accept "their darkest fears had become real" (293). He concludes that "Justin wasn't taking drugs, but there was something else profoundly wrong with him" (293). Justin explains that when he killed the girl: "I felt Coyne" (294). It was as though he were "a puppet in the hands of compulsion" (294). He warns that he knows that Coyne will not stop killing, and he know this "because now that I've killed, neither will I" (295). In cloning a monster, Davis has recreated one, the text suggests. It suggests this, that is, until the unsettling twist of the final pages, which reveals Coyne was not the murderer they believed him to be. Coyne may not have committed murder, but there is no doubt that his clone did. Justin becomes a monster not because he was cloned from one, but because he is convinced that he is one. He, like Davis, becomes obsessed with capturing a monster, and through that obsession, becomes one.

¹⁰¹ Online debate shows public opinion is equally divided on the subject ("Do Violent Video Games").

VICTIMISING THE MONSTER

The portrayal of clones as victims in contemporary narratives is becoming increasingly evident. This functions in two ways: it firstly encourages a sympathetic response, and secondly, it turns society into the monster for its treatment of them. The more the clone is treated as a monster, the more society reveals monstrosity within itself. Paralleling the trope of monster, contemporary depictions of the clone initiate sympathy rather than fear. At the same time, as the second chapter demonstrates, the humanness of the clone has become increasingly prevalent in post-Dolly cloning texts, increasing identification and condemnation when treated as less than human. While newspapers primarily elicited fear about cloning and the clone, the public also expressed concern. This was shown when respondents of the 1998 Wellcome Trust report suggested a cloned child would become "stigmatised and discriminated against" (17), an anxiety seemingly valid in relation to the plight of Dolly herself. Revealing its monstrous side again, society bestowed celebrity status on Dolly virtually overnight, with the resulting attention lavished on her leading to her confinement in a barn where previously she had roamed free. It has never been made clear whether her weight issue was the result of her being a clone,¹⁰² or of overfeeding by tourists. Rather than a monster herself, her treatment could instead be deemed monstrous, rendering her an exploited creature. When asked if Dolly became bored, Douglas McGavin, an assistant on the farm, responded: "I think she gets programmed to her surroundings and that's a completely normal life to her" (Meek). Although undoubtedly unintentional, his use of the word "programmed" in relation to a clone is telling, suggestive of something mechanical rather than a living creature. He implies that her treatment is morally acceptable due to her inability to differentiate, her inability to feel. Nor has the

¹⁰² Clones of several species have been overweight.

fascination with Dolly ended with her death. Though in appearance no different from any other sheep, Dolly has generated enough interest to merit videos of her stuffed body rotating silently inside her glass prison appearing on YouTube, attracting more than 97,000 views (Justinwlaurab). Even in death Dolly is a spectacle at which to "gawp." It is not the display itself that attracts interest, nor the videos made of it, however, since they could be easily dismissed as remarkably dull; it is the fact that Dolly serves to flesh out what was previously no more than a fictional concept: the figure of the clone.

What seems clear is that based on the example of Dolly, the first human clone would be likely to lead a very troubled life. Indeed, if history is anything to judge by, the certainty of this increases. Society has not been kind to those considered different in the past: not only were the first Siamese twins displayed in a circus, the first surviving quintuplets, born in Ontario in 1934, appeared in one too. Nor is Dolly the only "product" of scientific advances to be designated a celebrity. Despite the fact IVF is now, broadly speaking, considered acceptable and widely practiced, Louise Brown is still considered newsworthy more than thirty years after her birth. Her twenty-fifth and thirtieth birthdays were reported by the press, and there was significant media attention when she became pregnant and later gave birth. When those connected with her achieve something newsworthy her name again appears: in 2010 she was interviewed when IVF pioneer Robert Edwards was awarded a Nobel prize. Society's obsession with celebrity culture, like its obsession with youth, further serves to emphasise its monstrous nature. As the Wellcome Trust report shows, the public have expressed concern over the social implications of cloning on the clone, but this is not a significant feature of press reports. The press showed a tendency to leap to horror scenarios; the public focused also on the

clone. Initial concerns that cloning would result in a loss of individuality were lessened when Wellcome participants were given evidence of the significant role nurture plays in the forming of an individual. However, this information did not alter their fundamental rejection of human cloning. A minority of participants felt cloning would be acceptable as a "last resort" for women having difficulty conceiving. However, an increased awareness of the failed attempts prior to Dolly led to an acknowledgement that greater efficiency would be necessary before it should be considered (15).¹⁰³

The suffering caused to animals through cloning inevitably raises grave concerns for any attempts made to clone humans, forming one of the strongest arguments against it. Further controversy arose when a team of researchers in Denmark and Australia sought to adapt the same cloning technique used by the team at Roslin in the creation of Dolly to clone cattle, taking the genetic material necessary to achieve this from dead cows – raising the disquieting prospect of using cloning on dead humans. The scientists themselves dismissed such concerns, with Australian researcher Alan O. Trounson¹⁰⁴ commenting about British headlines on the subject: "it's good for scaring people," but reasoning: "I don't hear any scientists talking about it. No one wants to go down that line" (Coghlan 55). His reasoning was not, however, sufficient to diminish public fears. The concept of resurrecting the dead is featured in cloning narratives as diverse as *The Boys from Brazil* (1976) and *Mary Modern* (2007). While the earlier narrative serves to heighten fear and alarm associated with cloning, however, *Mary Modern* portrays the clone in a more sympathetic light. While narratives which preceded the announcement of Dolly's creation, as the second chapter shows, frequently suggested a less than human aspect of the clone, contemporary

¹⁰³ *TIME Magazine* reported that it took "277 trials and errors to produce Dolly the sheep, creating a cellular body count that would look like sheer carnage if the cells were human" (Krauthammer).

¹⁰⁴ Trounson had made headlines previously during the 1980s with the first IVF birth in Australia.

interpretations of clones, even when depicted as monstrous, tend to view them as tragic, exploited figures, and they are depicted with sympathy rather than horror and fear.

THE MONSTER'S VOICE

This shift in sympathies was initiated by Shelley when she gave her creature a voice, although, as Glennis Byron and I have noted elsewhere, "his narrative nevertheless remained contained within that of his creator" (456). In contrast, *The Secret*, *Double Identity*, *Never Let Me Go* and *Blood Ties* and *Blood Ransom* are all narrated solely by clones: "Now, the creature's voice is all we have" (Byron and Ogston 456). The result of such highly personalised narration is to bring the reader into alignment with the narrator, creating a sense of conversation and sharing, and significantly placing the clone and reader side by side. There is a frequent sense of confusion expressed by the clone over who or what she is and her lack of individual identity. This is shown in *The Secret* by Iris's repeated reference to herself in the plural: "you don't love us anymore" (44); "We still love you, we want you to stay here" (45). She appears as an extension of her mother, who encourages such perception by stating: "you can't fight me without fighting yourself" (48). Iris considers herself a monster: "She'd given life to a copy of herself; and the copy had metamorphosed into this strange, this alien creature" (167). She describes herself as such, and yet through the personalised narration also shows she is not. Her treatment by the outside world reveals her as a tragic figure: her aunt treats her "the way you might act with someone who's not quite right in the head, perhaps, or who's severely damaged" (11). Such treatment convinces her there is a "weirdness" within, which she describes as "the black

matter lurking in the back of myself" (13). "Can a creature like me have feelings?" (41), Iris asks, while evidencing throughout her intense narration that she undoubtedly can.

Iris opens her narrative by explaining, "I knew and didn't know" (1), which she later attempts to elaborate: "I knew, but didn't understand" (44). She describes this as a form of "slippage" (44), and it is a sentiment echoed by Kathy in *Never Let Me Go*. This tension between a particular kind of knowing and not knowing, or not realising, which is expressed in these contemporary cloning texts, is a form of brainwashing or social control which confuses the limits of reality. These ideas stem from George Orwell's *Nineteen Eighty-Four* (1949). In Orwell's earlier dystopian nightmare, citizens are taught to "know and not to know" during a process of reality control known as "doublethink" (37). The Hailsham clones undergo an updated version of reality control: they are denied comprehensive understanding by being informed under a veil of transparency. The guardians filter information to them "timed very carefully and deliberately" so that "they were always just too young to understand properly" (81). As Miss Lucy maintains, they have "been told and not told. You've been told, but none of you really understand" (79). The students react by avoiding the subject of donations as much as possible, when they were younger because it was "awkward or embarrassing," and then later because it was "sombre and serious" (87). There was an awareness "at some level" (81), but rather than being brought to the surface and dealt with by the guardians, it is actively suppressed. This sense of dislocation confuses memories and casts doubt on the reliability of Kathy's narration, not only because she has repressed memories, but also, as Jerng explains, "because she is unable to traverse the gap between what she knew and understood in the past and what she knows and understands in the present" (385). As Mark Currie explains, events become "obscured by lack of

recollection or hearsay" and this lack of clarity is exemplified through the use of the "proleptic past perfect" tense (95): "Tommy and I discussed the tokens controversy a few years ago, and we couldn't at first agree when it had happened. I said we'd been ten at the time; he thought it was later, but in the end came round to agreeing with me" (38). The students are manipulated and abused, and they are ultimately victims. Their victimised status is made more poignant by Kathy's technique of directly addressing her readers, drawing them into the narrative: "If you're one of them" (3); "I'm sure you've heard it" (4); "I don't know how it was where you were" (13). The inevitable result is identification with the narrator, something that lingers even after it becomes apparent we are not "her own kind" (3-4). As awareness is crystallised for the reader, sympathy grows to the extent it is not the humanity of the clones which is questioned, so much as the inhumanity of the society who have condemned them to "the shadows" (258). Once again, the site of the monstrous is transferred from the clones to society.

Like Iris, the Hailsham clones are "sheltered" (263) from the outside world, and it is when that outside world encroaches on them in the form of Madame that their difference becomes apparent. Ruth puts forward a theory that Madame is afraid of them which the students test by choosing to "swarm out" (34) around her. Madame's response is an involuntarily physical one: she "froze" and appears to recoil from the students, suppressing a "shudder" (35). Though their theory seems to have been proven, it is not satisfaction it brings but unease:

And though we just kept on walking, we all felt it; it was like we'd walked from the sun right into chilly shade. Ruth had been right: Madame *was* afraid of us. But she was afraid of us in the same way someone might be

afraid of spiders. We hadn't been ready for that. It had never occurred to us to wonder how *we* would feel, being seen like that, being the spiders. (35)

Significantly it is Kathy's perspective being related: it is how she interprets Madame's reaction, and how *she* feels. She relates herself to a spider: a creature long acknowledged as producing irrational fear. It is an image developed later in the novel prior to the confrontation with Madame when we are told she stiffened, "as if a pair of large spiders was set to crawl towards her" (243). It is a reaction not based on logical reasoning but instinctual fear, one comparable with the views expressed by much of the public in relation to human cloning, a reaction which Klotzko describes as having a tendency to preclude debate rather than initiate it (109). They are views based on instinctive feelings which override rational thought, and akin to the horror a harmless spider provokes. In the case of the students, the fear and revulsion felt is not caused by their appearance – they are in no way physical monsters as their trip to Norfolk shows – so much as the thought behind who or what they are; the perception there is something inherently wrong in their existence. Nor is Madame alone in responding like this. Miss Emily, their head, later admits: "I myself had to fight back my dread of you all almost every day I was at Hailsham" (264). Given those that know them are responding like this, to the outside world they are likely to be viewed as akin to monsters. Yet readers of this novel have been drawn into the narrative by the gentle narration of one of those clones. "The first time you see yourself through the eyes of another," Kathy recalls, "it's a cold moment. It's like walking past a mirror you've walked past every day of your life, and suddenly it shows you something else, something troubling and strange" (36). The reader is viewing events through *her* eyes: from the perspective of the spider.

These contemporary texts give the clone a voice – the monster a voice – and in doing so bestow an identity. Furthermore, they align the clone and reader. In doing so, the clone is transformed into a tragic figure who, much like Frankenstein's creature, has become a figure more likely to be viewed with sympathy than fear. Ishiguro does not spare his reader identification with the monster, but rather places them side by side. While Kathy retains a measured composure throughout, almost to the extent of colluding in the system which has condemned her, only Tommy rages against their treatment. There is a real sense that, had the subversive voice of Miss Lucy not been stamped out, Tommy would have found the strength to rebel.¹⁰⁵ Tommy confesses to Kathy he had "these dreams all the time where I'm fighting loads of Roman soldiers" (84) and was prone to violent tantrums from a young age. Indeed, there may be dormant potential in many of the students who are described as loving "the moment the American jumps over the barbed wire on his bike in *The Great Escape*" (97). Wire causes Ruth to come to "an abrupt halt" (218) when approaching a boat, and in the final paragraph Kathy looks out to where "all sorts of rubbish had caught and tangled" (282) on it. The rubbish represents society's treatment of the clones; the wire the conditioning of the students' minds, containing them rather than allowing them to break free. Despite the euphoria felt as the American in *The Great Escape* leaps the first fence, he is contained by the second, and the ultimate fate of most of the escapees would likely be enough to dampen any thoughts of escape in the "prisoners" of Hailsham. Moreover, the Hailsham students were the "lucky pawns" (261), and the novel provides a mere glimpse of the horror they were spared. The rest is left to the imagination. While an attempt was made by Hailsham to protect its students, Ishiguro does not similarly spare his readers from identification with the students (Summers-Bremner 158). While

¹⁰⁵ Criticism has been levelled against the novel asking why the students are so accepting of their fate.

Kathy only touches upon the anguish she feels, Ishiguro encourages his readers to experience it. He does this by presenting the monster's voice, and aligning it with our own.

CONCLUSION

There is space for a new monster in contemporary culture, and the clone neatly fills the gap. Ironically, the clone's visual similarity to the rest of humanity, rather than separating her from the monster, more closely aligns the clone and monster through the perceived threat the clone holds. There has been a shift within monster theory towards an acceptance of difference, a shift that is paralleled by a change within society itself. Difference is far more apparent in Western society today than in the past: it no longer separates people considered different from the norm, locking them away in an asylum or displaying them in a circus or freak show. *The Independent* concluded that society has become more tolerant in its "Snapshot of British Society in 2013," with the survey showing that Britons "have grown more tolerant of differences in lifestyle," for example, opposition to same-sex relationships has dropped from 64% in 1987 to 22% in 2012 (Milmo). As society has become more tolerant, the parameters of what is considered "monstrous" have also changed. Suddenly, it is not so clear what "normal" is, and as that becomes more apparent, stable notions of what identity is and means have become increasingly threatened. Baldick and Mighall have argued that, far from presenting a bourgeoisie "paralysed by dread," Gothic fiction regards otherness "not with terror but with equanimity or even delight" as it represents "a new market" (284). If the clone represents an otherness which can be met with equanimity, then cloning, as the second chapter shows, can be seen to provide a new market for bioscience. The more difference is embraced, however, the less certain the

definition of normality becomes. To be normal is, paradoxically, to be strange. Sameness has replaced difference as the new fear, and the clone makes this fear flesh, forcing a confrontation with the uncanny and the monster within.

The clone simultaneously embodies both difference and sameness, she is *unheimlich*: familiar and yet unfamiliar. She flows against the tide. At the same time, cloning points towards the future, a future "with its new Frankensteins and new monsters barely distinguishable" (Botting, *Limits* 157). Cloning could remove the need for tolerance within society by eliminating difference, creating a new kind of world filled with a different kind of monster. The clone forces a confrontation with uncertainty: the fear of the unknown. Unknown that is, until the creation of Dolly. Dolly introduced a new fear to the concept of the clone: the notion of premature ageing. To a society obsessed with the retention of youth, it is an idea filled with horror, a monstrous concept. And yet, even narratives which depict such a scenario direct the monstrous away from the clone. Consumer society, encompassing humanity as a whole, has become the new monster for its treatment of the clone. The use of clones as spare parts, a scenario which the next chapter discusses, exposes the dark underbelly of society: its hidden, criminalised side willing to engage in organ harvesting for financial gain, known as the organ black market. It distorts the distinction between therapeutic and reproductive cloning, which the next chapter explores in more detail.

Chapter 4

Cloning Therapeutically

One fire burns out another's burning,
One pain is lessen'd by another's anguish.
Romeo and Juliet

What's so great about discovery? It's a violent,
penetrative act that scars what it explores.
What you call discovery, I call the rape of the
natural world.
Jurassic Park

The invisible line dividing the morally defensible and indefensible is one severely tested and challenged by cloning. In an editorial entitled "Ethics of Therapeutic Cloning," *Nature* described it as "one of the most divisive topics in modern biology" (1). Georges Kutukdjian, former Director of UNESCO's Division of the Ethics of Science and Technology, described the cloning of Dolly as "like a bolt of lightning" which opened up "unimagined possibilities." He warned that while it brought with it "a host of benefits ... we must take care that the concept of 'human dignity,' the cornerstone of the intangibility and inalienability of human rights, is not fractured" (20). This chapter investigates fictional portrayals of human dignity being compromised, looking at ways in which literature and film reveal how narrow the ethical divide is between what is deemed ethically acceptable and what is not, and how easily it can be transgressed. Scientists are anxious to differentiate therapeutic cloning from reproductive cloning. In therapeutic cloning, cloned

embryos are prevented from reaching full term, taking their stem cells¹⁰⁶ as a means of replacing tissue or organs, or curing disease. Reproductive cloning, on the other hand, results in the development of a new individual. Fictional portrayals of using clones as "spare parts," however, confuse this divide through the depiction of reproductive cloning used for therapeutic means. Rather than helping to soften the public's reaction to therapeutic cloning or stem cell research by distancing it from reproductive cloning, they instead incite anxiety. As this chapter demonstrates, fiction serves as a check on scientific progress, exploring the potential consequences of disregarding medical ethics. It shows that the ability to proceed does not necessarily mean it is acceptable to do so. This chapter examines fictional scenarios in which scientists do proceed, looking at the role fiction plays within bioethical debates.

While the focus of the chapter is on cloning, other medical advances which either run parallel with it, or have been made possible because of it, are also discussed. Some of these advances have been deemed more acceptable than others, and the chapter looks at where the divide has been drawn, as well as how cloning is perceived within the ethical debate. In addition to cloning, the chapter considers fiction dealing with genetic engineering, a technique which has been made viable through cloning as it enables the copying of genetic material in sufficient quantity. The creation of saviour siblings is viewed in a more sympathetic light, and is a procedure which has already taken place. It involves the creation of a child through selective IVF to be a compatible donor of cells or organs for a sibling with a life-threatening condition. This creation of a "donor child" mirrors the scenarios depicted in many clone narratives, where clones are created for the

¹⁰⁶ Stem cells are nature's master cells, capable of generating every one of the many different cells that make up the body. They have the ability to self-renew, meaning they are theoretically immortal (Gibbs).

express purpose of donating their organs. This brings to the fore the processes of organ transplantation and xenotransplantation: the transplantation of living cells, tissues or organs from one species to another, which is also discussed. Just as the use of clones for spare parts involves the prioritising of one human over another, the creation of a saviour sibling and xenotransplantation both involve the prioritising of a human over another species. Such procedures raise the question of whether it is morally acceptable to destroy one life in order to save another. Establishing clones as human, an issue which is discussed in detail in the second chapter, comes back to the fore here. Presenting clones as non or sub-human justifies their treatment within narratives, for a clone cannot be protected by human rights if not deemed human.

