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‘The Last Great Infertility Hurdle’: A Critical Discourse Analysis of US News Media Frames of Female Age-Related Fertility Decline

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Joyce Robbins
Abstract

Since the 1970s, later-age childbearing has become a trend in many Western contexts, particularly as more women have steadily entered the workforce. This shift has coincided with increased media attention given to women’s age and fertility decline, a relationship often represented by means of the ‘biological clock’ trope. More recently, news media representations of female age-related fertility decline have been paired with the commercialisation of ‘elective egg-freezing’, a technique which involves the retrieval and storage of a woman’s eggs for later use. To explore current print media representation of female age-related fertility decline, this thesis employs Critical Discourse Analysis to specifically examine how American print media frame female age-related fertility decline and ‘egg-freezing’ between the years 2003 and 2013. Findings are considered in relation to their reiteration and obfuscation of historically constructed discourses.
Acknowledgements

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Introduction

Since the 1970s, in many Western contexts, women’s increasing participation and advancement in the workforce has been co-existent with a movement toward later-age childbearing. Shifting childbearing trends have occurred alongside many socio-political changes, such as the advent of contraceptive technologies and legalised abortion, that both significantly altered the ability to manipulate reproduction (Harris, Fronczak, Roth & Meacham, 2011), urban migration, economic fluctuations that largely necessitated a shift in family structure to dual-income earners, and fluid anti- and pro-natalist movements. The interweaving of these socio-political factors have, according to Waldby and Cooper (2008), dramatically increased the emotional and economic consequences of childbearing amongst middle-class Western women. The total fertility decline amongst this cohort has coincided with increased medical and media attention given to the issue of female age as a factor of fertility. Of particular salience was media attention given to a large French study in 1982 (Schwartz & Mayaux), one of the first to attempt to isolate age as a factor of fertility. The results of this large data set are largely responsible for the medical demarcation of the age thirty and thirty-five as significant turning points in women’s reproductive capacity.

A selection of women over the age of thirty-five, an age at which fertility is believed to exponentially decline, are now encouraged to seek medical attention and possible fertility treatment if they are unable to conceive after six months of unprotected intercourse (IVF Australia, 2013; Dunson, Baird & Colombo, 2004). The benchmark of thirty-five years is often linked with medical risks said to be involved in later-aged childbirth, both for mother and child. Given the aforementioned trend toward later-age childbearing, age is now largely considered the primary cause of ‘infertility’ (IVF Australia, 2013; Mazza et al., 2012).

The current standard medical definition of ‘infertility’ is the inability to conceive after one year of unprotected intercourse. Despite its commonplace use, I assert that infertility is a term with its own ‘linguistic life’ (Treichler, 1990) and discursive evolution parallel to the development and commercialisation of assisted reproductive technologies (ARTs) that have directly benefited from this discursive construction. Certainly, involuntary childlessness and
difficulties with conception have always existed on a global level, but in many Western
countries, namely the US, UK and Australia, it was arguably post 1978, after the birth of
Louise Brown, the first baby born as a result of *in vitro fertilisation* (IVF), meaning, literally
‘in glass’, that the concept of infertility as a ‘medical disorder’ was brought to widespread
public attention (Inhorn & van Balen, 2002; van Dijck, 1995).

One shortcoming of the medical definition of infertility is its failure to account for the frequency
or timing of procreative intercourse, key volitional components of conception (Rothman et al.,
2013; van Dijck, 1995). A substantial amount of current research suggests that two to four years
of unprotected intercourse, including for women over the age of thirty-five, has a relatively high
probability to result in natural conception (Leridon, 2004; Rothman et al., 2013). Also
problematic in the medical construction of infertility is the explicit cultural ideology upon which
it draws. Infertility, as a discourse, relies on the legitimacy of biological parenthood as both a
desired and ‘natural’ role, particularly for women. Whilst individuals may fit the medical criteria
of infertility or be considered at risk of ‘future infertility’, they may not self-identify as such. In
this way, the modern medical definition broadens potential diagnostic candidacy by linking most
women and some men to a reproductive imperative. This definition, however, is simultaneously
exclusionary by positioning some women and men as less appropriate consumers of ARTs, and
therefore implicitly less appropriate parents, namely based on class distinction.

Prior to widespread media coverage, IVF and other ART procedures had been evolving over
a number of years. The first reference to IVF was published in *Science* in 1944, but there
were anxieties about its practicality and ethical implications, and it was largely seen as
science fiction within the medical community (van Dijck, 1995). Scientists throughout the
world, and in various disciplines such as medicine, biology and agriculture, were nevertheless
tucked away in laboratories, experimenting with nascent techniques (Clarke, 1998) that
exponentially grew in the late 1970s and 1980s (Aral & Cates, 1983). It was during this time
that the specific study of human reproduction piqued general physician interest and
stimulated a dynamic new field of study, presenting opportunities for profit, prestige and
specialisation (Clarke, 1998). As the ‘reproductive sciences’ expanded to newer and more
specialised roles and practices, the formation of official societies, board certification, licensing procedures and numerous professional journals ensued (Aral & Cates, 1983; Burfoot, 1990; Clarke, 1998). These discursive moves provided the conditions by which human reproduction was professionalised and made exclusive to scientific and medical communities. These practices also fueled what continues to this day as a competitive field of power relations to name, classify, quantify and treat fertility.¹

ARTs continue to receive large research funding schemes and have therefore consistently put into question the potential to manipulate and even optimise fertility and reproduction. One recently commercialised bio-technological development, ‘oocyte cryopreservation’, or egg-freezing, is testament to the salience given to age as an increasing factor of infertility. This process involves the retrieval and storage (often called ‘banking’) of a woman’s oocytes (eggs) for later use, even post menopause. When represented as an ‘elective’ procedure, as opposed to its original inception for women undergoing cancer treatment, it is often advertised as a way to ‘pause’ the ‘biological clock.’