Hope proves a powerful driving force behind many medical advances, with the desire to find cures for debilitating conditions softening attitudes to therapeutic cloning. Experimentation on human embryos, however, introduces the thorny issue of when a human life begins, an issue central to the ongoing debate on abortion, and one for which a conclusive answer has yet to be found. This chapter examines such ethical issues, discussing bioethical debates and how fiction engages with them. It explores the role fiction plays in revealing the emotional implications of medical advancement and the imagined consequences that may result.

WHAT'S IN A NAME?

In the new millennium, the public discourse on cloning has to a large extent remained one based on fear. Following the immediate furore surrounding Dolly's birth, attempts were made to soften the image of science, and in particular the maverick scientist, in the public's

mind. Many of these attempts focused upon making the process palatable by moving away from the term cloning which was by now too tied with fictional scenarios. The term stem cell research was increasingly employed in an effort to distance people from the notion of human reproductive cloning. Following Clonaid's discredited claim to have created the first human clone using reproductive cloning, scientists were anxious that therapeutic cloning would not be tarred "with the same brush," fearing that the public "don't understand the distinction" (Kolata, "The Promise"). Press reporting on Dolly largely encouraged misapprehension, deflecting attention from any potential benefits cloning may bring. The British government, led by Tony Blair, attempted a public defence of science and stem cell research in the late twentieth century, passing a 2001 amendment to the 1990 "Human Fertilisation and Embryology Act" to allow for therapeutic cloning. In an effort to moderate the fear surrounding cloning, the term "cell nuclear replacement" started to be used instead of therapeutic cloning within scientific and political fields in Britain.

In 2004, as part of a UK drama documentary series *If*, a debate took place entitled "If... Cloning could cure us," which merged drama and documentary, fiction and fact. It televised an embryonic stem-cell scientist attempting to cure a twenty-eight-year-old patient paralysed as the result of a climbing accident. The only means of doing this was to break the law, taking the stem cells needed from a nineteen-day-old cloned embryo and injecting them into his spine. Featuring interviews and a jury, the programme invited audiences to register their own vote as to whether the scientist was guilty, and two endings were filmed based on the possible outcomes (Haran et al. 148). The result showed that 81% of the "at home audience" considered the scientist not guilty, while only 19% felt she was guilty. As such, the "not-guilty" screening was shown after a *Newsnight* discussion hosted

by Jeremy Paxman was broadcast discussing the programme. As the verdict on this debate suggests, the more the health benefits of therapeutic cloning are emphasised, the more sympathetic towards it the public are likely to feel, something that is explored more fully later in this chapter, through analysis of texts such as *Never Let Me Go*.

In America, stem cell research remains a highly contentious political issue in the twenty-first century, featuring in the 2004 presidential election. Britain, in contrast, became pioneers of the cause. In 2004, Blair introduced a plan to make the UK "the embryonic stem cell capital of the world," stating: "the government believes that all types of stem cell research, including therapeutic cloning, should be encouraged" (Ertelt). Over the last twenty years, celebrity scientists such as Robert Winston and Ian Wilmut have emerged in Britain to promote therapeutic cloning, and in August 2004 a team from Newcastle was granted the first license, initially for one year, to pursue therapeutic cloning research using discarded eggs from those undergoing fertility treatment.¹⁰⁷ This enabled investigation to be carried out in the search for treatments for conditions such as diabetes, Parkinson's and Alzheimer's disease. As well as controversy this also inspired hope, though results did not prove rapid enough to entirely dispel public unease. Despite progress being reported with embryo research and cord-blood cells, Joanne Kurtzberg, a doctor working on cures for children with blood diseases at Duke University Medical Centre, acknowledged that results would not be seen for another "10 to 20 years" (Gibbs). *The New York Times* compounded this by reporting that "despite optimistic statements about curing diseases, almost all researchers, when questioned, confess that such accomplishments are more dream than reality" (Kolata, "The Promise"). The miraculous cures the public had anticipated were

¹⁰⁷ The team hope to yield viable embryonic stem cells with the potential to turn into any tissue in the body. At that point, only one team had come close to succeeding in this – a team led by Hwang Woo-suk at Seoul National University, a scientist later stripped of his credibility when his findings were disproved.

simply not materialising, and scepticism once again dominated public view. With British legislation appearing to be guided by science rather than the majority view, many feared their concerns were not being addressed, as Britain came to resemble a "technocracy"¹⁰⁸ (Jensen 138). Work carried out in Britain has been recognised as the first known effort to clone human embryos in Europe, and indeed in the West (Klotzko xxxii).

America began to fall behind due to staunch opposition, despite attempts by Hollywood celebrities to champion the cause. Christopher Reeve, the *Superman* actor left paralysed following a riding accident, became a vocal advocate of stem cell research, believing it would help him walk again and stating he would seek treatment in Britain should it not become available in America. Shortly before his death in October 2004, Reeve appeared in a commercial declaring, "stem cells have already cured paralysis in animals" (Gibbs). He advocated the power of hope as something which in itself worked like a drug: "Hope must be real, and built on the same foundation as a lighthouse; in that way it is different from optimism or wishful thinking. When we have hope, we discover powers within ourselves we may have never known - the power to make sacrifices, to endure, to heal, and to love. Once we choose hope, everything is possible" (Reeve 194). Arnold Schwarzenegger, who plays a clone in *The Sixth Day*, developed pro-active stem-cell policies as the governor of California¹⁰⁹ (Haran et al. 7). Michael J. Fox became another staunch celebrity advocate, setting up a foundation to fund stem cell research which focused particularly on his own condition of Parkinson's disease.¹¹⁰ In South Korea,

¹⁰⁸ A technocracy is "the government or control of society or industry by an elite of technical experts" ("Technocracy").

¹⁰⁹ Reproductive cloning is banned in most states of America, though Arizona and Missouri have only gone so far as prohibiting the use of public money for reproductive or therapeutic cloning. Many states in America also have a ban on therapeutic cloning.

¹¹⁰ Despite years of being a front-line supporter, however, Fox has recently been reported as turning his attention elsewhere in the belief that "other lines of research hold more promise" (Aldhouse).

although reproductive cloning is banned, therapeutic cloning has received substantial public funding. A stamp was produced in 2005 to commemorate the achievements of Hwang Woo-suk, "despite the fact advances using stem cells were speculative at best" (Bellomo, 123). The stamp professed the miraculous potential of stem-cell cures through the visual image of an individual leaping from a wheelchair to walk again (Haran et al. 46-7):



Fig. 19. South Korea celebrates the "miraculous" potential of stem cells (South Korean Stamp).

The stamp, which was to become an embarrassment once Hwang was discredited, epitomises the misguided hope aligned with stem cell research that it will result in instantaneous cures. Not only will it enable those confined in a wheelchair to walk again, it will also, the image suggests, bring with it joy and even love. The stamp offered the hope the public longed for, before sensationally taking it away.

This evidence suggests that the promise of cures is a substantial lure for the public, helping to soften the negative image of cloning. It is a hope which scientists and politicians have shown willing to exploit in the name of scientific progress, focusing on the curative potential of therapeutic cloning to establish the divide between it and reproductive cloning. The divide between the two types of cloning, however, has been complicated by maverick scientists such as Antinori and Zafos who have used the term "human therapeutic cloning" to refer to reproductive human cloning, suggesting it should be used for "therapeutic" means, such as enabling infertile couples to have children. Their rhetoric strengthens rather

than dampens fears, while also demonstrating how narrow the ethical divide actually is. Fictional scenarios disturb the divide still further by depicting reproductive human cloning being used for therapeutic purposes, specifically the extension of human life. The rapid progress of science brings with it the promise of medical breakthroughs, but it is the consequences of such advances which fiction has the freedom to explore.

MEDICAL ETHICS

The controversy surrounding therapeutic cloning centres around the human embryo and whether it should be regarded as a viable human being. The *Catechism of the Catholic Church* states: "since it must be treated from conception as a person, the embryo must be defended in its integrity, cared for, and healed, as far as possible, like any other human being" (Bordwell 490). Furthermore, the Declaration of Geneva, known as the "Physician's Oath" and adopted by the General Assembly of the World Medical Association in 1948, stipulates that doctors should "maintain the utmost respect for human life from the time of conception" (Joseph 16). Given that a human embryo will develop into a human being if left to develop naturally, many argue it should be viewed as such, meaning that therapeutic cloning involves experimenting on humans. Objections to experiments carried out on human embryos are similar to those relating to abortion, in which the debate centres upon the stage at which the foetus becomes sufficiently human to have a right to life. The Abortion Act of 1967, which covers the UK mainland, states that abortion can legally be carried out during the first twenty-four weeks of pregnancy, and later than that in exceptional circumstances. Although the implication behind this is that a foetus should not be considered human until that point, this remains a highly contentious issue. Indeed, there

is no consensus in medicine, philosophy or religion concerning the stage at which a foetus has the right to life ("When is the foetus alive?"). In Ireland, up until The Protection of Life During Pregnancy Act, which became law in July 2013, abortion was illegal, and even today it is only permissible when the pregnancy is a risk to the mother's life ("President Higgins"). Many who oppose abortion claim a foetus should be considered human from conception, and as such has the right to life from this point.

Whether a human embryo is considered a human being is crucial: if deemed to be human, then experimentation on embryos would be contrary to their universal human rights. The universal declaration of human rights was adopted by the United Nations shortly after the end of the Second World War, with article 3 stating: "Everyone has the right to life, liberty and security of person" (UN). Humans are legally protected by this, and have traditionally been shielded from becoming research experiments by virtue of their humanness. There is, however, evidence of this being violated in the name of scientific progress from as early as the 1970s. A chapter in the *Pro-Life Activist's Encyclopedia* reported that researchers from four British medical schools had begun experiments on live, late-term aborted babies:

Dr Ian Donald, the British gynaecologist who first applied ultrasound to obstetrics, told Father Paul Marx of Human Life International that he had personally witnessed experiments being performed on near-term alive aborted babies at Sweden's Karolinska Institute. The babies, who were not even afforded the mercy of anaesthetic, writhed and cried in agony, and when their usefulness had expired they were executed and discarded as garbage. (Clowes)

Though the language in his report is undeniably emotive – "mercy ... writhed and cried in agony ... executed and discarded as garbage" – such affecting language seems unnecessary in reporting the claim, which it is suggested has been published in a medical journal. The aim of the experiments was to determine the potentially harmful effects of ultrasound, to improve the quality of life of wanted babies by, Paul Marx suggests, inflicting "agony" on unwanted ones, adopting a Utilitarian philosophical approach. The prioritising of one human over another deemed more expendable is a moral question which recurs throughout this chapter. The 1998 Wellcome Trust report highlighted the public's mistrust of scientists and their motives, with a "cynical view" being taken. The report warns that this could form a "major barrier to a better dialogue" (5). Participants frequently compared cloning with IVF, a reproductive advance which forms a crucial strand in the history of cloning and became one of the central focuses of moral anxiety during the 1970s. Indeed, Robert Winston, Emeritus Professor of Fertility Studies at Imperial College London, said that when he first started working on IVF he was "accused of murder" (Winston). A 1969 Harris poll revealed that the majority of Americans believed techniques like IVF were "against God's will" (O'Reilly). The objections raised against IVF, ranging from fears that it was unsafe to concerns that it was "unnatural," are some of the same anxieties repeatedly raised in the discourse on cloning. The backlash against IVF largely abated, however, as the introduction shows, following the birth of Louise Brown in 1978. While previously IVF was felt to lead to the mysterious, the unknown, it was now broadly acknowledged as resulting in a normal, healthy child. The advances in human reproductive technologies are directly linked to the genealogy of cloning, and as such the birth of Louise Brown can be seen as a significant genealogical marker in the history of cloning (Haran et al. 19). As

TIME magazine points out, cloning embryos would also significantly increase the chances of IVF proving successful, and would therefore be of particular interest to infertility specialists working in the field of IVF (Elmer-Dewitt).

THE CLONE AS PARTS – *THE CLONUS HORROR*

Just a year after Louise was born, Fiveson released *The Clonus Horror*, a low-brow horror in which clones are used by politicians for spare parts in a quest for immortality. Vacuum-packed bodies, hanging as though pieces of meat, open the film while muffled voices whisper in the background. This unsettling scene is juxtaposed with a presidential speech, with the sound of cheering crowds replacing the whispered voices as the focus switches between the two contrasting scenes. The clones are portrayed as childlike, less than human, distinguished from normal people by their "clone blink." Each clone has their individuality suppressed to make them more malleable by dropping a virus into the cell group at the time of inception, and in doing so their humanity is also suppressed. Even the central characters, Lena and Richard, known as "controls" as they have been conditioned less harshly, display a childlike naivety which sets them apart. Their status is emphasised by the guards' use of the personal pronoun "it" with regards to the clones: "it's ready"; "Get it ready"; "it can't get away" (*Clonus*). All clones are carefully monitored "big brother" style by Clonus, with the viewer aligned with the company as voyeur in this way. The film used techniques replicated in later clone narratives and can be seen as a precursor for later texts. It also, as the director explains in his audio commentary, aims "to make the horror more horrifying" (Fiveson), by, for example, reviving the clones with a bloodcurdling scream just before they die. By exploiting the shock-value of the film, and depicting the clones as less than

human, Fiveson deflects sympathy for the clones in favour of horror. The film was released a year after John Carpenter's *Halloween* (1978) popularised the "slasher film," and graphic scenes of violence were fashionable at the time. With anxiety relating to IVF abating, the film attempts to initiate new fears relating to cloning, though it was still considered science fiction at this point.

The use of clones for spare parts, whether those clones are deemed human or not, is a gruesome prospect appropriate to the horror genre. Yet, while the film emphasises the horror this entails, it also, as the Director explains in his commentary, presents both sides of the argument. Richard's wealthy progenitor, aptly named Rich, is presented as a man of morality and reason who initially fights against his brother's use of clones to prolong his own life. Yet his brother, Jeff Knight, presents a compelling argument, declaring a clone does not have any human rights as "clones are not humans, they're things" (*Clonus*). Following this same logic, their death could not be considered murder, an act which is defined as "the unlawful premeditated killing of one human being by another" ("Murder"). Within the fictional world of the film, they are merely products, created in order to prolong humanity which has been deemed the superior species. The knowledge that his own brother would not be alive today were it not for the Clonus scheme, taps into a morally grey area for Rich, highlighting the lengths people may go to for the health and longevity of those they love.

Rather than viewing the body as a whole, the Clonus clones are dissected into parts, their organs and tissues used in an attempt to make others whole. The literary concept of donating body parts and organs can be traced as far back as 1818 to *Frankenstein*, in which an engineered human is brought to life by assembling body parts: "I collected bones from

charnel-houses ... the dissecting room and the slaughter-house furnished many of my materials" (Shelley 53). Shelley, who was writing during the aftermath of the 1814 debate over the "life principle" that split science into the materialist (William Lawrence) and the metaphysical (John Abernethy), was concerned with the question voiced by Frankenstein as: "whence ... did the principle of life proceed?" (50). *Frankenstein* explores the issue of what it means to be a human being, initiating a concern which "dominates Gothic's engagement with both science and industry over the following centuries: the disruption of accepted notions of the human" (Punter and Byron 21). While many critics focus on the ways in which *Frankenstein* problematises the human, however, the cloning discourse appropriates it in a very different way. Frankenstein did not use magic or supernatural forces to create life; he did not need women or sex or God; Frankenstein relied on science alone. This fuelled fears prevalent in the nineteenth century that science could be manipulated to render us less than human, fears that remain prevalent today and are central to the cloning discourse. Frankenstein reanimated dead body parts, gathering them from mortuaries, dissecting rooms and slaughter-houses. His creature is an amalgamation of this dead matter brought back to life, obscuring the boundary between life and death. Through cloning, the reanimation of dead matter has been made possible, and furthermore has already been done in America where dead cattle were cloned and resurrected to boost food production (Ghosh).

The use of cloning to resurrect the dead features in many clone narratives, including *Joshua Son of None* and *The Boys from Brazil* prior to Dolly's cloning; and *Alien Resurrection*, *Godsend*, *Double Identity*, *Mary Modern* and *Blood Ties* and *Blood Ransom* after Dolly's cloning. Cloning offers a second chance at life in this way, a means of

conquering death. While cloning also enables an extension of life in narratives in which clones are used as spare parts, in these texts it is not the clones who are the beneficiaries. Instead, the clones' bodies are dissected and torn apart and their organs removed and transplanted until their lives are extinguished altogether. These clones have no rights or control over their own bodies: they do not own them. While Frankenstein steals body parts he finds around him to further his own scientific ambitions, the clones have their body parts stolen from them to benefit others. In this way they raise the issue of who owns what we are, an issue which recurs throughout this and the final chapter.

CLONES AS *SPARES*

Clones lack ownership of their bodies in Michael Marshall Smith's *Spare*, which was published in 1996, the year Dolly was born. Clones in the novel are "shapes in the gloom" (40), hacked apart as an insurance policy for their wealthy progenitors. Once again, the body is central, and not only in relation to the clones with their various missing limbs. Body parts are so integral to the novel that the city is described in these terms: Jack describes the "bowels of the city," stating it "must raise its eyes" (5) and has an "ancient and barren womb" (8). Body parts are frequently singled out in the novel, and inanimate objects personified, with a focus on parts rather than the whole, almost to the extent of fetishisation. As Jack enters Golson's apartment he comments: "it looked like the inside of someone's mouth" (90). Eyes predominate: men, like Jack, who have served in "the Gap" have "the Bright Eyes" (27); murder victims' eyes are gouged out and stolen; and prostitutes' eyes hold "implants" which read the codes of credit cards (102). This focus seems appropriate to a novel in which it is unclear as to who or what many of the

characters are: if eyes enable a glimpse into the soul, the distortion or removal of them distances the soul, and so their humanness. Indeed, Jack comments about leaving the Gap: "when they brought our bodies out they didn't check hard enough to see if they'd brought out our souls as well" (199). The clones themselves are not only treated as less than human by society at large, but their lack of development as characters also supports this. Jack comments that the caretakers were "token humans" (39) on the farms – suggesting the clones themselves are not human. Their development has been stunted by their treatment: much like the clones in *The Clonus Horror* they appear childlike, devoid of any meaningful interior life. Like the children of the Gap, the clones live half lives, their bodies "dissolving" into each other (242). "Naked children lay all over the floor," Jack explains on first encountering the spares, "curled into foetal positions, sprawled on top of each other or huddled upright against the walls" (42). The clones are undeniable victims, but due to that victimisation they have been deprived of the natural process of socialisation which enables a person to develop sufficiently to become "whole," to be considered fully human. They are "like babies whose bodies had been accidentally stretched by years" (47). Their development has been stunted, like a foetus yet to reach the point at which it can be considered human, the focus of the abortion debate. Ironically, the primary purpose of the clones is to make their progenitor "whole again" (45). Described as "the fake twin" (44), the spares' bodies are brutally dissected without anaesthetic, leaving them mangled and incomplete, in order to ensure the wholeness of those who are deemed fully human. Not only do they appear less than human by their stunted development, they are also treated and portrayed as no more than animal.