Although the metaphor of the ‘biological clock’ is now a taken-for-granted trope, it only emerged in popular discourse in the late 1970s and 80s (Amir, 2006; Friese, Becker & Natchtigall, 2006). The way in which this linguistic construct links women’s reproductive temporality to the established field of science and medicine follows a long-standing tradition in which women’s bodies and material reproductive and sexual processes have been discursively manipulated within the terms of medical discourse (Greil et al., 2011; Martin, 2010; Sandelowski, 1991). Despite increasing privitisation of the fertility industry, in which small

¹ The two largest professional organisations for the fertility industry are the American Society for Reproductive Medicine (ASRM), founded in 1944 and originally known as the American Society for the Study of Sterility (Aral & Cates, 1983), and the European Society for Human Reproduction and Embryology (ESHRE), formed in 1985 and promoted by Dr Robert Edwards, considered one of the ‘founding fathers’ of IVF (Burfoot, 1990). Each of these societies publishes their own specialist journal, Fertility and Sterility (ASRM) and Human Reproduction (ESHRE), which remain the two leading publications in the industry. ASRM and ESHRE have developed physician licensing and certification procedures, processes which helped normalise the profession, secure and protect its claims to authority, and support ongoing research initiatives (Burfoot, 1990; Clarke, 1998; Inhorn & van Balen, 2002; van Dijck, 1995).
clinics and research teams struggle for publication and recruitment of individual consumers, I assert the larger institutions of medicine and science maintain and disproportionately dictate the conditions by which ‘truths’ are constructed and disseminated (Burfoot, 1990; Woolgar, 1988). With privileged access to economic resources and discursive representation, I contend these institutions and their governing bodies disproportionately construct the linguistic parameters by which women are invited to think and perceive themselves.

For example, since the late 1970s, the ‘biological clock’ metaphor has played an increasingly prominent role in the dissemination of fertility education in medical and news media. The trope also features heavily in popular media, noted by TV heroines such as Bridget Jones and Alley McBeal’s growing interest in their own fertility limitations as a result of increasing age. Well-established as a part of daily conversation, some women even employ terms like ‘clock tickers’ (Primdore-Brown, M., 2013) and ‘Bridget Jones types’ (Chaudhuri, 1999) to describe their fertility. Both public and private campaigns have also addressed the issue of age and fertility, such as the American Society for Reproductive Medicine’s (ASRM) ‘Protect Your Fertility’ campaign in the US (2002), and the ‘Get Britain Fertile’ campaign2 launched in summer of 2013, funded by a pregnancy testing company, First Response. Both of these initiatives explicitly highlight age as a risk factor of future infertility.

Medical literature has also placed more emphasis on the duty of gynaecologists, obstetricians and general physicians to discuss age-related fertility decline with their female patients, particularly in light of what some medical practitioners see as a new collective of ‘perpetual postponers’ (Lockwood, 2011). The impact of men’s age on sexual function and sperm quality has likewise received increasing medical and media attention, including representation of older men’s decreased fertility, an increased time trajectory to conception, and potential health risks for future offspring (Harris, et al., 2011; Dunson, Baird & Colombo, 2004). Despite these emerging discourses, however, women remain the primary targets of the ‘biological clock’ message, which

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2 See http://www.getbritainfertile.com/
demonstrates a long-standing cultural assumption that women are (or should be) more likely to imagine and orient their futures in terms of reproductive goals, and engage in self-governing techniques to monitor and enhance their fertility potential (Amir, 2006; Martin, 2010).

Research motivation

The previous discussion points to the central task of this thesis, which is to make more explicit the discursive emergence and evolution of the concept of female age-related fertility decline as a strategy of governance. Although there has been a vast amount of inter-disciplinary literature discussing the medicalisation and mediatisation of motherhood and pregnancy (Earle & Letherby, 2003; Ehrenreich & English, 1978; Lupton, 2012; Marsh & Ronner, 1996; Phoenix et al., 2001; Weir, 2006), the politics and mediatisation of human reproduction discourses (Akhter, 1992; Clarke, 1998; Cover, 2011; Ehrenreich & English, 1978; Ginsburg & Rapp, 1995; Hanmer, 1984; Inhorn & van Balen, 2002; Kasun, 1988; Paul, 1995; Raymond, 1995; Roberts, 1997), and critical feminist assessments of assisted reproductive technologies and their media representation (Condit, 1994/1996; Corea, 1985; Firestone, 1979; Franklin, 1997; McNeil et al., 1990; Mies, 1988; Klein et al., 1984; Stanworth, 1987; Throsby, 2010; van Dijck, 1995), to date there is little literature that analyses media framings of age-related fertility discourses (Budds et al., 2013; Bute et al., 2009; Campbell, 2011; Shaw & Giles, 2009) and only one known published study that examines the emergence of the discursive construction of the ‘biological clock’ through a lens of governance (Amir, 2006). Moreover, there are no studies that specifically analyse the discourse of female age-related fertility decline by considering the role neo-liberal and ‘post-feminist’ rationalities contribute to its currency. It is the specific amalgamation of theory and methods combined with a contemporary case study which therefore mark this research as an original scholarly contribution.

Aim and Scope

The primary aim of this research is to investigate how U.S. news media frame discourses of female age-related fertility decline. More specifically, this thesis uses Critical Discourse Analysis to evaluate a selection of news texts between the years 2003 and 2013 as the prominent
case study. The goal is to map out the various ways in which this particular fertility discourse has been framed in American news media during the most recent decade. This contemporary case study is then considered in relation to various historical discourses from which its expressive currency depends.