The institutions imprisoning the spares are described as "farms" which resemble Gothic labyrinths, farms which enclose the clones in "warm and humid" tunnels (40). Within these tunnels, "the bodies staggered and crawled like blind grubs" (42). They are first observed as bodies, not people as a whole: "the body nearest the window looked up suddenly" (42). Jack explains they were "docile, brainless," and that the orderly acted "with the casual impatience of a butcher walking through a slaughter-house" (42). During their escape Jack likens the spares to "a litter of kittens" (62): they are clearly other, more closely linked to animals than humans. When granted their freedom, the clones "froze" (63): they have become institutionalised, developing a condition known as "learned helplessness."¹¹¹ Jack describes a feeling of exaltation at associating once again with "normal people" (19), at being able to have "a real conversation with someone who wasn't a droid or a spare" (65). Even he, their rescuer, views the clones as "other." Yet, as Jack's character develops through the course of the novel, his perception of the clones alters as well, to the extent that by its close he muses that the spares had hoped to become "proper people" following their escape, acknowledging their potential and declaring: "I brought five and a half human beings out of the womb and into the world" (261). Through spending time with Svej in a human environment, seeing her "wearing a thin summer dress, a subtle print that twisted and changed as she moved" (148), Jack is able to recognise her as human. Her human identity is established by her external appearance rather than an inner core. Through their escape, the spares emerged from the "womb" into a world where they had the potential at least to be accepted as "proper people" (261).

¹¹¹ In 1967, Martin Seligman, an American Psychologist, discovered that through conditioning dogs to receive pain, they eventually stopped resisting that pain and this state of learned helplessness prevented them from escaping when opportunity arose (Seligman and Maier 1-9).

Spare marks a turning point in clone narratives beyond science fiction. "The thriller has just evolved" announces the book's cover, disassociating it from the science-fiction genre. As in *The Clonus Horror*, the clones are established as helpless victims, valued for their consumable parts and not recognised as fully human, a characteristic feature of cloning narratives before the public's introduction to Dolly. Both depict graphic scenes of violence, and treatment of clones which is disturbing and grotesque. Again, consumer society is the moral monster, a society willing to set about "creating a life, and then systematically destroying it" (44). The corporate giant SafetyNet was founded by a biochemist as a means of overcoming the "inherent difficulty with getting damaged bodies to accept replacement parts" (43). The production of genetically identical parts through cloning is a viable means of overcoming this, tapping into the consumer public's desire to prolong life, a preoccupation the third chapter discusses.

THE CLONE MADE REAL

In 1984, the reputable biologist Davor Solter concluded, in an article published in the scientific journals *Cell* and *Nature*, that "the cloning of mammals by simple nuclear transfer is biologically impossible" (McGrath and Solter 1319). Just twelve years later, Dolly was born. Her introduction to the world in 1997 moved the prospect of a clone from speculation to fact, and appropriate to this, cloning as a literary topic subsequently broadened from science fiction to other genres, a move already initiated by *Spare*. Although *Spare* was published in the year of Dolly's birth, it was not until the following year that her creation was made known to the wider public. This accounts for the grotesque horror associated with these earlier texts, as the clone was still regarded as science fiction

at this point, and yet the use of clones for spare parts is a theme that continues to feature in clone narratives, as is shown later in the chapter. This reflects the public's continued interest in prolonging and sustaining life, and their obsession with finding cures, an obsession which appears closer to fruition due to scientific advances like cloning. "Spare parts" narratives, rather than science fiction, can more appropriately be categorised as speculative fiction, as they portray hypothetical situations which feasibly could now occur. Following Dolly's creation, as Silver points out, the question was no longer will it work, but "whether it could be used safely" (93), and a Nobel prize winning scientist predicted in 2012 that human cloning will take place "within 50 years" (N. Collins). "Spare parts" narratives show reproductive cloning used for therapeutic means, blurring the distinction between the two. Interest in the moral ambiguities associated with cloning, including the overlap between therapeutic and reproductive cloning, is one which, if anything, has been heightened by the creation of Dolly, which brought it closer to reality, and this is reflected in contemporary texts. In the first chapter, I conclude that though fears associated with the mad scientist may have dissipated, those surrounding science have remained. In line with this reasoning, I suggest here that fear lies in the ambiguous moral divide between the scientific advances viewed as acceptable, and those which are not.

THE LURE OF CURES

One of the most prevalent anxieties of twenty-first-century society is the debilitating effects of illness and disease, with a recent Harris poll revealing cancer to be the most feared, followed by Alzheimer's disease. This has been reflected at policy level in America where the National Institute of Health spends more than twice as much researching the molecular

biology of cancer as on the mechanisms of heart disease which kills more people (Ropeik). Similarly in Britain, Cancer Research UK has been awarded best charity brand by *Third Sector* for three consecutive years since 2010, and is funded almost entirely by public donations, reflecting the anxiety generated by the disease. The previous chapter discusses the public's obsession with prolonging life and beauty, and the search for a cure for cancer and other debilitating conditions is tied in with this and a natural extension of it. It is a preoccupation which, as the 2004 documentary showed, softens the public's reaction to controversial scientific advances. The search for curing debilitating conditions is the motivation behind much scientific progress; in particular, cloning itself. It is a search which often takes place in secret, and this is reflected in "spare parts" clone narratives such as *The Clonus Horror*, *Spares* and *Never Let Me Go* in which the clones are separated from the rest of society. This separation serves to prevent a moral backlash, while also enabling ignorance to be used as a defence.

Hollywood has made use of the public's obsession with finding cures by taking this as the premise of recent disaster films. In 2007, Francis Lawrence's *I am Legend* was released, adapted from Richard Matheson's 1954 novel. Its opening scene involves a cameo appearance by Emma Thompson as Dr Alice Krippin, who explains that they have created a genetically engineered variant of the measles virus which has cured cancer. The next shot, just three years later, is of a desolate city landscape devoid of human activity and life, the one resulting directly from the other. The man-made virus that cured cancer mutates into a lethal strain which wipes out most of humanity: what humanity most sought is exactly what leads to its downfall and near-extinction. *Splice* similarly depicts genetic scientists experimenting with splicing techniques, the combining of DNA from one or more

different organism, to find cures for disease and revolutionise science. Their initial goal is to isolate the genes that produce medicinal proteins in the hope that this will lead to the production of compounds that will cure debilitating human conditions. Clive explains: "we can begin to address any number of genetically influenced diseases," with an excited Elsa elaborating: "Parkinson's, Alzheimer's, diabetes, even some forms of cancer" (*Splice*). She describes it as "the medical breakthrough of the century," displaying shock at the reluctance of their boss. These fictional scenarios reflect the extent to which scientists are motivated by finding cures in modern society. Rupert Wyatt's *Rise of the Planet of the Apes* (2011) begins with a breakthrough cure for Alzheimer's disease, the same cure set to virtually wipe out humanity. The temptation of finding cures for disease is too strong for many scientists to ignore, and as a plot device it works well with disaster films, often leading to humanity's downfall. It works because of the many unknown factors associated with medical advancement; because it is something urgently desired despite the uncertainties and the risks entailed. These films emphasise the power lying in scientists' hands, exploiting fears associated with science. They serve as warnings against therapeutic cloning, posing doubt within the public as to where such advances may lead.

IN SEARCH OF PERFECTION

Margaret Atwood defines her novel *Oryx and Crake* (2003) as "speculative fiction" rather than science fiction as it avoids techniques "that have not been invented yet" ("The Handmaid's Tale" 513). Steven Spielberg expressed similar sentiments in relation to *Jurassic Park* (1993) when he declared: "this is not science fiction; it's science eventuality" ("Welcome" 2). Atwood and Spielberg acknowledge technological advances within

science, notably in the cloning field, which make such scenarios, though arguably improbable, no longer impossible. *Oryx and Crake* portrays the virtual extinction of humanity as a result of the extreme use of biotechnology, and is narrated through flashbacks to a society consumed by the desire to achieve perfection by altering nature. It is a society not unlike our own. The novel depicts the use of xenotransplantation, a process which addresses the issue raised by Jack in *Spare*: "if the scientists could clone whole bodies, then they could have just grown limbs or parts when the need arose" (54). Scientists in *Oryx and Crake* create "pigoons" which are ordinary pigs with human stem cells implanted inside to enable the growth of "foolproof human-tissue organs" which would "transplant smoothly and avoid rejection" (25). Snowman, the novel's narrator, previously known as Jimmy, comments: "it was much cheaper than getting yourself cloned for spare parts – a few wrinkles left to be ironed out there, as Jimmy's dad used to say – or keeping a for-harvest child or two stashed away in some illegal baby orchard" (27). Atwood depicts a technological culture intent on extending life by modifying the human through genetic engineering – a process which is, as Silver explains, only possible with cloning since the success rate without it would be too small: "without cloning, genetic engineering is science fiction. With it, it moves into the realms of reality" (129). It is in this way, he continues, that "the human species will gain control over its own destiny" (130). This is precisely what is achieved in Atwood's dystopian tale, through the creation of the Crakers: the human recreated.

Crake redesigns the human in an attempt to maximise quality of life, achieving a model of perfection for the men and women he creates. The men are "smooth-skinned, well-muscled"; they represent "a gay magazine centrefold" (183). As for the women, "each one

of them is admirably proportioned ... No ripples of fat around their waists, no bulges ... They look like retouched fashion photos, or ads for a high-priced workout program" (115). The thriving beauty industry teaches women to aim for such perfection, it has presented an ideal woman and suggests all women can and should strive for this (Derrick). Though individuality is openly prized, at the same time most women want to look the same, with flawless skin and no ripples of fat, the kind of "sameness" cloning potentially offers. Yet when Snowman finds himself presented with such women, it arouses nothing in him, and he realises: "it was the thumbprints of human imperfection that used to move him, the flaws in the design: the lopsided smile, the wart next to the navel, the mole, the bruise" (115). These women appear unnatural and artificial, qualities which are also, paradoxically, unattractive. Ironically, Snowman suggests, the model that the beauty industry is coaxing women to believe in is far from the ideal men want. The result is "animated statues" (115), figures reminiscent of the women in Ira Levin's *Stepford Wives* (1972), and a description some fear would aptly relate to a human clone. Beside these images of perfection, it is Snowman, the one token human, who has become the monster.

The quest for younger, more beautiful selves has the consequences, when achieved, of "othering" those like Snowman who fail to conform. In the search for perfection, it is those who are not perfect – who are arguably the more human precisely because of their flaws – who become other, who come to be sidelined for their "monstrousness" (116). Once again, however, it is society itself which is the ultimate monster for allowing such a scenario to achieve fruition:

Human society, they claimed, was a sort of monster, its main by-products being corpses and rubble. It never learned, it made the same cretinous

mistakes over and over, trading short-term gain for long-term pain. It was like a giant slug eating its way relentlessly through all the other bioforms on the planet, grinding up life on earth and shitting it out the back-side in the form of pieces of manufactured and soon-to-be-obsolete junk. (285)

The further society goes in the search for beauty, perfection and the cure for disease, even immortality, the closer it gets, these stories suggest, to reducing itself to "corpses and rubble." The search for perfect humans leads instead to their eradication. These narratives warn against striving too hard, asking the questions posed by Jimmy: "Why is it he feels some line has been crossed, some boundary transgressed? How much is too much, how far is too far?" (242). These are questions central to the discourse on cloning, stemming from traditional fears of the Faustian overreacher. Each advance of science leads on to the next, with science building on previous findings: from the discovery of DNA by Francis Crick and James Watson in 1953, to the Roslin team's creation of Dolly in the late twentieth century and beyond. While scientists suggest such advances will lead to breakthrough cures for such debilitating conditions as cancer or Alzheimer's, narratives like *Oryx and Crake* warn of dystopian nightmares which may also result, leading to the downfall of humanity. Scientists and policy makers have attempted to promote therapeutic cloning by using a "discourse of hope" relating to the search for cures. Fiction, on the other hand, has turned this around. It raises speculation about the possibilities which may arise from scientific advancement, showing that optimistic pronouncements from scientists are not always as straightforward as they appear. In his Enlightenment Lecture at the University of Edinburgh in October 2013, Robert Winston acknowledged the role of the humanities in scientific fields, stating they are "of key importance to how we deal with our sciences." The

failure to differentiate between reproductive and therapeutic cloning, a failure in part encouraged by fiction, has led to a general rejection of cloning as a whole. It is this rejection which has led to the alteration of labels for therapeutic cloning, as discussed earlier in the chapter, necessary because, as Nerlich, Clarke and Dingwall explain: "the science of cloning and the science fiction of cloning have evolved in parallel since the appearance of *Frankenstein*" ("The Influence" 2.6). Scientists and policymakers are becoming increasingly concerned about the public's image of science, and with reason: "in the majority of movies, the depiction of science reveals the fundamental uneasiness, distrust, and even mystification of science on the part of the moviemakers that must, in some way, reflect the sentiments of the crowds that watch their products" (Weingart 281). The negative portrayal of science in fiction strengthens fears central to the cloning discourse, including that scientific advances are threatening the individuality of the human, or more than that, are threatening the integrity of the human species.

PRIZING THE HUMAN

The human, as Gaylin asserts in his 1972 article, has traditionally been protected by virtue of her "humanness" (91). With technological advances, however, the definition of "human" has become less clear, as the second chapter shows, and furthermore within humanity there are sub-sections of people treated as "sub-species" in morally dubious ways. Organ transplantation, a central feature of clone narratives, is often depicted in fiction as a means by which one individual is prized over another. Nor is this classification of humans restricted to cloning texts, as Stephen Frears's *Dirty Pretty Things* (2002) shows. The film depicts the use of illegal immigrants for organs, offering them an exchange of their kidney

for forged passports. This introduces a hierarchy within society in which one human is prized over another human deemed less worthy, or who wields enough power to manipulate another for personal gain. It demonstrates the willingness of unscrupulous individuals to prey on the desperation of others and exploit it. It not only shows the desperation of illegal immigrants willing to sacrifice one of their own organs, it also hints at the desperation of others willing to take that organ, in all likelihood in ignorance of its origins. Evidence suggests there are people within society willing to accept organs without asking questions which may raise morally dubious issues. In May 2012, *The Guardian* reported that an organ is sold every hour according to the World Health Organisation, that there is a thriving organ black market (Campbell and Davison).

Such morally dubious acts are often veiled in secrecy as unlawful acts, and this is also evident in fiction dealing with controversial medical procedures, including many cloning narratives. It also features in Malorie Blackman's *Pig Heart Boy* (1997), a children's novel published the same year as Dolly's existence became known, which focuses on xenotransplantation. While this procedure is considered less contentious than cloning, it is another example of one species being prioritised over another. Thirteen-year-old Cameron ponders the ethics of ending the life of a pig in order to extend his own, challenging the notion that she is "just a pig":

People always used that argument whenever they wanted to use and abuse animals – or even other people. Part of the excuse used to justify slavery was that we black people were "less than human." And the Nazis said the same things about Jewish people. Like mum said, it was such a convenient excuse. If other people and animals were different but *equal*, then you had

to treat them with the same respect that you wanted for yourself. Different but "less than" was an entirely different proposition. (75-6)

Sacrificing an animal's life in order to prolong the life of a human has traditionally been acknowledged as socially acceptable. Indeed, the majority of people in society happily consume animals, as Cameron rationalises. This does not, however, stop the press from hounding the family, leaving Cameron feeling like "shark bait" (139). The press are quick to tap into the controversy surrounding the procedure, building the sense of unease associated with it. Much like the public's response to a clone, the notion of a pig's heart inside a human leaves many with an uncomfortable sense that goes beyond logical thought: it simply does not *feel* right. Cameron's best friend vocalises the fear: "aren't you afraid that the pig's heart will somehow ... *change* you?" (46). He is asking if having an animal heart will make him "less than" human, will change an essential part of him. While emotions are controlled by the brain and not the heart, the heart has become a symbol of love and emotion which are understood to be central to being human. Kirstie Blair has argued that the heart's cultural significance has developed in particular in relation to poetry, with the portrayal of the heart, be it healthy or diseased, being indelibly entwined with emotions. "The heart," she suggests, "was a nexus for debates over the emotions because it allowed writers to evade the necessity to ascribe emotion either purely to physical causes or to mental ones" (15). This theory has built up through decades of cultural connections. The notion of replacing a human heart, with all its cultural significance, with that of an animal, reintroduces the question raised by contemporary cultural theorists such as Katherine Hayles, as the second chapter discusses, concerning the effect altering the body has on identity, given the body is so integrally connected to identity. This is an idea stemming

from the Victorian period during which it was believed that health "depended on preserving the body's integrity... and preventing the introduction of any foreign material into the body" (Durbach 4). Concern that the introduction of animal blood, tissues and organs might jeopardise the integrity of the human remains to this day, and yet has also been instrumental in the treatment of disease: insulin from pigs, for example, was the only treatment for type-1 diabetes until the 1980s. Concerns, however, are dispelled in the novel, which makes clear that Cameron's identity is in no way damaged by the inclusion of a pig's heart: "it's just a heart. A muscle. It has nothing to do with what I am or how I think or behave or feel" (Blackman 154). It does, however, emphasise the sort of unwanted attention lavished on anyone considered newsworthy or in any way different. Not only is Cameron harassed by the press, some of his school friends keep their distance, with Julie explaining: "Mum said you could have all kinds of germs and diseases in you now. Germs and diseases that are new to humans and dangerous" (178). With dismay, Cameron realises she and other class-mates are *scared* of him, a realisation similar to one later expressed by Kathy in *Never Let Me Go* when the students surround Madame. The novel offers a glimpse of how it would feel to be labelled "different" or other, and the fear it would instil, something likely to be bestowed on the first human clone.

While *Pig Heart Boy* focuses on the social implications of xenotransplantation, it also sounds a warning note against medical advancement when Cameron's body rejects its new heart. While this warns against scientific progress in one respect, it can also be considered as an argument in favour of cloning, as this would ensure genetic compatibility and so avoid the devastating rejection with which Cameron is faced. The ending, however, is left open, its message ambivalent, highlighting the uncertainty attached to all such

procedures. Blackman aims her novel at young readers, explaining the issues in direct, clear terms. Its didactic nature is a common feature of young adult fiction, which often deals with issues that children may at some stage face, encouraging them to consider the various implications which may arise. This may be unsurprising in the case of xenotransplantation, given it was a procedure which was, in the late 1990s when *Pig Heart Boy* was published, believed to be coming soon. Indeed, in 1998, the British Medical Journal reported that "a Cambridge based company, Imutran, is within months of applying for a license to use a pig's liver to provide dialysis until a human organ becomes available" (Warden 365).¹¹² The depiction of clones used for "spare parts" in young adult fiction, however, seems more surprising. Yet both *House of the Scorpion* and *Blood Ransom* feature this storyline in novels aimed at young adults, and both also make a clone's status as human explicit. Both Matt and Theo have been designated, not to be recipients of a heart transplant like Cameron in *Pig Heart Boy*, but to be the donor. While killing a pig could not be legally defined as murder, the same cannot be said of a clone, as Theo states when he hears of Daniel's death: "A little boy with my genes had been murdered so that an ageing man could live" (McKenzie 226). Elijah made clones of himself to prolong his own life, taking ownership of the clones as master to his slaves, claiming them "*mine*" (385). Rachel and Theo discover one of those clones near the end of the novel, his body "deformed and twisted, the skin tapering off at the guts" (378). Elijah explains that though he was born "disfigured," he had "healthy internal organs" (385): he is still capable of fulfilling his function. Theo's encounter with this grotesque double, who mouths inaudibly for help, is reminiscent of Ripley's encounter with deformed versions of herself in *Alien*

¹¹² More recently, concerns have been expressed over risks of infection, which has held back progress (Watts, 128).

Resurrection. It is a disturbing topic for young readers to digest. When I interviewed Sophie McKenzie in December 2010, she commented that "the science of human cloning is almost there" and continued that her aim was to "show as wide a range of views on cloning as possible and let readers make up their own minds" (McKenzie). Since Dolly's creation, cloning has moved into the mainstream as an issue in need of debate, and this is reflected by its inclusion in young adult fiction.

THE CLONE AS SLAVE

This notion of clones being produced for spare parts has been described by Hans-Bernahard Wuermeling, a medical ethicist at the University of Erlangen in Germany, as "a modern form of slavery" (Elmer-DeWitt). The link between cloning and slavery has been made explicit in the second chapter in relation to *Cloud Atlas*, in which clones are used for slave labour. This chapter, however, reveals a more disturbing link in which clones are used for spare parts. In narratives prior to the announcement of Dolly, such as *The Clonus Horror* and *Spares*, the notion of a clone seemed a remote enough possibility to avoid excessive alarm. Fiction after this, however, presents a more uncomfortable scenario given the realisation that a human clone is now biologically possible. The portrayal of their use as spare parts, moreover, is made worse by their depiction as human in post-Dolly texts. While the killing of animals through xenotransplantation can be justified on the grounds that animals are not human, the same argument does not stand in relation to clones. In a radio address in August 2001, the then US President George W. Bush stated his opposition to cloning, warning: "even the most noble ends do not justify any means," before specifically mentioning the use of clones for spare parts: "we recoil at the idea of growing

human beings for spare body parts or creating life for our convenience. I strongly oppose cloning." By specifically mentioning this potential use of cloning, Bush not only stirred opposition, he also raised the possibility such a scenario may one day materialise. Shortly after Bush's re-election, Michael Bay released *The Island* (2005) with A-list stars Ewan McGregor and Scarlett Johansson in the title role of clones, depicting just such a scenario.

The Island has been described by Mark Jerng as "an emancipation narrative" (371), likening the oppression of the clones with that of black people. Indeed, the central character's name, Lincoln Six Echo, recalls President Abraham Lincoln who in April 1862 signed The District of Columbia Emancipation Act which abolished slavery. Near the film's close, Albert Laurent makes the connection explicit. Hired as a hit man, he changes his allegiance when he realises the clones have suffered a similar fate to his own: "did you know," he asks Merrick, "my father was part of the Burkinabé rebellion? When he was killed, my brothers and I were branded, so everyone would know we were less than human" (*The Island*). Jerng suggests that it is through the clones' emancipation, through their "assertion of agency and resistance" (378), that they become human. In the case of the Jews during the holocaust, however, a counter argument can be made. Human dignity, which is central to Jewish law, was expressed by Jews during the holocaust not through rebellion, but through the act of submission. When resistance is futile, this is all that is left, and serves as a powerful emblem of dignity which is central to being human. It is expressed by Matt in *The House of the Scorpion* when he submits to his oppressors, displaying dignity in the face of death. He rises above his society's projection of the clone as animal, explaining: "he didn't want María's last image of him to be of a terrified farm

animal being dragged off to slaughter" (226). It is through his submission that he expresses his humanity, showing himself as superior to animals by revealing his human dignity.

The clones in *The Island* are "manufacture[d] human beings who walk, talk ... and feel" (*The Island*). Jerng suggests the clones "become" human through their emancipation, implying that prior to their escape the clones are less than human. I would suggest, however, that rather than being less than human, these clones, enslaved in "the garden of Eden," have become institutionalised, their mental development held back by an enslavement which saw them "educated to the level of a 15 year old" (*The Island*). The clones are able to express human emotions, in particular frustration and discontent, and Jordan also reveals the ability to manipulate to receive the food she wants. They may be naïve but they are far from the childlike clones of *The Clonus Horror*. Yet the similarity between the two films was sufficient for Fiveson to sue for copyright infringement, with DreamWorks settling with an undisclosed seven-figure sum. Michael Marshall Smith had similar reason to object, as *The Island's* release is likely to have prevented his novel *Spares* from being adapted to film, after DreamWorks purchased the film rights. The decision to release *The Island* despite this controversy reflects the importance of cloning as an issue at the time. While the earlier texts leave little hope for the fate of the clones, *The Island* concludes in a more positive light, fitting for an age in which human cloning is now an acknowledged possibility. All these narratives depict the clone as other, as "products" sacrificed in order to prolong the lives of others. While in the earlier narratives the clones are deemed as childlike and less than human, however, in *The Island* their humanity is clearly established – if not at the start of the film, undoubtedly by its close. The clones are kept apart from mainstream society, a society which is fed the comforting lie that their

"products" are not human but rather retained in a vegetative state. Whether society would object, however, is brought into doubt by Tom Lincoln's progenitor, who states: "it's a small price to pay to cheat death" (*The Island*). "Just cause people wanna eat the burger, doesn't mean they wanna meet the cow," reasons James McCord, explaining that their "sponsors," their progenitors, "own them" (*The Island*). The concept of being "owned" further links the clones with slavery and is discussed in more detail in the final chapter. The liberation scene shows the freed clones reflecting white against the landscape, with the main protagonists standing apart through the colour of their clothing, alongside Albert Laurent, the emancipated slave.

LETTING GO SO OTHERS DON'T HAVE TO

While *The Island's* slaves achieve emancipation, no such freedom is gained by the prisoners of Hailsham in *Never Let Me Go* (2005). Through the subject of cloning, *Never Let Me Go* may appear to be looking to the future, but in fact in the Gothic tradition it is continually looking to the past. Ishiguro sets his novel in the 1990s, the recent past. It is laid out as a personal memoir recollecting the past, and it goes further than that. Through the intimate first-person narration of Kathy it reveals a nostalgic yearning for the past, an inability to let it go. In this way the novel focuses inwards, to an examination of the students themselves, before finally drawing the reader to a wider judgement of society as a whole. Yet even this is not straightforward. Miss Emily's explanation for how these circumstances have come about reveals a society that reflects our own:

Suddenly there were all these possibilities laid before us, all these ways to cure so many previously incurable conditions. This was what the world

noticed most, wanted the most. And for a long time, people preferred to believe these organs appeared from nowhere, or at most that they grew in a kind of vacuum. Yes, there *were* arguments. But by the time people became concerned about...about *students*, by the time they came to consider just how you were reared, whether you should have been brought into existence at all, well by then it was too late. There was no way to reverse the process. How can you ask a world that has come to regard cancer as curable, how can you ask such a world to put away that cure, to go back to the dark old days? (257)

The desire to find cures for debilitating disease is one of the main driving forces of modern-day science, as this chapter discusses in some detail, and a motivation behind science condoned by society at large. After aligning his readers with the students and developing a sense of identification, Ishiguro then bluntly forces an acceptance that we form a part of the system to which we object. Miss Emily describes "great breakthroughs in science" happening "so rapidly" that there was no time "to ask the sensible questions," such as the consequences of taking such action. It is a depiction of a society caught up in the excitement of being able to "cure so many previously incurable conditions" to such an extent that it chooses not to see the reality of what those cures mean. Once again, a cloning narrative depicts a Utilitarian state, the greatest good for the greatest number, in horrific form. Miss Emily presents an image of a "process" being put in motion that they were then unable to "reverse." Nor, despite her superior stance, is it a process she attempts to reverse.

Miss Emily's campaign is not to save the students, or even to extend their lives, but rather to improve the way they were being, as she puts it, "reared," a word likening them to

meat for consumption. The clone and animal are again aligned, with Ishiguro stating in an interview that the clones are "butchered" for their organs (124). They are treated no better than animals. Miss Emily, however, expresses pride at her achievements: "I think what we achieved merits some respect" (251). Indeed, during their confrontation Miss Emily appears "frail and contorted," a "figure in a wheelchair" (250), raising the possibility that she herself may be a future beneficiary of the system. Such a possibility brings to mind the South Korean stamp where a figure rises from a wheelchair to walk again, which was issued in the same year as *Never Let Me Go's* publication. Miss Emily even goes so far as to seek gratitude from the students. In contrast, Madame appears more attuned to how the students must be feeling: "All they feel now is disappointment" (260). Fluet suggests that in their final meeting Madame "has not let go of her disgust with clones" (282). However, Madame expresses more pity and regret than their head teacher who appears lofty and remote, with Madame exclaiming with tears in her eyes: "Poor creatures. What did we do to you? With all our schemes and plans?" (249). She feels sympathy for them, and yet she continues to refer to them as "creatures"; she is unable to align herself with them, but instead looks upon them from a position of superiority. Though they campaign on behalf of the students and devote much of their lives to their welfare, neither Madame nor Miss Emily accept them as human. The vocabulary they use to describe them, the revulsion they admit to feeling in their presence, and the fact their campaign does not attempt to alter the students' fate, all make this clear. The clones have no control over their lives and no rights over their bodies, which are state owned. There remains an unbridgeable gap which separates the clones from society at large, a gap which is integral as a weak justification for their treatment.

Reviews of *Never Let Me Go* often focus on the students' apparent inability to rebel against their fate. The broadcaster Tony Parsons, for example, asked on *Newsnight Review* why, rather than running away, the students "meekly passively accept" their fate. When interviewed, Ishiguro offered his own explanation that it is the equivalent of the way we, as humans, have accepted the inevitability of our own death: "we are inclined to be passive, to accept our own fate" (124). Ingersoll concurs, suggesting it represents "the capacity of human beings to 'go along' with expectations of them" (51). Within the context of the plot, however, it is the lessons of Hailsham which play a central role in ensuring its students remain malleable, encouraging their apathy and preventing thoughts of escape. Miss Emily, as the first chapter shows, confines the knowledge of her students to ensure they remain complicit in their fate. Kathy comments after losing her valued cassette that it "would have felt wrong" to have expressed emotional distress, as though she were "letting the side down" (73). What becomes clear is that Hailsham was not the school or even sanctuary that it professed to be. It was rather an institution that conditioned the students to become the best "products" they could be. Kathy conforms to that role perfectly, could even be said to be colluding in the system herself. She proudly tells us at the start of the novel that she is doing a good job of preventing her donors from being "classified" as "agitated" (3). She further helps to ensure the donor system is considered a success. The influence of Hailsham, its ability to control behaviour, remains with the clones long after they have left the institution itself. Rather than "*sheltering*" (263) the students, as Miss Emily suggests, Hailsham stifles them with its careful monitoring, conditioning and control. In the end, despite their desperate clinging to each other, to fantasy worlds and to their past, despite trying to "cling onto life" (222), they have to let go. Hailsham, which had once given them

hope, is eventually shown to have sealed their fate. Hope is not a powerful enough drug for them. With its "row of windows unnaturally high up" (6), Hailsham is little more than a prison.

While Romanek's 2010 screen adaptation of the novel centralises the love triangle between the main protagonists, it also aptly demonstrates the depravity enforced upon the clones as a result of their sheltered upbringing. One of the most celebrated events at Hailsham is the sales, and the students respond excitedly when Miss Emily tells them to expect a "bumper crop" of toys and games (*Never Let Me Go*). As they forage amongst that crop, it is evident to the viewers that these treasures are little more than rubbish. The camera pans around images of broken toys, games with pieces missing, the top of a recorder, and most notably a doll with its arms missing – an object foreshadowing the fate of the clones' own bodies. The cassette Tommy proudly presents to Kathy highlights their deprivation as, by the late 1990s, the compact disc was the popularised medium for music. The students later display nervous incompetence when faced with ordering from a café, despite Miss Lucy's earlier attempts to equip them for such situations through role play. After leaving Hailsham, Kathy remarks that she "knew about charity shops, I'd found it all out" (129), making it clear just how closeted their lives at Hailsham have been. The Hailsham clones may have had a privileged upbringing by comparison with other clones, but it is far from the normality experienced by other children in society, both within the text, as their trip to Norfolk shows, and in real life. The clones live in a "kind of vacuum," hidden from view because "people preferred to believe these organs appeared from nowhere" (257). In this way the rest of society is shielded from having to face the reality of the system of which they are a part, a necessary step as by the point of their existence it

was "too late" to "reverse the process" (257). They have achieved the ultimate goal of creating a society which regards "cancer as curable" (257), and the fate of the clones is the necessary consequence of this. As the pieces of the jigsaw are slowly and painfully put in place, so too any sense of hope within the novel is slowly and painfully destroyed. As Tommy describes in the gentle, understated way epitomising the students, they try "to hold onto each other, holding on as hard as they can, but in the end it's just too much. The current's too strong" (277). While the clones hold tight to their past as a means of self-protection, they are ultimately forced to let go. They are forced to let go, so others do not have to.

SAVIOUR SIBLINGS

Sarah Fitzgerald is a mother unable to let go in *My Sister's Keeper*. On hearing the news her daughter has acute promyelocytic leukemia, she announces to her husband: "I'm not going to let Kate die" (Picoult 34), and then makes this determination the focus of her life. While narratives like *Never Let Me Go* concentrate on the perspective of the donor, increasing the sense of injustice by doing so, *My Sister's Keeper* adopts the technique of multiple first-person narration to show differing perspectives, emphasising in doing so the complexity of the issues involved, and also, as Storrow points out, enhancing "the immediacy of the story and thus the reader's sense of its veracity" (264). Anna is subjected to gruelling treatment by her parents, "way too much to explain": "the nurses holding me down to stick me for white cells Kate might borrow; the doctor saying they didn't get enough first time around. The bruises and the deep bone ache after I gave up my marrow; the shots that sparked more stem cells in me, so there'd be extra for my sister" (18). Yet,

she is not sick herself, and her ordeal has all been for the benefit of another. Anna is a donor child, created for that purpose using advances in reproductive technology, just like the clones in *Never Let Me Go*. When Tommy comments that he thinks he's quite a good donor, Ruth responds, "it's what we're *supposed* to be doing, isn't it?" (Ishiguro 223). It is the same for Anna in *My Sister's Keeper*. "Don't mess with the system, Anna," (15) her brother tells her with bitterness, implying their parents have mapped out their roles. While the clones have been conditioned to prevent them from rebelling, however, Anna is in a position to question her treatment and fight against it. Yet, while readers are likely to be appalled by the treatment of the donors in *Never Let Me Go*, they are as likely to understand the actions of Sara Fitzgerald and her husband, maybe even agree with them. While the issue of therapeutic cloning remains contentious, and the notion of reproductive cloning has received widespread condemnation, the creation of a "saviour sibling" by means of IVF and genetic manipulation is not only deemed morally acceptable, it has already taken place. In 2003, a child in America was treated with stem cells transplanted from his "saviour sibling" brother, and in December 2010, *BBC News* reported the first successful saviour sibling treatment of Megan Matthews in the UK, heralding it as the "gift of life" (Walsh). The focus of such reporting is a positive one, looking at how medical advancement has made it possible to save the life of a child, to give hope where previously there was none. The bioethicist, Jacob M. Appel of New York University, has gone a step further by suggesting that "children cloned for therapeutic purposes" such as "to donate bone marrow to a sibling with leukemia" may someday be "viewed as heroes" (Appel). It is narrative portrayals of such scenarios which provide a deeper insight into the consequences taking such a route may cause. Megan Matthews's parents respond to how they will deal

with future health problems by stating they will "face those hurdles when and if they come to them" (Walsh). *My Sister's Keeper* reveals exactly what that may mean.

When asked her intentions in writing the novel, Jodi Picoult responds: "you've got science that is only as ethical as the people who are researching and implementing it – and once again, in the wake of such intense scientific advancement, what's falling by the wayside are the emotions involved in the case by case scenarios" (411). Literature serves to fill this gap, bringing cases to life and showing the emotional intensity which may arise. Fiction is a space in which multiple futures can be played out using existing scientific theories, the "what if" scenarios which may materialise as a result of the advances being made. It brings news reports to life by showing real people and, as Picoult says, the emotions involved in each case. Sara and Brian create a child for the express purpose of using her as a donor for another child. Nine months into her pregnancy, they still have not named the child, with Sara confessing: "I have thought of this daughter only in terms of what she will be able to do for the daughter I already have" (98). At the moment of Anna's birth, the first thought in Sara's mind is "the umbilical cord" (101), confirming Anna's fear over her birth: "did my mother kiss the top of my head and refuse to let the nurse take me away to be cleaned up? Or did they simply hand me away, since the real prize had been clamped between my belly and the placenta?" (50).

Sara's life revolves around her sick child from the moment of her diagnosis. Her primary interest in Anna is as a donor child, and her preoccupation with this scenario leads to the neglect of her son Jesse, resulting in his delinquent behaviour. While it would be easy to condemn the actions of parents who appear willing to prioritise one child over another, by giving both Sara and her husband Brian a voice in the novel, Picoult

emphasises the complexity of the issues involved. When Sara discovers her child is dying, like most parents she becomes consumed with what can be done to save her child. She defends her actions by suggesting her focus is on what is best for her family as a whole: she puts their collective need above Anna's individual need. As a child Anna has no choice but to adhere to her parents' wishes: the fate of her body lies under her parents' control. She must take extreme action to regain control of her body, in doing so forcing her mother to justify the actions she has taken: the "building was on fire, one of my children was in it – and the only opportunity to save her was to send in my other child, because she was the only one who knew the way" (390). Sara explains that it was not a case of choosing one child over another, but of wanting "*both*" (390). She does whatever it takes to save the life of her child, as most mothers would profess to do. From the point Sara decides to design a child, however, her path is set, with each step leading naturally to the next. While some comfort may have been derived from the thought that clones being used as "spare parts" is a scenario unlikely to materialise – unlikely not because technology would not allow it, but because society would surely condemn such actions being taken – *My Sister's Keeper* removes that sense of comfort. It shows not only the lengths parents may take to save a child, but also the trauma that would be involved in the donor child being permitted to stop, a trauma which threatens to destroy the family altogether. As real life cases have shown, society not only condones the creation of a saviour sibling, it celebrates such action being taken to save a child. The saviour sibling can, in this way, be viewed as the acceptable face of the clone. *My Sister's Keeper*, on the other hand, shows the hurdles that can follow the creation of a donor child, the slippery slope it opens up. The intention of creating a donor

child is not to kill her and in this way it does differ from cloning narratives. The result, however, as *My Sister's Keeper* shows, can be exactly the same.