By means of the specific case study, this analysis is situated within the broader theme of the politics of human reproduction (Clarke, 1998; Kasun, 1988; Paul, 1995; Martin, 2010; Watkins, 2007) and specifically, governance of the female-gendered body (Martin, 1987; Klein, 1989; Reed & Saukko, 2010). I will consider these issues primarily through a theoretical lens of governmentality, contributing to literature that considers how a model of governmentality operates within and between various social structures and situations (Lupton, 2012; Miller & Rose, 2008; Petersen & Bunson, 1997; Reed & Saukko, 2010; Rose, 2000/2007), and how media representations promote the stratification, commoditisation and medicalisation of self-governing strategies that target a selection of female-gendered bodies (Heyes, 2007; Reed & Saukko, 2010; Condit, 1994/1996). The subsection of scholarship that considers health discourses through a lens of governmentality is expanding, but the particular ways in which gender and neo-liberalism inter-relate remains relatively undertheorised (Gill, 2007; McRobbie, 2009; Reed & Saukko, 2010). To address this lacuna, I intend to focus specifically on the gendered nature of this particular fertility discourse in order to consider its various media framings in relation to a ‘post-feminist sensibility’ (McRobbie, 2009; Gill, 2007). It is at the specific theoretical nexus of post-feminism and neo-liberalism that I will discuss how Western cultural ideals such as self-empowerment, choice, and rights become central to new modes of gendered governance.

Significance of the Study

A key aim of CDA is to expose power relations. My research questions were constructed toward this aim; that is, to explore how contemporary discourses of female age-related fertility decline might function to re-inscribe sexual difference and gender normative behavior, and intersect with issues of class and the cultural currency given to ‘appropriate’ mothers and kinship norms. It is also my intention to destabilise the privileged epistemological assumption that ‘science’ and ‘scientific methods’ produce reliable knowledge claims. Thus, I aim to critically examine the
beneficiaries of this particular fertility discourse by considering the conditions that support the funding, protection, and power of the institutions of science and medicine (Woolgar, 1988).

An analysis of the mediatisation of this particular fertility discourse is highly relevant given what Martin (1987/1991) convincingly argues is the authority of metaphorical expression to contribute to physicians’ attitudes and treatment of women, and women’s subjective experiences of their bodies and reproductive processes. Although I am not undertaking psychological effects research, and do not theorise or quantify the subjective effects of this discourse, this research has arguable social relevance.

Overview of the Study

This thesis will be composed of four chapters. In Chapter One, I discuss the discursive formation of ‘woman’ in the Western world, and present a selection of social, cultural and psychoanalytic theories of male dominance. I begin with the tradition of Greek philosophy and proceed to consider the influence of biological and psychoanalytic discourses. Chapter Two will build upon the previous discussion of woman’s discursive construction, to discuss how the materiality of age-related fertility decline has been discursively manipulated throughout the second half of the twentieth century. In Chapter Three I outline my theoretical framework and methodology and then proceed to Chapter Four in which I present an analysis and discussion of my case study, linking back to the established theoretical framework and themes set out in the introductory chapters.
Chapter One: Situating Woman: The Epistemological Problem of Woman and the Discursive Construction of Sex

In this section I explore the discursive constitution of woman from a Western perspective by drawing from a selection of discourses, beginning with the tradition of Greek philosophy and proceeding to give an overview of biological and psychoanalytic discourses. I have selected texts based on a resonance among the scholars who are all, to various degrees, concerned with discursive theories of woman’s construction and theories of male dominance. Analysis of the lineage of philosophical discourse is a strategy that echoes Irigaray’s assertion that one must disrupt and challenge philosophical discourse ‘inasmuch as this discourse sets forth the law for all others, inasmuch as it constitutes the discourse on discourse’ (1991, p. 122). Towards this aim, I am influenced by Foucault’s (1972) genealogical approach to knowledge, which, according to Elizabeth Grosz (1994) is ‘aimed at unsettling established models of knowledge and epistemological presumptions …’ (p.145). As such, I assert that the development of all discourses, and their contributions to the social-ordering of woman throughout history, have always arisen from contentious power relations. The Foucauldian concepts of power and discourse are primary, but ultimately I attempt to extend the androcentrism of these ideas to consider the specific ways in which a selection of women have been governed throughout history (Heckman, 1996; McNay, 1992; Taylor & Vintages, 2004; Reed & Saukko, 2010).

As Juliet Mitchell has noted, ‘sexual distinction and the consequent oppression of women wanders around in search of its author’ (1974, p.364). Rather than search for a singular, secret origin of sexual differentiation or oppression, what Foucault (1972) refers to as a ‘naivety of chronologies’ (p. 27), my aim is rather to destabilise two popular claims of woman’s derivation. The first claim relies on bio-evolutionary logic to assert a natural and therefore irrefutable

3 Throughout this research I rely on a normative use of the term woman given the context of the fertility discourse under exploration. This does not point to an allegiance with materialist-feminism or a psychological viewpoint of the notion of the category of woman. Neither does this suggest forthright exclusion of the myriad ways to be a ‘woman’ in society, as queer and transgender theory have rightfully asserted. I use this convention mainly for ease of comprehension, and always with an awareness of the ways in which intersectionality, namely class, race and sexuality, affect what it means to be governed as a woman.
explanatory law of sexual bifurcation. The second claim points to patriarchy as the universal law that has defined woman’s cultural construction and which argues for a pre-patriarchal ideal of the feminine. By exploring these assertions, I problematise the assumption of a pre-discursive sex or feminine ideal as *a priori* fact, by rejecting all arguments that suggest a pre-cultural, natural signification of the material body. This follows from the prominent work of Judith Butler (1993/1999) who has convincingly argued that ‘woman’ has no precise derivation, but always arises, operates, and evolves within politicised discursive conditions.