In 2009, Nick Cassavetes made a significant change to the story's ending when he released it as a film. While in the film version Kate loses her battle with cancer, showing she is ready to let go and enabling the rest of the family to regain their lives, the novel offers a far less comforting conclusion. Picoult explains that she felt it was Anna who has to die because: "this isn't an easy book, and you know from the first page that there are no easy answers. Medically, this ending was a realistic scenario for the family – and thematically, it was the only way to hammer home to all the characters what's truly important in life" (416). As Sara sobs over the dead body of her donor child, she weeps, "but she wasn't supposed to" (401). While Hollywood presents an emotional but acceptable ending, through the death of Anna, Picoult challenges the notion that life is fair. She grants Sara her initial request of saving the life of her dying child, but does so by sacrificing the life of her other. Anna was created for the purpose of saving Kate and she fulfils that purpose, just like the clones in *Never Let Me Go*. The shock of her death, however, forces an acknowledgement that holding on so tightly to the life of a sick child, risks sacrificing another. Sometimes, however difficult, it is better to let nature take its course. The novel suggests that desperate parents will grasp any hope that is offered to them when it comes to saving their child, their attention at that point transfixed on the fate of existing children, rather than future. Given that such parents are emotionally incapable of considering all possible implications when the life of their child is involved, it becomes essential that authority figures do so instead. Fictional scenarios raise awareness of this necessity, showing that a very clear line needs to be drawn.

CONCLUSION

This chapter has examined the literary portrayal of various controversial medical procedures, some of which have been largely accepted by society, others of which have not. While controversy still surrounds the issue of therapeutic cloning, hope has proved a powerful drug, and the desire to cure debilitating conditions is so compelling that research has been steadily progressing in this field. While therapeutic cloning is considered acceptable by many, taking it to the next stage of allowing a cloned human embryo to develop into a child, reproductive human cloning remains universally condemned as an affront to human dignity. Within this invisible divide lie many issues, however, not least the difficult question which asks "at what point human life begins." An emphasis on the therapeutic benefits of procedures sways much public opinion in its favour; the lure of cures is a strong motivating factor for society at large. Yet the divide between therapeutic and reproductive cloning which policymakers and scientists are anxious to show is far from clear to the general public, and is confused by suggestions, both by real-life maverick scientists and fiction, that reproductive cloning can be used therapeutically. Fictional portrayals of clones used as spare parts suggest that reproductive cloning can result in the therapeutic benefits sought, complicating the argument made in favour of stem cell research. Through fiction, the clear divide that scientists have attempted to establish is suddenly shown to be a little less clear. Cloning has also opened the door to the advancement of other procedures such as genetic engineering, which allows genes to be manipulated to create "designer babies." While this is a procedure which has been largely condemned, taking such action to create a saviour sibling is not only viewed in a more positive light, it has already taken place. While the benefits of this are explicit and

profound, *My Sister's Keeper* asks where the line should be drawn when taking such a path. Using reproductive cloning to produce a "donor child" for the therapeutic benefit of another, the horrifying scenario portrayed in clone narratives like *Never Let Me Go*, seems uncomfortably close to using selective IVF to create a saviour sibling. Indeed, it seems a natural progression.

The medical procedures this chapter examines involve one individual being prioritised over another. When the donor is not human, for example in xenotransplantation, controversy is reduced by a general acceptance within society that the human should be prized above all else. Instances where one human is prized over another, however, are far more contentious. While *Pig Heart Boy* portrays an animal being used to prolong the life of a human, a procedure generally deemed acceptable, *Dirty Pretty Things* exposes the baser level of society in its depiction of illegal immigrants being approached for their organs as a means of prolonging the life of more privileged humans. Society's desperation to find cures can take precedence over moral implications and concerns, with people sooner not knowing the consequences of the actions taken. As Miss Emily explains in *Never Let Me Go*, "people preferred to believe these organs appeared from nowhere" (257). People would sooner not know, the novel suggests, what is taking place behind closed doors. In the case of clones, while post-Dolly texts generally acknowledge their humanity, the societies portrayed often convince themselves the clone is less than human as a means of justifying their actions, as to do otherwise would be to condone murder.

The body is often the central focus of narratives involving organ donation, a procedure which involves the dissecting of one body to allow the sustainability of another. The donor is split into parts rather than being recognised as a whole. This is an issue central

to the discourse on cloning: it initiates the fear that a clone would be in some way incomplete, be that through a loss of aura, individuality or soul. *Frankenstein* is the precursor for the clone narratives which follow, through its depiction of a creature engineered from various body parts and organs and brought back to life. Frankenstein's creature, as David Punter states, "is not merely born, he is reborn but with the crucial difference that the material of his rebirth is body-stuff, not soul-stuff: he thus stands for the resurrection of the body which is to come" (50). The same applies to the clone. While cloning cannot reproduce the spirit of a person, it can reproduce the body. The cloning of Dolly proved that genetic material can be taken from anywhere in an organism's body, transferred to an enucleated cell and then fused together to form an embryo to be implanted into a surrogate mother using IVF. The resulting clone would be genetically identical to its original, a rebirth of "body-stuff, not soul-stuff." Whether the clone would contain a soul of its own is a debated issue. A panel set up by Pope John Paul II has suggested not, declaring that the spiritual soul, "the constitutive kernel" of every human created by God, "cannot be produced through cloning" (Keyes 480). As Turney suggests: "cloning is the best evidence for the advent of Frankenstein science" (179), making possible the reanimation of life from dead matter.

Medical procedures which attempt to extend human life, fictional scenarios suggest, often inadvertently produce the opposite result. The search for cures depicted in *I Am Legend*, *Rise of the Planet of the Apes* and *Oryx and Crake*, rather than extending human life, lead to its destruction. *Never Let Me Go* presents a society which has been morally compromised by its desire for cures, resorting to killing cloned citizens to prolong the lives of others. On a smaller scale, *My Sister's Keeper* shows how the search for a cure, rather

than strengthening the family unit, instead tears it apart. The introduction of a donor child threatens the stability of the family unit in this novel, just as the introduction of a clone jeopardises the family unit in most cloning narratives. The impact of the clone on family dynamics is explored in the final chapter.

Chapter 5

A Black Sheep in the Family

The family is the first essential
cell of human society.
Pope John XXIII

"Her Mother's Twin" ran *The Daily Mail* headline announcing Dolly to the world, alluding to the disruption cloning would cause to the family unit (Derbyshire). Attempts by scientists to dispel fear by aligning the clone with the monozygotic, or identical, twin were undermined by the press, both tabloid and mainstream. They instead emphasised the difference by focusing on her role within the family unit, giving the impression she is distinctly unnatural and goes against "the norm." The facts alone surrounding Dolly's creation were enough to initiate alarm about the impact of cloning on family dynamics: the press had merely to report them, encouraging the public to leap ahead to the prospect of human cloning. The breakdown of the nuclear family is broadly viewed as a negative thing, in particular within the field of psychiatry where upbringing is deemed to impact significantly on future development. The comfortable familiarity of the terms "mother," "father" and "parent" become confused in the cloning discourse, which has envisaged a future in which such terms no longer apply. Were a family member to be cloned, the progenitor, or original, would adopt the dual role of parent and identical twin, as identities merge and boundaries break down. While IVF separated reproduction from the sexual act, reproductive cloning takes this further by obviating the need for two parents. As Jean Baudrillard commented, cloning "radically eliminates not only the mother but also the

father," resulting in a "genetic code which is destined to 'give birth,' from now till eternity, in an operational mode from which all chance sexual elements have been expunged" (115). While the twin creates a close sibling bond that supports the family structure, the clone breaks down the boundaries upon which that structure depends, and disturbs traditional roles. The clone would take on the role of "a time-delayed twin" (Kolata, "Scientist"), forcing a re-evaluation of the term "twin." In addition, as an identical copy of the "parent," the natural process of separation for a clone is jeopardised. Cloning compromises socialisation by disfiguring human relations, resulting in the inability to separate the clone from her parents (Jerng 374). This is discussed in detail in relation to *The Secret*.

This chapter transfers the focus from science to the social implications of cloning through an exploration of the heart of our society: the family unit. After winning the General Election in 1997, the same year Dolly's creation was made public, Tony Blair declared at the Labour party conference in Brighton: "We cannot say we want a strong and secure society when we ignore its very foundations: family life" ("Text of Speech"). He continued by referring to the growing number of teenage pregnancies, and children growing up without strong role models, pledging to scrutinise every piece of government policy to see how it affects family life. Despite a general consensus that the nuclear family is undergoing radical change, the family is still conveyed, particularly within political rhetoric, as an essential component within society: an institution which "must not be changed" (Silva and Smart 2). The family is a component threatened, if not destroyed, cloning narratives often suggest, by the introduction of a clone. This chapter discusses literary portrayals of this, showing how, in the tradition of the Gothic, cloning transgresses social boundaries, undermining the stability of what the family represents. Although clones

are, from a biological perspective, the same as monozygotic twins, as the next section discusses, their placing within the family unit differentiates the two terms. A clone's twin may also play the role of parent, and cloning narratives repeatedly show how a clone disrupts traditional family roles, resulting in a lack of terminology and confused relationships. This confusion often leads to a confrontation with the incest taboo, as another line is transgressed. The uncanny frequently comes to the fore, with family members seeing a person who is simultaneously both familiar and strange. The chapter looks at how fiction reveals cloning not only to be socially and culturally questionable, but anthropologically wrong as well. It looks at both the practical implications of cloning, and also the psychological impact on the clone. Although focusing on contemporary narratives, it looks first at cloning texts from the 1970s, a time when controversy surrounding reproductive medicine was rife. These pre-Dolly narratives largely portray futuristic societies removed from our own, societies where the family unit no longer exists in its conventional form. Although contemporary fiction tends to narrow the focus to a more familiar family setting, it also suggests that a healthy family unit containing a clone is an unrealistic goal. The clone lacks, by definition, two parents. Indeed, the clone lacks any conventional form of parent. In this way, although paradoxically by its nature a duplicate person, the clone can be aligned with the orphan: a creature alone.

THE CLONE AS IDENTICAL TWIN¹¹³

Monozygotic twins are genetically identical, just like clones, and so make a valuable source of study when envisaging the human clone. Although twins have been of interest to scholars since early civilisation, the realisation that they can be genetically identical is

¹¹³ I would like to thank Will Viney for his thoughts in the early stages of writing this section.

relatively new. It was not until the 1920s that the distinction between monozygotic (MZ) and dizygotic (DZ), non-identical, twins was fully recognised (Liew et al. 1998). In the twenty-first century, not only are monozygotic twins known to be genetically identical, they are also often referred to by behavioural geneticists as clones. This association helps, as it establishes that any differences in behaviour are environmental rather than the result of genetics. Indeed, Robert Plomin of the Institute of Psychiatry in London has gone so far as to state that: "identical twins are more identical than clones will ever be" (Ritter). Such an assertion seems logical when it is considered that monozygotic twins will share the same birth date, while the same cannot be achieved with a clone and her original. More than this, the association between clones and identical twins serves to remove the stigma attached to cloning, to a degree "normalising" the notion of a clone. In a BBC interview carried out in January 1999, renowned British scientist Richard Dawkins declared: "anybody who objects to cloning on principle has to answer to all the identical twins in the world who might be insulted by the thought that there is something offensive about their very existence. Clones are simply identical twins" ("Nothing wrong"). Dawkins's assertion that identical twins may be insulted by those who object to human cloning on the grounds of genetic sameness, has been backed by research carried out by a team led by Barbara Prainsack of the Department of Social Science, Health and Medicine, King's College London. Their study also showed that "MZ twins were significantly more likely to agree that [human reproductive cloning] should be allowed for medical purposes, such as saving a sibling's life, than were DZ twins" (2302). This suggests that the "practical experience" of being genetically identical that MZ twins have, "renders them less likely to object to cloning solely on the basis of the creation of genetically identical individuals" (2307). The sense of

unease expressed by much of the public regarding human cloning on the grounds of genetic sameness, the notion that it does not seem natural, is not only something identical twins do not share, it is something that actively offends them.¹¹⁴

The media, on the other hand, remains eager to promote the unease resulting from the association between twins and clones. The parallel has been made explicit by a popular US documentary series "In Search of..." which features an episode on cloning originally broadcast on 28 September 1978, shortly after the birth of Louise Brown. The programme begins by revealing that the odds of having an identical twin are "less than 1 in 200," while the odds of giving birth to identical triplets are "astronomical" (Beautystruck). Describing twins as "nature's oddity" narrator Leonard Nimoy¹¹⁵ suggests that in the "near future" cloning could mean they become "a familiar sight" (Beautystruck). Nimoy's solemn tone adds credence to the documentary which carefully combines scientific fact with conjecture. Emphasising the differences between twins, described as "living examples of what clones could be," and showing the long history of cloning being used in nature, the programme builds gradually to its dramatic conclusion, made more realistic by its measured build up of fact. Cloning, the episode concludes in Spock's authoritative tone, would make it "theoretically possible" to create an "army of identical humans who might synchronise their brains, thoughts and actions to become a master-race" (Beautystruck). An actor recognised by his sombre tone, Nimoy again plays a measured, uncompromising character in *Invasion of the Body Snatchers*. The series was aired again throughout the 1990s, initially on the *A&E Network* and then later on *The History Channel*.

¹¹⁴ American author and civic campaigner Douglas Dunn has posted on the internet that the "whole outrageous outcry" against cloning "has been an insult to all identical twins."

¹¹⁵ Nimoy was made popular with science fiction fans by his role as Spock in the TV series *Star Trek*.

FAMILY DYNAMICS AND THE CLONING DISCOURSE

The clone clearly differs from the twin in its role within the family unit, where she is widely viewed as a threat to healthy family dynamics. While it could be argued that the "nuclear family" has already broken down, and that introducing a clone into the mix would merely be taking this one step further, public concern felt about the issue is highlighted by the extent to which family issues are raised within the cloning discourse. It is an issue raised both by the media storm which followed Dolly's introduction, and through public consultation such as the 1998 Wellcome Trust report. The fear is that cloning introduces "unnatural" variations within the traditional family structure. When announcing Dolly's creation, *The Daily Mail* emphasised the confusion cloning causes to family roles, while *The Sun* speculated that "a woman could give birth to her father's twin" (Coppie). Nor was it only the tabloids who adopted an alarmist tone, with *The Independent* reminding the public that Dolly has the "same original genes as its 'mother'" (Arthur, "First Cloned") and *The Guardian* similarly stating that Dolly "is an identical twin of the 'parent' ewe" (Radford). Rather than normalising the clone through identification with the twin, the press emphasise the difference by demonstrating the way in which she confuses family roles, suggesting cloning would ultimately lead to the family unit breaking down.

While the primary focus of the press was on the disruption cloning would bring to the family unit, however, *The New York Times* attempted to balance the negativity by reporting the views of John Robertson, a law professor at the University of Texas studying reproductive rights and bioethics. Robertson has suggested that in the case of a couple whose child is dying and "wanted, literally, to replace the child" it would not be reprehensible to clone. Furthermore, it may be of benefit, he continues, in the case of

infertile couples who "want to be sure that whatever offspring they have has good genes" (Kolata, "With Cloning"). *The Washington Post* depicts this in a more sensationalist light, speculating on the possibility of "childless couples using the clones of brilliant philosophers (or of Bill Gates, for that matter) to produce super-brainy kids" (Glassman). Less attention, however, was paid by the media to the psychological impact that would result for the clone herself. Klotzko expresses concern that families seeking to replace a dead child with an identical duplicate would be casting that child into a secondary role, and would suffer as a result (127). The strain of expectation on a cloned child may be enormous, with the potential that people turn to cloning in order to relive their dreams, literally, through their children. Moreover, a young clone would be able to see the impact that age and decay would be likely to have, and may even observe her original's illness as a precursor of her own fate. Through fiction, such speculative scenarios are envisioned and their implications explored, and the chapter turns to that now.

THE CLONE IN 1970S TEXTS

Fears that the nuclear family might break down were augmented in the 1970s by advances in bio-medical fertility treatments such as IVF. During that period, in 1974, family planning clinics were allowed to prescribe single women the contraceptive pill: "a controversial decision at the time" (Cafe). As a result, the family unit took on fresh significance in literature, and became the focus of cloning narratives of the period. The clone is significant in the social and political upheaval of the period as she threatens to undermine established conceptions of the family on wider society. Largely confined to the science fiction genre, these texts responded to controversy by presenting an alternative

view; bringing cloning into a family setting before exploring how its structure might break down, altering the foundations of society by removing the family unit altogether.

Where Late the Sweet Birds Sang confronts such fears of the family breaking down, opening with a solid family unit before showing its gradual disintegration. Mark, working alongside the uncle he affectionately calls "Dr Walt" (6), turns to cloning not, as with the traditional mad scientist figure, motivated primarily by hubris, but out of a necessity for survival. Family bonds strengthen the scientists, who, in seeking to rebuild humanity, show a degree of arrogance by turning inwards and cloning themselves as the ideal family unit. They move swiftly from the cloning of livestock to a stage where "human clones were being grown" (37) as though plants.¹¹⁶ Mark is prevented from fathering children by the death of his cousin Celia, a relationship tarnished by fears that familial links may have led to "hereditary defects" (10). Instead, cloning enables him to see how his children may have been as he watches Celia's doubles develop. Yet there is something missing in these cloned children, something "not quite human" (54): they "all had something missing, a dead area" (59). In short, the clones are more like artificial replicants than humans. Cloning neither strengthens the family unit nor ensures humanity's continuation. Even the clones regard themselves as a different species, adopting a Utilitarian philosophy whereby they live as a collective community rather than individuals. The clones model themselves as a community family, ostracising those who strike a different course, depicting a society which eradicates the traditional nuclear family. Cloning, the text implies, is not conducive to healthy family life in any conventional sense, but would instead initiate a move away from the family altogether, a move which ultimately proves unsustainable.

¹¹⁶ Though the novel stresses the difficulties entailed in successful cloning of this nature, there is little emphasis on the abnormalities that would have resulted from this practice in reality.

Where Late the Sweet Birds Sang and other 1970s cloning narratives such as *Solution Three* depict alternative models of society opened up by cloning. Ultimately, and perhaps inevitably, however, the traditional family unit is reinforced through these novels which demonstrate how sameness results in a loss of diversity and the breakdown of the evolutionary process. *Solution Three* concludes by showing how the mass use of cloning ultimately results in the destruction of the evolutionary process by removing random distribution, an observation Gaylin had previously made. Julian Huxley also warned of the dangers of this back in 1931: "if the human race is to bring about its own collapse, it will be because it has counteracted the effects of natural selection without attempting to put anything in its place, has allowed harmful mutations to accumulate instead of weeding them out or prevented [*sic*] them from appearing, and in fine has neglected eugenic measures" (115-6). In this way the novel can be considered as a warning against the rapid progress of science, in particular breakthroughs in reproductive medicine. Both *Solution Three* and *Where Late the Sweet Birds Sang* portray alternative models of society made possible by cloning, in which the nuclear family has failed to persist. They are models which, the novels conclude, are unsustainable and, by showing this, the texts reinforce the importance of the family unit as a way of life.