By using the phrase, ‘the discursive construction of woman’, I suggest, in alliance with Butler (1993), that ‘materiality’ represents a certain effect of power or, rather, is power in its formative or constituting effects’ (p.9). My aim is thus to consider how power relations interact to produce ‘object domains’, ‘fields of intelligibility’ and material effects (i.e. woman and infertility) which then become taken-for-granted as ‘epistemological points of departure’ (Butler, 1993, p.10). I do not, however, consider how material effects of power relate to subjectivity and the possibility for agency in the *lived, somatic experiences* of people who identify and live as women.

The terms sex and gender are necessarily complex, contested, and problematic after the turn to poststructuralism and queer theory (Jagose, 1996). For ease of comprehension, I must clarify my use of these terms, given I use them in order to contest their legitimacy⁴. My reference to the term *sex* is conventional, signifying that which is assumed to be ‘natural’ anatomical or ‘biological’ difference between material bodies. Through an analysis of such terms, however, I will demonstrate how this categorical distinction of material bodies has been discursively constructed over time. The consequence of the discursive construction of sex, as I will show, creates an illusion of sex as an original, fixed, and natural state separate to culture or discourse. In this way, *gender* is equally problematic. Again, I align with Butler, that sex/gender are ‘not what one has or what one is, but a norm which

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⁴ I use the terms ‘he’ and ‘she’ according to the established binary model primarily for linguistic convenience and clarity, rather than allegiance to convention or presumed naturalness of such terms.
qualifies a body as culturally intelligible’ (Butler, 1993, p. xii). I interpret gender in terms of Foucault’s notion of productive power (1977/1978), what Butler (1990) refers to as an ‘apparatus of production’. In other words, I understand gender to be inculcated rather than imposed, a dialogical process within power relations that invites the active participation of subjects.

To begin a discussion of the influence of philosophical discourse on woman’s discursive construction, I turn to Thomas Laqueur (1990). Laqueur stands in opposition to de Beauvoir’s (1949) existential argumentation, in which the latter focuses on an ahistorical and homogenous position of woman as Other. Laqueur, on the other hand, considers how Greek philosophy and Renaissance anatomy were precursors to sexual differentiation as has become a taken-for-granted assumption in biological discourse. This supports my aim to destabilise the ‘natural’ categorisation of woman by considering the evolution of epistemological frameworks as a consequence of discursive power relations. I will further supplement Laqueur’s research by considering psychoanalytic and matriarchal theories of woman’s subordinate social status.

Laqueur’s one-sex model and the multiplicity of gender expression

Laqueur’s work in Making Sex: Body and Gender from the Greeks to Freud (1990) demonstrates a complex and contingent history of social ordering practices and gender asymmetries in order to render illogical a pre-cultural, pre-discursive, natural sex. He begins by examining the sustained prevalence of what he terms the ‘one-sex model’ which, he argues, persisted until the dawn of biological science. His analysis is based largely on the writings of Galen, a quintessential medical researcher and philosopher who later informed the works of Hippocrates (Dean-Jones, 1994). In the Galenic model, woman was not represented as an ontologically different category to man, but the anatomically isomorphic inversion of man. Man presumed the position of one, or the canonical body upon which all others were based. According to Laqueur, this model allowed for the hierarchical organisation of bodies as a matter of distinction not kind.
Laqueur argues the one-sex model was the dominant model up until the end of the seventeenth century when the discursive formation of biology ensued. However, Aristotle’s writings seem to suggest a binary distinction of bodies based largely on differences in reproductive function, wherein man constituted an active principle (metaphorically, a ‘plough’) that contributed to form, and woman was considered the passive principle (metaphorically, a ‘furrow’), contributing to matter (Laqueur, 1990; de Beauvoir, 1949). Although the Aristotelian distinction was used to explain the differentiation of reproductive roles, Laqueur argues this conceptualisation is not inherently opposed to the one-sex model because it is not grounded in biological discourse. Likewise, he argues that the distinctions between bodies were primarily functional rather than material, which he uses to suggest that gender distinction, where gender, in this case, is understood as the cultural intelligibility ascribed to bodies (Butler, 1986), pre-dates the linguistic construction of biological sexual differentiation.

The concept of gender was important for social ordering prior to binary sex distinction, but according to Laqueur, was not linked to biological or anatomical rationale to assert its claims. In some cultures, argues Laqueur (1990), the relative masculinization or feminization of bodies was largely based on the concept of internal heat, a quality thought to be a source of physical and mental vigour, particularly in Aristotle’s writings. Dean-Jones (1994) reiterates this view in her analysis of Aristotle’s contribution to the Hippocratic texts in which she explores the link between a masculine logic which concluded that greater heat supported the ability to derive more nourishment from food and thus manifested as physical and intellectual superiority. Internal coolness was thus thought to manifest as physical weakness and intellectual inferiority. According to Galen, the moderate temperature of woman’s uterus provided the proper climate for gestation (Laqueur, 1990).

The amount of heat within the material body was also theoretically correlated to reproductive fluids. In the one-sex model, feminized bodies were thought to lack the heat necessary to convert food to semen. This surplus of nutrition was said to result in menstrual blood (Laqueur, 1990).
According to Galen, both men and women possessed reproductive seed, but man’s seed was assumed superior given its external presence. Laqueur argues this discursively constructed gendered hierarchy of reproductive fluids, a concept to which I will later return, required ‘an immense amount of effort and anxiety’ to prove its claims (p. 58). In other words, Laqueur argues it was a particularly masculine political strategy to highlight woman’s inability to conceive within herself as a means to link the inferiority of her mind with her uterus. He suggests the mind and the uterus became ‘two equivalent arenas for the male active principle’ such that ‘her person is under the rational governance and instruction of her husband for the same reason her womb is under the sway of his sperm’ (p.59).