CONFUSING FAMILY ROLES

While 1970s narratives depict futuristic scenarios which explore what lies beyond the traditional family unit, post-Dolly cloning texts narrow the focus, creating a sense of immediacy appropriate for a time when human cloning is approaching reality. Press reporting of Dolly showed how cloning can disrupt the family unit, and this is further

highlighted by fictional scenarios. *The Secret's* Iris, for example, explains her situation as having been "born of my mother, who was my identical twin" (69). Through this statement alone she dispels the notion that clones are no different from identical twins, by demonstrating the confused familial roles which result. "We looked like sisters," Iris explains, "who, by rights, should have been twins. Or like twins who by some fluke were ageing at different speeds" (35). They are a visual representation of the uncanny. She finds herself struggling to explain the relationship they share, a relationship which smothers through its intensity, and yet one which is "beyond the borders of known vocabulary" (69). Although Iris casually explains that "the nuclear family – the nuke – was dead as the dodo by the time I came along," as an explanation for why she "didn't think there was anything abnormal about the absence of a daddy," her narrative reveals a critical obsession with her own unconventional family set-up, as well as a "shadowy longing" for the traditional roles missing from her life (5). Iris's development is stunted by her upbringing, which is interpreted by her therapist as "a pathological version of the mother-daughter bond" (38). Cloning, the text implies, hampers the process of individuation by removing the natural separation between parent and child. As the therapist explains, it results in "a relationship in which there isn't enough separation, so that the daughter gets submerged and lost" (38). Elizabeth's own relationship with her mother is initially a close one, and yet their letters suggest that it diminishes with age as "the generation gap" comes between them (54). This is an issue that she overcomes through cloning, which enables her to create a bond so close it resembles that of Siamese twins: "you can't fight me without fighting yourself," she tells her daughter, who acknowledges, "fighting her was like fighting a Siamese twin" (48). Cloning, this suggests, results in a more solid bond than those of identical twins, whose

identities are strongly influenced by environmental factors. It results in a pathological relationship in which identities are merged in a form of double identity: one identity shared by two. The repetition of the self through cloning does not result in duplication of individuality, but rather its eradication. This is another paradox at the heart of the cloning discourse. Rather than extending her family, by replacing conventional procreation with cloning Elizabeth alienates herself from the rest of her family, creating instead another version of herself. Her parents and sister distance themselves from this vision of the child they once knew reborn, the "spectre made flesh, or flesh that should have remained spectral" (132). Rather than seeing similarities between Iris and Elizabeth, as conventionally between mother and child, they are faced with the ghostly spectacle of Elizabeth's identity repeated, a fluid rather than fixed entity, which is discussed later in the chapter. Iris considers herself as "the embodiment of the unacceptable" (132) in their eyes, yet she is more than that to them – she is the embodiment of the Freudian concept of the uncanny. Iris represents the familiar image of Elizabeth, the resurfacing of the past, while also being a different person altogether. This culminates in the confusion displayed in Elizabeth's dying mother, who comes to believe Iris is her child. Iris herself suggests this when meeting her grandparents for the first time: "I mean, you are really you are really my parents, aren't you?" Her grandfather is quick to deny this, however, explaining: "it would be very wrong to think of us that way" (134). There are no clearly definable terms to explain the family relationships which result from cloning, which provokes, above all else, confusion. Elizabeth's parents desperately want grandchildren, but instead find themselves faced with someone who is not "exactly natural" (143). While attempting to create a sense of familial belonging, Iris instead realises with bitterness: "I don't count as a grandchild, do

I?" (143). Rather than creating new life and hope for the family, cloning results in bitterness, emotional pain and confusion. It leaves Elizabeth alienated from her family, and eventually alienated from her clone as well. The novel does not present cloning as a viable option for the future, but rather strongly warns against it. It adopts a didactic tone, something reinforced by *Scotland on Sunday's* review, quoted on the novel's back cover, which describes it as "a sophisticated and articulate fable." Its use of the term "fable" is telling, as this tends to be used to describe moral stories in which the characters, frequently mythological creatures or animals, are given human qualities and yet are not actually human. This is a fear repeatedly expressed by Iris, who at one point goes so far as to describe herself as "a semi-animate beast" (129). Iris is more like an uncanny imposter within her family than a welcome addition, and by concluding that separation is the only means by which she can achieve individuation, the impression is giving that cloning destroys rather than supports the family structure.

In *Mary Modern*, Lucy uses cloning to resurrect her grandmother. On discovering that she cannot conceive naturally, Lucy turns to cloning as a viable alternative. The use of cloning to enable infertile couples to conceive a child draws a parallel with the now generally accepted technique of IVF. Yet *Mary Modern* presents a far from acceptable scenario resulting from doing so. Lucy gives birth to her grandmother, allowing "the past its eternal return" (Cohen ix). As Jeffrey Jerome Cohen explains in *Monster Theory*: "the monster *haunts*; it does not simply bring past and present together, but destroys the boundary that demanded their twinned foreclosure" (ix-x). It breaks down the barriers separating the past and present, distorting their divide. Indeed, Lucy's life appears to be suspended in the past, which is revealed both through her appearance and the environment

in which she lives. Her family home resembles a museum, a connection strengthened by Gray's flippant comment on their first date that she sounds "like a museum guide" (12). She explains to him that her mother was forty when she was born, and Gray observes a resemblance between the two which is "almost eerie" (12). She even wears her mother's engagement ring. Cloning enables the family to remain in the past: at the novel's climax, Lucy discovers she is the clone of her mother, and that the woman she recreated is her mother as well as grandmother. In this narrative, as with *The Secret*, the confusion cloning causes is made apparent, highlighting the disruption which cloning would bring to a family. In *Mary Modern* this is emphasised when the cloned grandparents, Mary and Teddy, visit their now aged children. "I've never believed in ghosts," states their daughter Kathy, while her husband fears the onset of "senility" (329). Lucy's is a family haunted by ghosts of the past, ghosts made real through cloning. Lucy ultimately finds herself alone, deserted by her partner and left by the clone she carried, in addition to being forced to come to terms with her premature ageing, as the third chapter discusses. She comes to realise that her memories as a small child are actually her mother's, that the woman she remembers as her mother is in reality her grandmother, Mary. The cloned Mary herself gradually accepts that the memories she holds are not her own, with the help and support of her partner, Teddy. The clones have inherited the memories of their original self. The notion that a memory can be passed genetically from one to another was known in the nineteenth century as "organic memory theory": the idea that "one inherited memories from ancestors along with their physical features" (Otis 2). This may seem unthinkable today, with evidence suggesting "traces of one's experiences *cannot* be passed on to one's offspring," (219) explains Laura Otis, but it becomes more credible "if one can include DNA by definition in the category of

memory" (2). Moreover, as long as the theory persists "in literature and popular culture," Otis concludes, "the idea of ancestral memory remains" (219). Indeed, it not only exists, a 2013 neuroscience study, carried out by a team at Emory University School of Medicine in America, has found evidence of "transgenerational epigenetic inheritance" in mice. Marcus Pembrey, University College of London Professor of Paediatric Genetics, reported that the findings provide "'compelling evidence' that a form of memory can be passed between generations" (Gallagher). It is a prevalent feature of cloning narratives, and particularly relevant to them as the genetic make-up of a clone is identical to their original. It is a theory made explicit in *Mary Modern*. Fantasy and the real are merged in the novel, as the clones come to realise that they cannot even trust the memories their own minds produce.

Far from normalising the clone through its connection with the monozygotic twin, these texts emphasise the way she warps the traditional family structure, emotionally scarring those involved. The clones bear such a tight relationship to their original selves that they find it hard to differentiate, and, for both Iris and Mary, establishing an individual identity is an emotional challenge. Neither text suggests cloning is conducive to a healthy family structure: in fact, quite the opposite, they suggest it would destroy it.

AVOIDING LOSS

The first chapter examines the consuming power of grief, showing how cloning appears to offer the chance to recreate a family by reincarnating a dead child. Cloning not only holds the potential to enable a child to "live again," it also enables the resurrection of a lost love. Both these examples are a response to grief, but in pursuing them they stunt the natural grieving process by fixating on the notion of removing loss rather than dealing with it. The

inability to let go is dealt with in the opening episode of the second series of Charlie Brooker's *Black Mirror* (2013), entitled "Be Right Back." Following her husband's death, Martha, significantly named after the biblical figure who witnesses the resurrection of her brother Lazarus, turns to technology to reconnect with her lost love, Ash. Communicating initially through virtual messaging after discovering she is pregnant, it is not long before she takes the next step of purchasing a synthetic body, a body which takes on the physical characteristics of her dead husband. For a while Martha feels as though Ash is with her again, even finding herself making love to the synthetic version of him. Inevitably, however, she recognises something is missing, that the spontaneity and emotional depth she had shared with Ash has now gone. She is living with an artificial version of the man she loved, a simulacrum, a virtual clone. She is faced with the uncanny spectacle of a person she knows and yet does not know. Shortly before his death, the couple happily sing along to the song, written by the Bee Gees: "If I Can't Have You," and it later proves apt. Martha turns to technology in the hope it will resurrect that lost "you," but finds in attempting to do so that she is pursuing an impossible goal. Ash reborn appears the same, and yet there is a vacancy within him, an awkwardness that reveals him as something less than human. He neither sleeps nor eats, and yet she is unable to let him go. His presence seems better than the emotional pain his absence causes, however, and Martha finds herself living a form of half-life with an echo of her husband instead of the real thing. Finding herself unable to end his life, she confines him instead to her loft, allowing her daughter weekend visits. Her life continues with a spectre in her roof, the man she loved now warped in her mind and heart, condemning her to a life in limbo. Technology, the episode concludes, can reconnect to a point, but it is no substitute for human interaction, and it

cannot reunite a family torn apart by death. Instead of opening up the possibility of finding a new father for her child, Martha traps herself in a pathological relationship through the inability to let it go.

THE INCEST TABOO

Womb introduces the similar scenario of a young woman, Rebecca, turning to technology as a means of reconnecting with Thomas, her lost love. Cloning, however, does not enable a person to be reborn at the age they die, despite misleading suggestions to the contrary entertained in *Mary Modern* and some other cloning texts. In order to be with Thomas again, Rebecca clones and then gives birth to him, caring for him not as her lover but as her child. "He could be here with us again," she tells his grieving parents. His mother responds indignantly, an increasing sense of horror lingering on her face as realisation dawns: "we are atheists," she states, "but that doesn't mean we can rummage in our deceased's grave and clone them. We are not farm animals. We accept what life gives us and also what it takes away" (*Womb*). Rebecca is unable to accept the finality of death, however, choosing instead to rummage in that grave and resurrect Thomas. She chooses to give birth to the man she loves, or at least a replica of him, to mother him. She explains to her "son" that his father was tragically killed, maintaining the illusion of being a traditional family unit. The necessity to maintain such an illusion, to conceal the truth, is highlighted through her interaction with other mothers in her rural community. One of those disapproving mothers explains that she should shun a young girl, as: "Dima is the victim of artificial incest. Her mother gave birth to her own mother" (*Womb*). The pain their attitudes provoke in Rebecca is powerfully conveyed through the strained expression on her face, though her composure

remains throughout. Subtle changes in her expression show far more than the words she speaks, with language being used as a form of euphemism, an attempt to evade the subversive truth, pointing towards the unspeakable. Language is also used as a form of euphemism in *Never Let Me Go*, in which "donations" refer to organ transplants, "students" mean clones, and "completion" indicates death (Currie 103). For Rebecca, although her words suggest agreement, her expression reveals the truth. It is her silence which most strongly conveys her feelings. Harold Pinter has explained the subtlety of this form of communicating: "I think we communicate only too well in our silence, in what is unsaid, and that what takes place is a continual evasion, desperate rearguard attempts to keep ourselves to ourselves ... To disclose to others the poverty within us is too fearsome a possibility" (20). Rebecca is justified in feeling such fear, as when her secret becomes known she must suffer the pain of her rejected child. It is a rejection which isolates the family still further, leaving them to draw comfort and companionship from each other.

The film's isolated setting, as with "Be Right Back," reflects the loneliness Rebecca feels, despite the presence of her son/lover. Their domestic set-up represents a pathological version of the one-parent family. As the boy grows, the sexual tension becomes increasingly apparent. The sharing of a bath is disquieting, her maternal kisses sometimes linger longer than they should, but yet more disquieting is a scene where Rebecca playfully wrestles with him on the beach as a young boy little older than ten. Lying over her he declares: "now I can do anything I want with you," to which Rebecca replies, "go ahead," as her mouth suggestively works up and down (*Womb*). Given the age of the boy the implication is disturbing, leaving aside the issue of incest. She later jealously observes her teenage son's relationship with his girlfriend, acting as voyeur at one unsettling point. An

unexpected encounter with his original's mother brings events to a head: "I know her" (*Womb*), he menacingly tells Rebecca, the theory of organic memory occurring again. As a theory it is so prevalent because clones inherit a full complex of their original's genes and "the question of exactly what people can inherit," Otis acknowledges, "remains as controversial as it ever was" (2). The scene where Tommy leans over her as a boy is mirrored later in the film with a matured Tommy, emphasising its significance:



Fig. 20. Parallel scene stills (*Womb*).

Realising the truth, Tommy orders his mother to remove her hands, yet remains intimately close while repeatedly demanding of her, "who are you?" (*Womb*). By distancing from her emotionally he allows intercourse to take place: Rebecca is no longer his mother, he is not sure who she is. What follows is an incestuous consummation between mother and son. The film ultimately takes its viewers full circle, recalling its opening scene of a pregnant Rebecca, implying this represents a second pregnancy with a fresh version of Tommy. And so the cycle continues, the eternal return, the threat remains as the boy lives on. As Nietzsche describes: "the eternal hourglass of existence is turned upside down again and again, and you with it, speck of dust!" (*The Gay* 341). Rebecca's fate is to live the same life over again, a fate she initiates by turning to cloning, through the inability to let go.

Cloning, this suggests, prevents the painful but necessary process of letting go. It offers an apparent quick fix to the grief following loss, but the confusion which results

leaves ethical and moral boundaries open to abuse. This is experienced by *The Secret's* Iris as well. When her mother finds a boyfriend, Steven, Iris's delight at having a father figure is juxtaposed with an intense anxiety at the enforced separation from her mother this causes. As a part of Elizabeth, it seems only natural to Iris that she would want to sleep with them at times, "to partake of the warmth which coursed between them and which, I felt, also belonged to me" (30). Steven attempts to reason with her, explaining it would be wrong of her to "sleep with your father," because, she innocently enquires "of the incest taboo?" (33). As she fights against his reasoning, he explains firmly that "now, I'm the first in your mother's... affections" (33), a statement which leaves Iris feeling "cruelly frustrated" (34). Her mother, however, undermines her partner by following her daughter after she has been ushered out of their bed, and lying with her in her own bed: "her arms around me" (34). The intensity of the bond ultimately drives Steven away, their chance of becoming a conventional family destroyed. As a grown woman, Iris returns to the man she once called father, appears to him as the visual image of the woman he once loved, and seduces him. She describes how "their bodies were guided by an old knowledge" (187), as if her mother's memories were her own. After the act, Steven talks about his research into the practices of "parent-child incest as a prelude to sacrifice," explaining that incest "was the first taboo" (194). Not only does Iris experiment with the taboo subject of incest, she does the same with the Oedipus complex. She confesses that she is "the girl who had nearly killed her mother and had slept with her almost father" (188). She actively disregards boundaries, justifying her actions by declaring herself a "new human, new woman." In this role, she continues, "no rules have been invented for me, I should be permitted to do anything at all" (189). As a clone, she rationalises, she exists beyond human laws and need

not be bound by them. Such a concept is also implied in the earlier cloning narrative *Cloned Lives*, written by Pamela Sargent in 1976. Cloned siblings Jim and Kira embark on an incestuous affair, action they justify as: "the old codes and ancient prohibitions could not apply to them, had not even allowed for their existence" (138). These clones use their controversial status as an excuse for disregarding the boundaries placed by society as a means of protecting its citizens. In doing so, they declare themselves outsiders, beings who live beyond enforceable laws, who are not in fact human. Narratives prior to Dolly's cloning frequently portrayed clones as sub-human, as the second chapter shows, but for Iris in the later novel, it is an assertion which appears to stem more from her angst-driven confusion than one she inherently believes. Her narrative is intensely analytical, suggesting herself entirely self-obsessed, which is also indicative of a depressive illness. Despite its intensity, the narrative style is also at times almost bland, suggesting her personality lacking. Rather than implying she is less than human, however, it is more the result of her crippling upbringing in which her mother "focused on me and coddled me and loved me half to death" (5). Much of Iris's narrative reveals a bewildered, tormented child, a psychological trauma brought about as a result of her status as clone. In order to find her place in the world she must rebel against her family, and ultimately distance herself from them completely.

In both *Womb* and *The Secret*, incest is a problem which occurs within the family unit. In Michael Winterbottom's *Code 46* (2003), in contrast, incest has become a societal concern. *Code 46* depicts an all-powerful state in which "IVF, DI embryo splitting and cloning techniques" have become so widespread that it has been necessary to pass a law "to prevent any accidental or deliberate incestuous reproduction" (*Code 46*). This law states

that prospective parents should be screened to ensure there is no genetic identity, and in cases of unplanned pregnancies the foetus should be screened. When a match is found, the pregnancy must be terminated, the law continues, and in instances where the parents are aware it is considered a criminal breach. By these means, this society strays into the uncomfortable field of eugenics, seeking to control and improve the genetic make-up of its citizens. Instances of accidental incest, also known as genetic sexual attraction, have become widespread in this fictional society, to the extent that state intervention has become a necessity. In our society, accidental incest has increased in likelihood due to the more prevalent use of artificial insemination and sperm donation, making the scenario played out in *Code 46* seem less futuristic than may be hoped. Incest is illegal in most European countries, a law justified due to "increased risk of congenital disorders, death and disability" caused, at least in part, by "inbreeding" (Wolf and Durham 3). Most reported cases of incest refer to adult-child incest and are considered child abuse, but some believe incest between consenting adults should not be prevented by law. A 2002 article in *The Guardian* pointed out that if incest is prohibited on the grounds that it may result in "defective" children, the same argument would need to be used to prohibit reproduction by haemophiliacs and the carriers of a host of other "defects" (Hari). Incest, one of society's oldest taboos, is generally condemned on the more vague grounds that it is deemed unnatural, a similar objection to that often levelled against cloning. Sociologist Vikki Bell has also emphasised the necessity of incest prohibition to "maintaining family roles," suggesting it is a threat to the family unit (97). Cloning, therefore, is not only a threat due to the confusion it causes to family roles, it is also a threat as it increases the risk of incest, something which holds the potential to distort the clarity of family roles still further.