In essence, Laqueur’s argument suggests that the culturally determined trait of heat was a strategy by which to authenticate the privileged social placement of man in the public sphere, and that man’s dominance was thus largely based on the assumption of his superior material composition (Dean-Jones, 1994). However, this construct cannot be read to describe a universal man or woman. As Laqueur suggests, the heat continuum model allowed for a multiplicity of gendered variance such that ‘effeminate’ men and ‘masculine’ women who were either disproportionally cold or hot were rendered socially and morally deviant. This is not because they upset a heterosexual order, but because they embodied ‘culturally unacceptable reversals of power and prestige’ (p.53). From an intersectional point of view, it’s noteworthy that when power was not of social significance, as in the case of slaves, gender was irrelevant.

Progressing his analysis forward, to the era popularly referred to as the European Renaissance, Laqueur discusses two crucial epistemological developments, anatomical dissection and the development of the scientific method. He argues these were both quintessential to the development of a two-sex model and the rise of biological discourse. Prior to human dissection, Aristotelian physiology was largely based on women’s oral tradition of their own bodies and the dissection of animals, which revealed prominent variance between men’s and women’s bodily organs thought to be involved with procreation (Dean-Jones, 1994). Despite the upsurge in knowledge of anatomical and functional difference, visual and textual representation continued to highlight anatomical similarities (see Figure 1) and woman was repeatedly constituted as
man’s inverted replica. For example, the uterus was elongated in visual images in order to correspond to the penis, such that their shape was indistinguishable (Laqueur, 1990). The representation of woman as inverted man, according to Laqueur, suggests there was no cultural imperative to fully distinguish anatomically discrete categories. He argues the one-sex model persisted in light of knowledge of anatomical distinction for two strategic reasons. First, this model supported an elastic social ordering of bodies that could absorb any number of gradations of difference imposed from the outside rather than as a result of material determinacy. Second, given man had already secured a superior position in the public sphere, the one-sex model functioned as a display of what was already socially evident. This further supported as ‘natural’ the rendering of woman, inter-sex people, and slaves, for example, as inferior.

Before proceeding to discuss Laqueur’s two-sex model, I will briefly present some insights from Matriarchal studies to demonstrate a broader perspective from which to theorise the discursive construction of woman and social dominance of man.
Patriarchal social structure, in which the majority of positions of power are held by men, is often cited as a universal explanatory principle of woman’s subordinate social status, but many feminist scholars have pointed to the existence of pre-patriarchal cultures, or matriarchies. Heide Göttner-Abendroth, a German feminist philosopher, active in the ‘second-wave’ feminist movement from the mid-1970s, is a leader in the field of Matriarchal Studies, and founded the International Academy for Modern Matriarchal Studies and Matriarchal Spirituality (HAGIA) in 1986.

One of Göttner-Abendroth’s main assertions is that the term ‘matriarchy’ and various expressions used synonymously, such as ‘matrilineal’, ‘matrifocal’, ‘matristic’ or ‘gylanic’, lack a clear universal definition and are therefore misunderstood. When patriarchy is commonly understood as the sovereign rule or dominance by men, the reverse is often applied to the term matriarchy, as in the case of de Beauvoir (1949). Göttner-Abendroth suggests this is to misunderstand the dualistic meaning of ‘arche’ in Greek as both ‘domination’ and ‘beginning’. She argues, for example, that the word ‘archetype’ would not be understood as ‘dominator-type’ just as ‘archaeology’ would not be understood as ‘the teaching of domination’ (p.xvi). Matriarchy is thus best defined as ‘mothers from the beginning’ (p.xvi) in both the biological and cultural sense. Man, she argues, can make no claims to this role, and as a result, ‘has been obliged, since the start of patriarchy, to insist on that role, and then to enforce it through domination’ (p.xvi). This theory supports her claim that mothers are the beginning of culture, and she asserts that matriarchies were societies of consensus, in which the division of labour was based on a horizontal logic that expressed economic mutuality through gift circulation, and honoured the sacred of the Feminine Divine. There is no patriarchal equivalent with which to compare this model, she argues, because patriarchy is a system that relies on the positioning of women (as well as most men) as inferior exchange objects.

Other scholars have relied on mythological and religious texts and structural linguistics as evidence of matriarchal social beginnings. A primary and respected text in matriarchal cultural theory is the work of religious historian, Robert Graves. In The white goddess: A historical grammar of poetic myth (1948), he makes an explicit critique against claims that the superiority
of patriarchal culture resulted from the overthrow of pre-existing matriarchal societies. By asserting that there were no male gods in early Europe, and by detailing the role of the immortal Great Goddess, he argues matriarchal culture was in fact the superior culture destroyed through the violence and domination of patriarchy. This, he argues, has led to a biased cannon of mythological and historical study.

Prior to Graves, J.J. Bachofen is thought to have provided the first documented account of distinct pre-patriarchal societies. He asserts that matriarchal cultural structures were not an aberration of any particular geographic location, but prevalent in regions such as India, Egypt, Persia, and many Mediterranean societies, including Greece (Göttner-Abendroth, 2013). In his primary text, Das Mutterrecht (Mother Right) (1861), considered largely influential to Graves’ work, Bachofen compares historical evidence with myth, supporting the conclusion that ‘myths can be generally understood as witnesses to history’ (Göttner-Abendroth, 2013, p.4). Feminist and indigenous matriarchal scholarship, beginning in the contexts of Western feminism in the 1970s, typically prefer Graves’ work to that of Bachofen, who, unlike Graves, is often accused of retrospectively projecting his middle-class Christian values on history.

As noted, Göttner-Abendroth’s research constructs an argument that matriarchal social ordering systems were more gender-egalitarian, but I suggest a more critical reading of her argument is necessary. Particularly, I take issue with the use of the term ‘matriarchy’ and from a Foucauldian perspective, argue this term is itself discursively constructed and can’t be known outside of the discursive economy in which its claims are asserted. To refer explicitly to the enjoyed freedom of ‘both sexes’ within matriarchal societies, linguistically depends on an established binary model of sex. Göttner-Abendroth’s imposition of this taken-for-granted dualism and her preference given to the ‘feminine’ doesn’t respond to indigenous research that has suggested myriad respected gendered constructions in more egalitarian societies, including inter-sex and transgender/transsexual embodiment and expression (Feinberg, 1996). Moreover, to position woman as maternal figure, the primary ordering principle in the creation of life and culture, relies on naturalistic discourse in which the ‘female’ body becomes culturally intelligible based on an assumption of its reproductive essence. This forecloses the possibility to see the maternal
figure as itself an effect or consequence of the culturally-specific system in which it exists. Göttner-Abendroth argues that, in opposition to what she terms ‘mainstream feminism’, her purported matriarchy paradigm is not Western-centric or interested only in gender relations. The overall structure of society, she claims, marks her theory as one of inclusive self-determination. Despite the allure of this perspective, I assert it remains illusory to imagine a true and idealised maternal body or matrilineal society as somehow prior to or beyond discourse.

*Biological Discourse and Laqueur's Two-Sex Model*

I return to Laqueur to give attention to the rise of biological science, which he argues is the essential discursive shift to support the absolute differentiation of sex. Biology was largely a project to factualise woman’s link to nature based on so-called empirical claims. Laqueur’s historical outline supports his argument that various cultural and political shifts, particularly ‘scientific rationalism’, led to the development of the two-sex model. Whilst not opposed to Laqueur’s stance, I believe it is problematic to assume there was a specific event that contributed to the predominance of a two-sex paradigm. More realistically, the shift occurred over time, within a web of cultural, social and political relations. To trace Laqueur’s argument, however, during the late seventeenth and early eighteenth century, a cultural period popularly referred to as the European Enlightenment, greater emphasis was placed on reason, objectivity and individualism. A decreased focus on mythology and religion and the subsequent diminution of knowledge based on faith, prompted aspirations to understand life itself within the discursive practice of ‘objective’ and ‘rational’ scientific enquiry that defined its own rules and norms (Clarke, 1998; Foucault, 1973). This epistemology came to be known as the ‘scientific method’ (Laqueur, 1990) in an era now popularly referred to as the ‘Scientific Revolution.’ As Foucault notes, however, retrospectively defining an era as the ‘Scientific Revolution’ requires the ascription of ‘particular spirits of an age in order to impose on history’ (1972, p. 17). In other words, I assert this discursive label privileges science as the superior episteme against which all others must be judged (Woolgar, 1988).
As empirical methodologies became increasingly important to support claims to authority and knowledge, the motivation to apply scientific principles to the corporeal body and to life itself became fashionable (Clarke, 1998; Laqueur, 1990; Moscucci, 1990). Eventually, this supported the discipline formation of what is now known as biology, a ‘science’ that attempts to detail the structure, function, growth and evolution of living organisms. The development and institutionalisation of this discipline, like any other, was dependent on a range of multi-sited power relations, but rather than trace this development, what is of critical importance to this project, are the ways in which biology has acted as a ‘regime of truth’ (Foucault, 1978) by its claims to empiricism. These claims, as Laqueur argues, supported the absolute differentiation of woman from man as ‘natural’ a priori fact.

Biological discourse provided the necessary anatomical terminology to differentiate woman’s reproductive organs from man’s. In other words, man was able to name woman by means of a language to which she had no access. This point is central to Irigaray’s (1985) work in psycho-linguistics. She refers to woman as ‘linguistic absence’ given that woman lacked a subject position from which to speak. This argument arises from her reading of Lacan, who asserts a subject can only emerge in language (Mitchell & Rose, 1982). The masculine language that had the power to objectify woman, supported woman’s social subordination and created a direct link between her cultural intelligibility and her generative function and capacity (Laqueur, 1990). In the words of Irigaray, ‘woman’s social inferiority is reinforced and complicated by the fact that [she] does not have access to language, except through recourse to ‘masculine’ systems of representation … the ‘feminine’ is never to be identified except by and for the masculine …’ (1985, p.85). As such, biological discourse defines woman by the presence of a uterus, ovaries and various reproductive processes, such as menstruation (de Beauvoir, 1948; Laqueur, 1990).