Code 46 dramatises an instance of accidental incest, a common scenario in a society where the use of artificial reproductive techniques like cloning has become widespread. In the film, William Geld has an illicit affair with a woman, Maria, who is the "biological clone" of his mother, while under the influence of an empathy virus. The virus makes him more intuitive, necessary to his work of detecting fraud, but also more attractive to Maria and susceptible to her desire. The ability to enhance empathy, a quality often deemed "authentically human," suggests a society in which human qualities can be artificially induced: an individual can "become" more human. Their memories can also be erased, which is inflicted on Maria early in the film when she violates Code 46, and then at the film's close on William, when the state enforces separation. In this way, the state not only controls intimate relationships, it also controls the very sense of an individuated self. Maria is forced to pay the price for their forbidden love, exiled from society to the outer quarters, relegated to a life of abject poverty but with her memories intact. On discovering Maria's genetic identity, William is told that although she is genetically identical, "we aren't prisoners of our genes" (*Code 46*). In other words, Maria is not identical to his mother, as external factors also influence, which twin studies confirm, but the genes they share would legally prohibit the possibility of sexual union. Such a union, which despite this he knowingly pursues, represents another modern-day enactment of the Oedipus Complex, in which a man falls in love with the biological clone of his mother. While Oedipus is punished for his transgression through the loss of his eyes, William is punished by being stripped of his memories: his emotional core. The state asserts ultimate control over the individual, including their inner self. It gives Maria a virus which makes her body involuntarily repel William, working against her own desire. That same virus also ensures

she involuntarily reports their forbidden love to the state, forcing her to condemn herself. Society is portrayed as the villain again: it opens up the possibility of incest through widespread use of genetic manipulation, making genetically incompatible encounters inevitable; it provides and encourages the use of viruses which shape and manipulate destiny; and then finally condemns those who unwittingly fall victim to it. It also preserves the sanctity of the traditional family unit, a unit threatened by its own prevalent use of cloning. While Oedipus enacts his own punishment through self-banishment, William is denied even the knowledge of his crime; he carries no burden of guilt. Instead he is returned to the roles of husband and father, his memories of Maria erased. The final scenes of William ensconced in a loving family environment are juxtaposed with those of a desolate Maria, suffering an exiled life alone. There is a society in which its citizens are under state control, a state which seeks to preserve the nuclear family, or more specifically the wealthy nuclear family, through whatever means required. It is a society willing and able to manipulate the very core of its citizens to achieve its goal.

SECOND CHANCES

The literary and cinematic portrayals examined to this point have emphasised the negative impact of cloning on the family unit, the disruption it causes and taboos it confronts. Cloning also, however, holds the potential to recreate a family torn apart by death. This is a scenario which recurs frequently in cloning narratives, for example *Double Identity*, *Blood Ties* and *Blood Ransom*, and *Godsend*. These texts feature parents overcoming the tragedy of losing a child through cloning, enabling them to be a family once again. By re-establishing a family unit in this way, the risk of incest is removed and it is generally felt to

be a more positive application for cloning, at least when the risk of abnormalities has been reduced to an acceptable level for humans. Cloning in this respect could be viewed as supporting the nuclear family, and yet, as Klotzko suggests, taking such a step may cause more harm than good. Parents watching their replicated child grow could, instead of feeling their grief assuaged, find their "grief could be prolonged indefinitely because of the constant reminder of the loss" (Klotzko 126). It is equally likely to have a negative impact on the clone, who would "be a sort of understudy who is called upon only because the person [her parents] really wanted is no longer around" (Klotzko 127). *Blood Ties's* Rachel finds herself continuously compared to her dead sister, feeling she is unable to measure up. She is living in Rebecca's shadow:¹¹⁷ "Rebecca took Grade Six with distinction when *she* was in Year Ten," her mother casually informs her (11). Her mother's apparent disappointment negatively impacts on her appearance and self-worth: "Fat, shapeless, nothing clothes for a fat, shapeless, nothing person" (11). In her mind, Rebecca was perfect, and she falls far short of her image. While on the surface it may appear to be a positive solution to dealing with grief, fiction enables a glimpse into the emotional intensity that may follow the decision to replicate a child. Contemporary fiction like *Blood Ties* acknowledges the role of nurture in shaping identity, showing the potential for a clone to forge a separate self. At the same time, it reveals the dangers of shying away from grief, the inability to let go, themes that repeatedly recur in cloning texts.

Salter is a failed father unable to let go in *A Number*. After subjecting his son to a childhood of neglect before sending him into care, Salter turns to cloning as a second chance at fatherhood following his wife's suicide. Through disjointed speech filled with

¹¹⁷ The prospect of being haunted by the ghost of Rebecca recalls Daphne Du Maurier's Gothic classic *Rebecca* (1938).

incomplete sentences, representing his own inadequacy, Salter reveals how cloning has offered him the opportunity to try again: "I didn't feel I lost him when I sent him away because I had the second chance" (61). Alcohol and drug addiction had left him incapable of caring for his first son, whose cries were left unheeded. Eventually, the young child stopped shouting, realising the futility of doing so, and at the same time stopped eating and talking. He suffers from child abuse at the hands of his father, a man unable to accept his failings but rather deflecting his guilt onto his son: "I could have killed you and I didn't... I spared you though you were this disgusting thing by then anyone in their right mind would have squashed you" (51). Rather than accepting responsibility for neglecting his son and attempting to make amends, he "had a new one made" (26). Cloning enables him to give up on his original son, even though he remained alive, and try again with his "son the new" (28). It offers him a supposedly clean solution, a way to avoid making the effort with his neglected son. He represses his past failings, using cloning as a means of making a fresh start, proving that he was capable of being "a very loving father" (43). The repressed, however, inevitably returns to haunt him in the form of his original son, now a forty-year-old man described by his replacement son as "frightening" (36). Salter turns to cloning rather than facing the consequences of his neglect, and his sons pay the ultimate price. He is left with the remaining clones of his son, and yet discovers that is no consolation. When he meets Michael for the first time, another cloned version of his original son, he recognises it is "not the same" (62). "You don't look at me in the same way," he observes with disappointment (55). In short, although genetically identical, he is not the same man. By revealing different versions of the same man, Churchill demonstrates the importance of nurture in forming the self. Cloning enables Salter to reject the child he had failed to

nurture, an act which is not only morally reprehensible, it is also a crime, and try again with another. The promise of an easy solution cloning seems to offer, once again proves anything but.

AN UNCONVENTIONAL FAMILY

From the start of Natali's unsettling *Splice*, Elsa and Clive adopt a parental role, gushingly declaring the birth of their first project, an animal hybrid named Fred, "perfect, just perfect" (*Splice*). The camera angle presents the viewer with the perspective of the creature during this birthing scene, looking up at the enthralled parents from the birthing canal. Elsa carefully videos his first moments of life, as a parent would their newborn child, exclaiming: "so cute!" (*Splice*). Returned to their own domestic space, the couple discuss having a child of their own, but are held back by Elsa's concerns over carrying a baby: "I'm the one who has to have it" (*Splice*). This is a reversal of the more prevalent scenario in which it is the man reluctant to procreate, and is accounted for by her own disturbed childhood. Elsa explains to her partner: "I don't want to bend my life to suit some third party who doesn't even exist yet" (*Splice*). Through the creation of Dren, however, that is exactly what she is forced to do, and yet Dren also enables her to adopt the role of mother without carrying a child. Elsa watches over the developing foetus with maternal interest, and when she fails to meet expectations, paralleling the rejection of a deformed child, Elsa fights for Dren's right to life, later refusing to let Clive refer to her as a "specimen" (*Splice*). Elsa's role of scientist gives way to that of mother, as she patiently coaxes her to eat as a parent would a child. Clothing her in a dress, she teaches the creature to read, dressing her as a little girl despite her animalistic nature, and also names her. Elsa adopts a modern

approach to child discipline, commanding in a firm voice: "Go to your place!" (*Splice*), when she rebels.¹¹⁸ This command reminds the viewer of her animalistic nature, as one often addressed to a dog, while simultaneously placing Elsa in the role of mother. "Oh sweetie," she later maternally coos after her mutant child has been sick, rocking her gently in her arms, "sweetie, you're sick, on no" (*Splice*). Her scientific interest in Dren has been almost entirely subjugated by an ingrained emotional attachment. "When did you stop being a scientist?" (*Splice*), demands Clive, with the answer being from the moment the idea was conceived and her maternal instinct began to take control. In this way, *Splice* demonstrates the difficulty of separating reason and emotion when science involves the creation of new forms of life. Such experiments risk emotions overpowering reason and taking control, resulting in judgements and moral divides becoming clouded.

Such clouding of judgement is highlighted through *Splice's* three acts of sexual intercourse, which increase in shock value as the film evolves. Neglecting their own relationship in favour of Dren, Clive and Elsa's eventual intercourse is, worryingly, witnessed by their child. This is no conventional family, however, and the embarrassment that would normally ensue is replaced by a voyeuristic fascination which initiates the sexual awakening of Dren. Still more disturbing, Clive sees her sinister presence in the background and yet makes no attempt to stop. While Clive appears the more reluctant parent, a reversal of his earlier position of desiring a child, when arguing with his brother it is Clive who repeatedly refers to Dren as "her" while his brother uses the pronoun "it" (*Splice*). His attachment builds as Dren is transported to her new home: an isolated farmhouse. The wildness of these uncontrolled surroundings brings Dren's animalistic

¹¹⁸ Parents are encouraged to send their children to a "naughty step" or equivalent as a means of discipline, a technique encouraged by "Supernanny," which first aired in the UK on Channel 4 in 2004.

nature to the fore, something compounded by the fact that, like an animal, she is confined in a barn. It is in this liminal place that Elsa relives her own childhood neglect, seeking to better parent Dren than her own mother did her, by bestowing her with the make-up and dolls she was denied as a child: "my mother wouldn't let me wear make-up," she tells Dren, "she said that it debased women" (*Splice*). Yet the mother-daughter bond she seeks is jeopardised by the necessity to ostracise Dren from the family home. This denies Dren the opportunity of experiencing a domestic childhood and flourishing as their child. Although housed as an animal, Dren is denied the freedom of the outside, despite explaining that she is bored, as her parents struggle to maintain control. Clive is the first to tell their child they love her, his pseudo-parental bond strengthening as Elsa's wanes. The traumatic memories of her childhood appear to take hold, brought on by the associated environment. When Dren rebels, Elsa reverts to the monstrous-mother role she experienced as a child, an attribute seemingly inbred. She ties her daughter down before distancing herself emotionally, embracing the role of scientist again, her control regained. Elsa coldly strips her experiment before cutting off her tail in a grotesque act resembling castration. In a reversal of roles, while Elsa focuses on their scientific quest, Clive plays the comforting parent, before finally giving way to the romantic interest Dren has for him. The second sexual act combines seduction and incest and is far more sensual and explicit than the first. This time, it is Elsa looking on in horror, and this time, Clive does stop. In the inevitable conflict which ensues, Clive questions his partner's motives: "why the fuck did you want to make her in the first place? Huh? For the betterment of mankind? You never wanted a normal child because you were afraid of losing control. But an experiment..." (*Splice*). Science enables Elsa to create and raise a child within a controlled scientific environment,

removing the burden of motherhood. The survivor of a childhood of neglect, Elsa does not trust herself enough to be a conventional mother, adhering to her maternal instincts through the creation of a genetic child. They attempt the role of loving parents but fall far short, eventually acknowledging: "we chained her up, we locked her away from the world, maimed her..." (*Splice*). Their scientific and parental functions are merged from the start, resulting in a confusion which leads to the film's disturbing climax.

The final sexual act is one of rape by a metamorphosed Dren. In a scene reminiscent of the traditional slasher film, Dren chases Elsa through the woods, but instead of murdering her, he violates his victim. Elsa, who has fought to maintain control throughout the film, is rendered helpless, at the mercy of the child she wrought. Earlier in the film, Elsa reassures Clive that none of the animals within Dren are predatory, with the result demonstrating that science cannot be controlled. Echoing Elsa's words back to her, Dren declares the desire to be "inside you" (*Splice*) before the awful penetration of his victim. His entry of Elsa parallels her entry of Dren through genetic manipulation, serving as punishment for her transgression of nature. The rape scene also mirrors and reverses the scene in which Elsa victimises Dren, as Dren exerts a violent revenge. It is this final sexual act, the most aggressive and disturbing, which results in impregnation. The chaos of the farm, a place that lives up to Elsa's description of it as "dead" (*Splice*), is transferred to a controlled corporate setting. Rather than aborting the resulting child – abortion following rape is one of the least condemned within society – Elsa chooses to sell her unborn child to the pharmaceutical company she works for, taking the next step in her scientific journey. She is destined to repeat and extend the familial sins of her past: chaining, maiming and then killing her first child, and selling her second to a life of experimentation. Elsa

represents a damaging role-model for science, suggesting the lengths a desperate scientist may be willing to go. Elsa shies away from natural motherhood, turning to the seemingly controlled field of science instead, and is punished for this transgression of nature. Elsa's function in the end is that of womb, as the threat lives on. "The monster is always coming back," explains Jeffrey Jerome Cohen, "always at the verge of irruption" (20). The past will have its "eternal return" (ix).

THE CLONE AS ORPHAN

Clinical intervention within the family unit, contemporary narratives seem to suggest, has disturbing consequences. The use of cloning for human reproduction confuses family roles, increasing the risk of initiating taboos like incest. The suggestion that cloning is a logical next step from IVF is refuted in these texts, which imply that rather than supporting the family unit, it works against it. While cloning creates a sense of claustrophobia within a family setting in which relationships are simply too close, when separated from a family context it results in isolation. The clone, like Frankenstein's creation "an unfortunate and deserted creature" (Shelley 129), is denied the nurture of family. Cloning negates the necessity for conventional parents, as Baudrillard has emphasised, leaving the clone in the role of orphan. In this way, cloning texts move from the extreme of intensely close relationships, to a distinct lack of them.

Such isolation is intensified by Sam Bell in *Moon*. His seclusion on the lunar station is lessened, however, by contact with his family. His wife and child are brought to him by pre-recorded video messages, messages which both touch him emotionally and reduce his sense of isolation. He relives a sexual encounter with his wife through a dream,

revealing an intense attachment to her. Yet the memories he holds, and messages he has received, are not his own but those belonging to a former self. In an updated version of the organic memory theory, each successive Sam has memories from the original Sam "uploaded." After discovering the truth, the distraught clone asks Gerty about his wife and child: "they are memory implants, Sam, uploaded, edited memories of the original Sam Bell" (*Moon*). The family support network he thought he had, that he thought he would be returning to, is merely an illusion of the truth. Sam is not only isolated by his location, he is isolated in terms of relationships as well. When he telephones the Bell home residence, he discovers the three-year-old child he remembers is now fifteen, and his wife has died. Addressing his daughter in language appropriate to the child he remembers, he asks in desperation: "Sweetheart ... how did mommy die, sweetheart? How did mommy die?" (*Moon*). His questions remain unanswered, however, as his daughter calls out, "Dad!" and another man responds. This is a devastation experienced by the other cloned Sam as well when he watches a recording of the video call. Neither of the cloned versions of Sam is the man he believed himself to be, nor do they have the family they believed they had. They are, in fact, alone in the world, orphaned.

Never Let Me Go not only associates the clone with orphan, it also presents a form of orphanage through its depiction of Hailsham. In the Gothic tradition, *Never Let Me Go* presents an old country house concealing dark and disturbing secrets. The gentle first-person narration of Kathy draws the reader into the seemingly idyllic world of Hailsham, consisting of playing fields with "poplars" (46), an "Orangery" (51) and "rhubarb patch" (41). Kathy provides a meticulously detailed account of her upbringing, offering descriptions that many readers would find familiar. Ishiguro lures his reader into a

seemingly familiar world: the impression is given of ordinary children growing up in a boarding school. Yet, there are repeated suggestions that the seemingly ordinary surface disguises something more troubling and sinister. There are the constant medicals, confusing terms like "donors" (3) and "donations" (29) and the sense of a predestined future: "what's going to happen to us one day" (29). Furthermore, none of the Hailsham students have parents, and there is the unsettling mention that none will have children, though no explanation is provided to explain why. The lack of parental nurture results in the prolific spreading of rumours and practical jokes which are inevitably linked to themselves, such as the fear - most closely linked with their confusion surrounding themselves - that they will "*unzip*" (84). Kathy relates the story of a girl's ghost "wandering about the woods, gazing over Hailsham, pining to be let back in" (50). It is a story which recalls Emily Brontë's Gothic novel, *Wuthering Heights* (1847), an earlier text involving doubling and transgenerational haunting in which the ghost of Cathy wanders the moors, begging "Let me in – let me in!" (Brontë 36). The Hailsham students do not have a reassuring parental voice dispelling such myths and rumours. They only have each other, and the disquieting truth. Hailsham is more than a boarding school in which children are separated from their parents, it is rather a "total institution" depicting the "literal parentlessness" of the clones (Currie 102). Clones are not orphans in the sense their parents have died: they have literally never had any.

Clones not only lack parents, in texts such as *Moon, Never Let Me Go* and *Cloud Atlas* (2004), their production is to the extent that their original does not feature as a significant character in the plot. Indeed, as is suggested in *Cloud Atlas*: "one may argue no originals remain in our world" (227). These clones' only sense of family comes from fellow

clones: other versions of themselves, monozygotic twins multiplied. Fabricants refer to each other as "sister," which is the only family relationship they experience. Their role is to serve the families of their society, silently, anonymously, and without question. When a boy asks his "mother consumer" why the servers "look xactly alike," she responds: they are "grown in the same wombtank, like radishes in his biology class." "Fabricants," she merrily continues, "don't want" to have babies (192). The myth of their consumer society is that the clones choose their life of slavery in favour of a more conventional family environment; that they have no desire for a domestic lifestyle is evidenced by the fact they "always smile" (192). Fabricants are a class so far beneath the consumers that when a battered Yoona ~ 939 appears, "few diners looked up from their meals" and those who did "pointed, rather than raised any alarm" (201). This is in stark contrast to the panic which ensues when she picks up a child and "hysteria xploded" (201). It is a society in which clones have been born to serve; their "memories are genomed weak" (205), and furthermore they "preferred not to wonder" (189). They have no past, and no future. They are denied the opportunity to experience family life, slaves who "lack both the means and the rights to xpress emotion" (219), worthless orphans.

DISCOVERING THE TRUTH: MEET THY MAKER

The moment of discovery is a turning point in the life of a clone, and mirrors an adoption narrative: the realisation that neither she nor her family is who she believes them to be. It is a discovery linking the clone and adopted child, initiating a struggle to establish an identity, a search for origins. While an adopted child may seek out her biological parents, clones look for their equivalent: they seek to confront their maker. "It's not an easy thing to meet

your maker," declares Roy to Tyrell in Scott's cult classic *Blade Runner*, as he pleads in vain for an extension to his life. Interestingly, in the 2007 final cut version of this scene, there is a change in Roy's request from: "I want more life, fucker," to "I want more life, father," as the maker is once again aligned with the role of father, as the first chapter discusses, while the tone is altered from one of melodrama to one of reason. Even androids, or humanoids, it would seem, are searching for a parent figure. The lack of a conventional parent figure in the lives of clones, who by the nature of their "production," like Frankenstein's creature, have no need for two parents, intensifies the relationship between creator and clone. The expression itself, "Meet Your Maker," also reinforces the connection between the creator and God, as a term often used when someone has died. This link with death is also apt, as the clone, like Frankenstein's creature, frequently comes about through the reanimation of dead flesh. Confronting her maker provides the opportunity for the created being to ask why, and request that her maker justify the actions taken in creating life. This desire for answers again relates the clone to adopted child, mirroring her search for a birth mother. On a practical level, it also provides the opportunity for the writer to deliver answers in the text, and build up dramatic tension. It moves the clone from ignorance to knowledge; from darkness into light. Although the acquisition of knowledge has historically been viewed in negative terms - biblically, it is related to the fall of Adam and Eve as well as the opening of Pandora's box, and Blake has also linked it to a loss of innocence - for the clone it provides choices and strength. Knowledge has become a positive thing in postmodern cloning fiction, enabling the clone to form an identity and establish control.

For Iris in *The Secret*, discovering her true form is the first step in establishing independence, leading to a confrontation with her maker, Dr Park. The truth leaves her in a state of turmoil as she struggles to come to terms with her new identity: "I was a replica, an artificial mechanism, a manufactured thing. I was unnatural" (61). She is forced to accept the realisation that she does not know herself. However, it also enables her to break free from her artificial family and stand alone in the world. Knowledge moves her beyond the unsettling state of Todorov's fantastic, lifting the uncomfortable uncertainty which had clouded her life. Confronting her maker and establishing the truth are necessary steps on Iris's journey of self-discovery. Knowledge empowers Iris, and it does the same for Justin in *Cast of Shadows* when he confronts Davis Moore. Although only fifteen, Justin shows himself to be articulate and resolute, echoing the scene in *Frankenstein* when the created being confronts his maker, and reveals himself to be the more eloquent. "I wanted to ask you some questions" (203), Justin confidently tells his creator, whose response is one of fear. That fear is not of the situation he is faced with but "of Justin himself" (204). Moore displays physical signs of stress during the encounter: his body "pumped two parts adrenaline to one part plasma" (205). As his emotions and reason conflict, Moore finds himself in an inferior position to the boy as he calmly allows Davis "to describe, to explain, to rationalise, to apologise" (206). Moore is physically and emotionally disturbed by the encounter, and it is only after Justin has left that he realises there were practical issues he has failed to address, such as the safety of the boy, and he berates himself for it. Science may have given Moore the ability to create a life of his choosing, but it renders him weak and vulnerable. This taps into another fear linked with cloning: that the clone will prove a superior being, with the potential to overpower her maker. It is venturing into the realms of

the unknown, something which often brings with it fear. James Morningdale, a blatantly mad scientist figure from *Never Let Me Go*, carried out experiments aimed at offering people "the opportunity to have children with enhanced characteristics" (258). Such intentions, however, create "a certain atmosphere" of fear amongst the public: "a generation of created children who'd take their place in society? Children demonstrably *superior* to the rest of us? Oh no. That frightened people. They recoiled from that" (259). They are recoiling from the idea that science could be used to create something beyond human control: that the slaves could rise up to challenge the master, leaving the creator helpless in their wake.

This is, of course, far from the experience of the Hailsham students, however, whose meeting with Miss Emily removes all hope and leaves only despair. Hailsham closes off the possibility of an alternative future for its students: it is the "deferral" (247) they had longed for, and the tragedy for them is it has already gone. The clones fail to meet narrative expectations of rebellion, and hope holds no power for them. Contemporary narratives predominantly place the clone in role of victim, as previous chapters show. Like an orphan or an adopted child, the clone lacks the family support network that nurtures development and growth. The clone is a being that stands alone.

ORPHAN BLACK AND THE CLONE AS FOSTERED CHILD

BBC America's cult television series *Orphan Black* (2013-) presents a fostered child encountering different versions of herself, as the mystery behind her life gradually unravels. The mystery surrounding origins is an experience shared by clones and the fostered or adopted child. "Define orphan, Sarah," asks her fellow clone; "orphan..."

orphanage" is her faltered reply, as she explains, "I was fostered out and then legally adopted" ("Variation"). Sarah's status as clone is bluntly revealed to her by "soccer mom" Alison: "we're clones, we're someone's experiment and they're killing us off" ("Variation"). Sarah has always been a troubled child. The extent of this is touched upon by her foster mother, Siobhan: "Every visit from the bloody police I've had, every missing person's report, every punch we threw..." ("Instinct"). Sarah is an outsider before discovering she is a clone, a discovery which enables her to start taking responsibility for her life and child, which helps her to realise that she has had a family all along. When her surrogate mother is killed, Sarah cries out to the killer clone, Helena: "you killed someone I've been dreaming about my whole life" ("Endless"). She may represent the mother she had dreamt about, a dream common to the orphaned child, but she is not family to Sarah, any more than her fellow clones; "I've already got a family" she declares, before shooting dead her twin ("Natural"). The series raises the issue of how family should be defined. Prior to meeting her surrogate mother, her foster mother cautiously reminds her: "she didn't raise you" ("Endless"). Family does not need to result from a biological bond, which is confirmed when Sarah asks her fellow clones how they are related, to which Alison retorts, "we're not." Cosima elaborates: "well, we are ... by nature, um, she's referring to nurture" ("Variation"). Furthermore, *Orphan Black* depicts a bond between foster brother and sister as strong, if not stronger, than biological siblings. Blood is not necessarily thicker than water. It is nurture, the series implies, which is the stronger force.

The fluid nature of identity is suggested by the series through the frequent impersonation of each other by fellow clones. This is shown from the first episode in which Sarah takes on the identity of Beth by merely changing her accent, hair and clothes. Beth's

work colleagues (a police force clearly lacking skills of detection), bank manager and even her boyfriend all accept the change. Examples of such impersonations are prolific in the series, and most remain unquestioned. This representation of identity as fluid is appropriate to a clone, whose origins and roots are unstable. It is also in line with the theory of David Gauntlett, a British sociologist and media theorist, who suggests identity is an accumulation of social and cultural appropriations rather than fixed. Identity, Gauntlett states, "is a performance" (147). Such a description is apt in relation to *Orphan Black*, in which the clones play the role of their identical twins at various points to suit themselves. When Alison discusses impersonating Sarah, she relates it to her performance at a community theatre, stating: "trust me, Sarah's no stretch, I got great reviews" ("Effects"). Her performance is sufficient to trick Sarah's foster mother but, significantly, it does not convince her child. "You're not my mother," Kira immediately states, "you just look like her" ("Effects"). Kira, Sarah's biological daughter, is able to see beyond Alison's performance, beyond their identical profile. There is no doubt in Kira's mind, no hesitation. Her response implies that identity may not be as fluid as supposed, that there may be an "inner self," a supposition Gauntlett denies, stating it is rather a belief reinforced "through the repetition of discourses about it" (147). Kira's recognition could be explained as indicating an increased perception within children, but more than that it attests to the strength of the mother-daughter bond, a bond which can see beyond outward appearances to an inner self.

The ownership of the self, an issue discussed in the preceding chapter, is the revelation which dominates the season finale. Each of the clones has a dedicated "monitor" who carries out tests on them while they sleep. This personal invasion of the self by a

corporate body is, however, merely the start of their monstrous intrusion. While the company which made them approaches each clone with contracts to guarantee their freedom, Cosima studies their genetic coding and makes a disturbing discovery. "Any freedom they promise is bullshit," she falteringly tells a stunned Sarah, "they're liars. That synthetic sequence, the barcode I told you about, it's a patent" ("Endless"). This proves a topical issue for the series to have raised, as in June 2013, a supreme court ruled that human DNA cannot be patented. It is a ruling, however, which Graeme Manson, *Orphan Black* creator, has declared is "full of holes." The ruling also states that synthetic DNA can be patented, leaving open the opportunity for biotech firms to "tweak" the DNA to claim ownership (Ryan). It leaves open the possibility, outlined in *Orphan Black*, for humans to become "property," as Cosima explains: "our bodies, our biology, everything we are, everything we become, belongs to them. Sarah, they *could* claim Kira" ("Endless"). Sarah's primary focus throughout the series has been the wellbeing of her daughter, a daughter she now discovers she does not even legally own. Sarah was born an outsider, as her foster mother explains, one of the "children in the black ... undocumented, outside the system" ("Entangled"). These children were rumoured to be the subject of medical experiments, "born of science" as Sarah declares to her twin ("Endless"). While most of her cloned sisters were, unbeknownst to them, subjected to nightly medical tests by their monitor, Sarah is spared by being kept hidden away. Ironically, she is safest in the dark. Siobhan enables her to be a part of a family: "I had the chance to legitimise a child so I became your legal guardian" ("Parts"). Sarah, an orphan child, is fostered at first before being legally adopted, becoming "legitimate" by her role within a family. The repressed past, however,

inevitably returns to the present as the security of the family Sarah has only just come to appreciate is torn apart.

CONCLUSION

The clone is a being who lacks a family, at least in any conventional sense. Clones are not the result of a sexual union and their genes do not consist of a combination from mother and father. They are, rather, the identical copy of a former self. The introduction of a clone to a family unit changes its dynamics and confuses the roles to such an extent its breakdown seems inevitable. The blurring of family roles frequently leads to the obscuring of relationships, and incest is a taboo featuring in many cloning texts. The fiction this chapter deals with repeatedly warns against straying into the territory of cloning, outlining the many problems which can result. It may be correct to state that the clone is biologically no different from an identical twin, but her placing within a family transforms her from seeming normal, to seeming distinctly unnatural. Through cloning, a woman can mother her identical twin, as shown in *The Secret*; parents can replace their child, as in *A Number*, *Blood Ties*, *Double Identity* and *Godsend*; a man can fall in love with his mother, as in *Code 46*; a woman can carry her grandmother, as in *Mary Modern*; or her lover, as depicted in *Womb*. These are scenarios which seem bizarre and yet are made possible through cloning. Nor are these unrealistic scenarios, for grief is a powerful emotion, and cloning seems to prevent the difficult necessity of letting go. In an attempt to hold the family together, however, fiction shows cloning's tendency to break it apart. The fear within the discourse of cloning that it will jeopardise the nuclear family, appears realised through contemporary cloning texts.

Conclusion

This thesis has demonstrated the way in which culture, science and fiction have interweaved through the cloning discourse since Dolly's creation became known. Through Dolly, the clone became real: an "other" which challenges distinctions between the human and the monstrous, and which constitutes an uncanny presence within contemporary culture. The thesis has drawn out the close alignment of cloning and the Gothic, the shared language of fear, and the fact that the roots of the cloning discourse stem from Mary Shelley's Gothic tale. It has also demonstrated that cloning is no longer a topic at the fringes of British and American culture, primarily discussed by scientists and science fiction writers: since Dolly, its centrality in the mainstream of cultural production has become clear. Over the last fifteen years, the portrayal of the clone in literature and film has softened: the clone has become more of a tragic figure. As the technologies of cloning – and the debates they provoke – continue to evolve, they raise fundamental social and ethical questions, and will do so with increasing urgency in the future. This conclusion demonstrates this through analysis of one of the most recent examples of a clone narrative - one which aptly demonstrates the cultural significance of cloning as a topic of interest and the continuing currency of the ideas raised - the cult television series which first aired in 2013: BBC America's *Orphan Black*.

EMERGING STRANDS

Contemporary cloning narratives, as the opening chapter shows, have brought about changes in the mad scientist trope by combining it with the father figure. *Orphan Black* adheres to this model, though this is not made explicit until more than half way into the second series. Ethan Duncan is introduced in an episode entitled "To Hound Nature in Her Wanderings," a title which comes from Francis Bacon's book *De Augmentis Scientiarum* and translates into "The Advancement of Science."¹¹⁹ Rather than a mad scientist, however, Ethan is introduced as a vulnerable old man, a father figure anxiously asking after his adopted clone, Rachel. "Once you've gone too far," he explains to Sarah, "it's hard not to go all the way" ("To Hound"). Through this explanation, he demonstrates the danger of scientific advancement and the temptation it provides. Yet, rather than serving as the explanation of a geneticist to his creation, it is the confession of a broken man. Witnessed by his adopted daughter, Ethan takes his own life in the second season's climax, while an anguished Rachel drops to her knees and begs him to stay: a child pleading with her father not to leave her again. The paternal scientist reaches out beyond the grave, however, offering hope to one of his creations, through secrets concealed in his copy of *The Island of Dr Moreau*. Through this, Ethan reveals a self-awareness lacking in the traditional mad scientist trope. *Orphan Black* carries the softening of the scientist a step further, moreover, through the convergence of the scientist and clone. Through the character of Cosima, the mad scientist and monster become one. This provides the ultimate self-analysis, enabling Cosima to analyse herself, to pursue illegitimate knowledge in the Gothic tradition. Cosima, however, is far from a monster. Indeed, of all the clones in *Orphan Black*, each

¹¹⁹ Each episode title from series two is taken from Sir Francis Bacon, the first scientist to receive a knighthood in 1603, while the titles from season one come from Darwin's *The Origin of Species*.

played by the same actress, Tatiana Maslany, it is Cosima who is the "pin-up," the scientist amongst the group:



Fig. 21. Cosima: the clone as sexy scientist, scene still (*Orphan Black*).

The *Orphan Black* website even includes a video clip where Tatiana addresses the question posed by numerous fans: "Why is Cosima the hot one?" It is a question she struggles to answer, responding uncertainly with an amused, "I don't know why she's the hot one. I guess smart is hot" ("Ask OB"). Not only has the image of the mad scientist softened with time, at least in cloning narratives, the image of science has as well. As the Huffington Post explains, in *Orphan Black* science is "not purely a threat or a monolithic authority or a precise tool. Like Cosima herself, it's funky, fascinating, exciting, a little dangerous and kind of cool" (Ryan). Indeed, science has been popularised thanks to ongoing television series such as this and *The Big Bang Theory*, while a Facebook page entitled "I Fucking Love Science" has more than 16,700,000 "likes."

The darkness which has shrouded science, and the mad scientist trope in particular, has been transferred elsewhere, as my second chapter shows, to the corporate institutions which manipulate and exploit for financial gain. In line with this, a new literary villain has

also emerged, in the form of the chief executive. *Orphan Black* again adheres to this, presenting power with a corporate face in the form of the mysterious commercial enterprise, The Dyad Institute. However, again, *Orphan Black* extends this notion by introducing the character of "corporate clone." While the company asserts control over the clones through their patenting, placing them in the conventional victim role, in a contemporary twist, one of those clones is at its helm. Rachel Duncan reveals a self-awareness lacking in other clones: she has not experienced the "moment of realisation" common to the majority of clones. More than this, she lacks the essential human quality of compassion, feeling no qualms about sending Cosima's lover away without a word. Rachel has not only subjected her fellow clones to corporate control, she has also subjected herself. She is simultaneously villain and victim, playing the unconventional role of empowered clone. Clones emerge uncannily through the course of seasons one and two, making their presence felt in such disparate fields as the police force, scientific field, corporate enterprise, and, as revealed in the climax of season two, the military. *Orphan Black* presents the clone in our midst, the human multiplied, the abiding doppelgänger in positions of increasing influence and power. Viewed from this perspective, the clone appears a threat, and yet, simultaneously, embraces the role of victim as well.

The cultural response to Dolly's creation was initially one of rejection, as my introduction shows: we shun what we do not understand. As the clone became real, the fear associated with her spread. Yet fiction has subsequently initiated a move towards a more sympathetic understanding of the clone, as this thesis has shown, encouraging a compassionate response. "Monstrosity," Botting asserts in relation to *Never Let Me Go*, "becomes reversible: objects of pity and rejection, the clones are less monstrous than the

humans (no matter how liberal they try to be) who evince their monstrosity in their disgust" ("Post-Millennial" 506). Yet, sympathising with clones as "objects of pity and rejection" still renders them other, still views them from a position of superiority. *Orphan Black*, on the other hand, confuses the role of other and renders it obsolete. Here the other is not merely embraced, it is submerged. The divide between hero and villain has been corroded: the clones are both threatened and the threat. They repel and yet attract, in this way perfectly matching Cohen's definition of the monster.

Not only is the monster's body under corporate control in *Orphan Black*, so too is the individual self. Yet, in a further subversion of expectations, rather than organ donor, the clone becomes recipient in *Orphan Black*. Cosima's respiratory illness is due to her genetic make-up: it is inherent in her batch of clones, a side-effect of the cloning. Her body betrays her, and in a comparable fashion to the contemporary "monster" clone, she faces a premature death having been rendered frail and old. The narrative here moves towards an illness narrative, and a fresh type of compassion for the clone results. We are all at the mercy of our genes, but for Cosima those genes have been "made" by a corporation who owns them and her. In offering her daughter's bone marrow as a cure for Cosima, Sarah prioritises a clone's life over her child, albeit willingly on the part of the child. Rather than, in customary fashion, portraying the clone as expendable, *Orphan Black* values the life of the clone. The series takes the scenario described in *My Sister's Keeper* a step further, through a mother jeopardising the life of her child in place of her sister clone. The bonds of family are disparate within *Orphan Black*, in which few, if any, conventional families exist. Despite the positive portrayal of science through Cosima, the ethical dangers inherent in cloning are also made clear, through the revelation it took more than four hundred attempts

to achieve another clone, with only one surviving. The state of those many failed attempts is left largely to the imagination, an imagination aided for contemporary audiences by the scene in *Alien Resurrection* when Ripley encounters a lab filled with failed genetic experiments. The mystery surrounding the *Orphan Black* clones is made paramount through Sarah's daughter Kira, whose miraculous healing powers suggest she herself is more than human, implying, in the Gothic convention, the eternal return.

Orphan Black demonstrates the broadening interest in cloning as a fictional topic: it is both current and evolving, like the Gothic itself. At the same time, many of the traditions which stem from *Frankenstein* remain. *Frankenstein* suggests it is society itself which is truly monstrous, and this is an argument which prevails. The empowerment of individual clones in *Orphan Black* is rendered unimportant, as power is not focused on the individual, but has broadened out instead. In this way, moreover, it has become far less controlled, and controllable.

FUTURE DIRECTION

There is a general consensus that the first human clone may be on the horizon, if indeed she has not arrived already, something made possible now the cloning technology has been published. Scientists are being held back by the legality and ethics of cloning, the fear of abnormalities which may result, which have already been evidenced in trials on animals. Fiction plays a valuable role in showing the implications of pursuing such a path, with cloning narratives often appearing as a contemporary version of the cautionary tale. Clones are no longer portrayed as sub-human in contemporary texts, but they are frequently treated that way. There are few positive examples of cloning within fiction, although young adult

fiction in particular, on the whole, advocates an acceptance of the clone. The inclusion of cloning, and, moreover, organ harvesting, in children's literature, further demonstrates the increasing relevance and interest in cloning as a literary topic.

The role of cloning fiction within bioethical debates explored within this thesis brings it into the realm of the diverse and burgeoning field of medical humanities. Although my focus has been on the Gothic aspects of this trope, the interdisciplinary nature of my research has also shown the value it may offer to medical humanities scholars. Traditionally, medical humanities has been a field driven by the study of ethical issues pertaining to humanities' subjects. Some of this work has informed my thinking here, and I would not have been able to deal with the issues raised in such depth, in chapter four for example, were it not for this research. As with the Gothic, cloning is a topic which expands into different fields, refusing to be neatly categorised or contained. The interrelationship of Gothic and medical humanities is a broadening academic field, as shown by the forthcoming "special issue" on Medical Gothic in *Gothic Studies* (May 2015), and this thesis provides fertile ground for further exploration in this area.

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