By the end of the seventeenth century, biological discourse, although never reaching consensus, assumed a position of explanatory precedence that legitimised and solidified the construction of anatomical sex within a discourse of natural order (Moscucci, 1990). This binary construct allowed for the rendering of exceptions, such as inter-sex bodies, beyond the boundaries of natural law (Dean-Jones, 1994).
According to Laqueur (1990), one of the primary strategies of the anatomical distinction of woman’s reproductive organs from man’s and the subsequent narrativisation of their respective functions, has been to absorb shifting political aims. For example, this construct has historically served to socially position woman within a logic of ‘natural domesticity’ as well as to explain woman’s inherent pathology and threat to order, as popularised in classic psychoanalytic theory (Ehrenreich & English, 1978; Irigaray, 1985; Kristeva, 1982; Mitchell, 1974). I will give attention to psychoanalytic theory in a forthcoming section. For now, it is important to note that the rhetoric of biological science was foundational to fix asymmetrical gender relations in the Western world, and that the shift to a distinctive binary model of sex was a critical means by which the sexual division of modern society was affirmed. This is astutely described in Butler’s (1990) ‘heterosexual matrix’ configuration, in which she argues the hegemonic construction of sex informs a normative relationship between gender and desire, such that desire is assumed to reflect and express gender, and gender is assumed to reflect and express desire. The biological discourse of sexual differentiation thus supports three specifically gendered ideologies: heteronormativity, woman’s subordinate social positioning, and woman’s essentialised reproductive nature. In Chapter Four, I will explore how these ideologies are rearticulated in contemporary media framings of female age-related fertility decline. Now, I turn to the exploration of psychoanalytic theory as it has been taken up by various feminist scholars. This provides an alternative theory of the discursive construction of woman and historical dominance of man.

Male dominance through a psychoanalytic lens

In the previous section I detailed a selection of historical and cultural perspectives that have contributed to theories regarding the construction and social signification of woman in the Western world. I focused on theories of patriarchy, the overthrow of ancient matriarchal social systems, the influence of Greek and Renaissance anatomy, and the rise of biological discourse in line with the ‘Scientific Revolution’. Here, I turn to a supplementary intra-psychic theory of woman’s discursive construction and signification through various feminist readings of psychoanalytic theory. Although my research does not aim to contribute to psychoanalytic
theory, a brief consideration of this scholarship is valuable in order to further demonstrate the complexity of the discursive enigma of woman.

The fashionability of scientific rhetoric supported the Cartesian mind / body split, which, as previously outlined, rationalised the social division of woman and man in the domestic and private spheres, respectively. Appeals to biology provided a natural site from which material bodies were thought to become culturally meaningful and intelligible. Biological science, however, took little account of psychological processes in the construction of a theory of sexual differentiation. This gap supported the introduction of psychoanalytic theory, which primarily concerns itself with the relations between biology and psychology rather than splitting the two (Chodorow, 1989). The most important contribution of psychoanalytic theory to my analysis is the way in which it has de-linked sex and gender. The invitation to rethink the relationship between sex and gender as non-linear and outside naturalistic terms, has been the primary appeal to many feminist scholars who defend psychoanalytic theory on the premise that it is ultimately an interpretive theory that attempts to analyse how subjects become sexed and gendered, asserts that men and women are made rather than born, argues that gender and sexuality cannot be fully understood through biological claims (Chodorow, 1989; Grosz, 1994; Mitchell, 1974), and argues there is no assumed ‘natural body’ or ‘pure sexual difference’ (Grosz, 1994, p. 57).

In addition to offering theories of sex and gender as developmental processes, Chodorow (1989, p.170) asserts psychoanalytic theories provide a promising lens through which to explore the ‘tenacity’ of the rigid bifurcation of sex and subsequent heterosexual normativity. Although non-normative sexual expression and gendered variance are given attention in classic psychoanalytic theory, they are framed as pathological or neurotic. Whilst numerous feminist scholars have entirely dismissed Freud and Lacan on these grounds, others have suggested great benefit in returning to these foundational texts in order to re-interpret certain premises and theorise more empowering articulations of gender, sexuality, subjectivity and power (Chodorow, 1989; Grosz, 1994; Mitchell, 1974; Butler, 1990).
Although certainly not a unified discourse, psychoanalytic feminist theory collaborates in attempts to disrupt, interrogate, contest and expand the possibilities of woman’s subjectivity and embodiment beyond culturally inscribed roles and essential biological claims. A common opposition to the blending of psychoanalytic theory with feminist theory and praxis has pointed to the tendency to universalise women’s (and men’s) psychic experiences and give too little attention to intersectionality, or other material markers of difference, such as class, race, age, and ethnicity (Chodorow, 1989). This is an important critique and serves as a reminder to remain critical of any universalising theory that doesn’t account for heterogeneous and complex social, psychological and somatic experiences. Of primary importance to my analysis are the ways in which some feminist scholars have interpreted psychoanalytic theory to re-think male dominance and the discursive construction of woman as naturally inferior, pathological, and instinctually maternal. This scholarship is necessarily complex; therefore, my intention is to draw from a selection of key feminist psychoanalytic scholars to explore another perspective from which to consider the historical rise of male dominance and the subsequent discursive construction of woman.

*Male dominance re-thought as fear and contempt of woman*

Previously, I discussed various arguments put forth within Matriarchal studies, which suggest that pre-patriarchal woman was revered for her sacred and mysterious link to the cosmological realm, a link which positioned her at the centre of human and social life. I discussed the devaluation of woman in terms of the Enlightenment and epistemological shifts that decentred the divine in favour of scientific enquiry. Another narrative from which to view the depreciation of woman is detailed in the work of various psychoanalytic feminist scholars who assert that man’s intrinsic fear of woman acts as the primary motivating force behind his attempts to subordinate her within a discourse of her natural inferiority. I will explore this argument in relation to the ways in which the maternal figure and various feminine bodily fluids, organs and processes have been historically represented in discourse. Accordingly, man’s inherent fear of women is theorised as a direct consequence of her power. To alleviate this fear, it is argued that
man must secure his power through access to and control over discourse, allowing him to construct woman in terms of deficiency or pathology.

The negotiation of man’s relationship to woman’s life-generating power by means of psychoanalytic discourse, points to a divide between reverence and contempt. However, according to Grosz (1994), these terms should not necessarily be understood as dichotomous, and they may in fact amount to the same thing. It is an expression of contempt, however, which appears to incite man’s impulse to gain dominance and power over woman through discourse. This relates back to Laqueur’s analysis of Greek texts, in which man positioned himself as superior by means of constructing a heat continuum discourse. Both biological and psychoanalytic discourses allow man to demote woman’s link to the divine, in which her life-generating power was a source of awe and respect, to an earthly sphere, in which the physiological characteristics that differentiate her as non-male or ‘morphologically dubious’ (Braidotti, 1997), can be reframed as unruly, unpredictable, pathological, and ultimately threatening. As Chodorow asserts, ‘For a man, if this [woman’s] power can be named and externalised, it can possibly be conquered’ (1989, p.35).

A return to Greek philosophical discourse reveals another perspective from which to consider the power dynamics involved in the linguistic parameters through which woman’s existence was constructed. Irigaray (1985) analyses Plato’s image of the feminine ‘receptacle’ or ‘chora’, as presented in Timaeus. In this dialogue, woman’s body is described as the space necessary for the formation of material existence, but which itself remains a non-form. This model constructs woman as penetrable material that gives back a reproduction of what has entered her, but which is neither the formative principle nor the result of what it creates. Irigaray asserts the Platonic receptacle demonstrates ‘man’s need to represent her as a closed volume, a container; his desire to immobilise her, keep her under his control, in his possession …’ (Whitford, 1991, p.28). However, Irigaray’s reading of Plato is too simplistic, argues Butler (1993), given that she fails to note that it is not just woman who must perform an essentialised task for the benefit of man, but that slaves, children, and animals are also necessary to ensure the desirable conditions of man’s life. Butler (1993) argues man’s dependency upon the conglomerate of these
constructed others secures his subject position. Whilst Butler offers a more robust reading of Plato’s receptacle, Irigaray’s commentary remains useful to speak to the point that men in positions of power largely assumed control of discourse, an exercise that rendered woman, slave, child, and animal as necessarily inferior.

Another perspective of man’s exertion of power over woman is offered by Braidotti (1997) in her analysis of the woman / mother figure as compared to the monster archetype. This pairing refers to the shared aberration between mother and monster, both as excess and lack in comparison to the male / human. This is based on the Greek root of the word monster, *teras*, which translates as ‘both horrible and wonderful, object of aberration and adoration’ (p.62). In her analysis, she refers to Aristotle’s text *The Generation of Animals*, in which he establishes the norm of reproduction as that which produces a male child, the female child thus representing reproductive anomaly. We can recall Laqueur’s (1990) reading of Aristotle, in which sperm is discursively constituted as the formative principle believed to produce a male child when properly potent. The monstrous maternal body, according to Braidotti (1997), is a boundary-less state which, following in the tradition of Douglas (1980) and Kristeva (1982), positions her as abject within a masculinist discourse of order and solidity.

Man’s fear of the mother / woman, as described in Freud’s Oedipal scenario, is another common site of feminist critique. Freud’s theory posits that in order to appropriately progress through the psychosexual stages of development, the boy child must overcome both his fear of and desire for the mother, in order to identify primarily with the father. Chodorow (1989), more broadly representative of the object-relations psychoanalytic school, theorises that the male-child project, which requires the boy’s rejection of woman based both on fear and desire, is simultaneously intra-psychically motivated and externally sanctioned as a result of the actual social disadvantage of women. Moreover, because Freud suggests all children have bisexual components to their personality, Chodorow argues there is no ‘absolute masculinity’. Accordingly, man must engage in continual practices to assert his triumph over the feminine aspect of his own personality and his non-relatedness to the mother in order to sustain appropriate (ie hegemonic) heterosexual masculinity. She further argues that the struggle for masculinity requires more reactivity and
defensiveness in the boy child in contrast to the development of femininity, which is theoretically in harmony with the maternal figure and therefore more easily ascribed to the girl child.

*Gendered metaphors of the feminine body*

A final theory I explore relates to the discursive construction of woman’s bodily fluids, organs, and processes involved in reproduction. According to this theory, man asserts his dominance by defining the feminine corporeal body not as revered giver of life, but as primarily threatening, chaotic and disruptive to the desired social order. This points back to the monster archetype; however, in this configuration, discourse is coupled to the physiological body rather than to mythical representation. Kristeva (1982) eloquently details this argument in *Powers of Horror*, in which she draws from Mary Douglas’ anthropological work in *Purity and Danger*. Douglas’ work suggests that particular bodily fluids become socially-constructed as threats to social order, an argument that Kristeva rethinks within psychological terms. Kristeva does this in order to discuss the gendered nature of bodily orifices and fluids and their boundaries. She theorises the abject as those fluids that exit the body and come to symbolise a constant reminder that the body can never overcome its demands. These flows thus create unregulated boundaries that represent the implication of death, limited autonomy, and an irrefutable link to a natural realm over which consciousness itself cannot reign sovereign.

Kristeva, Douglas, and Irigaray, each in their own ways, discuss the horror of these bodily fluids, in large part referencing Sarte’s (1969) discussion of the ‘viscous’ in *Being and Nothingness*. According to Grosz (1994), Sarte’s horror links to female sexuality and the fear of boundary-less absorption in the image of the *vagina dentate*. Put differently, Irigaray (1985) argues the discursive links between female sexuality, maternity, and the corporeal viscous body stand in opposition to the solidity, unification, and order of man. When man defines himself as solid, fluids ‘betray a certain irreducible materiality; they assert the priority of the body over subjectivity; they demonstrate the limits of subjectivity in the body’ (Grosz, 1994). The superior
positioning of consciousness and rationality, attributes man ascribes to himself as a means of differentiation, are threatened by the very presence and unpredictability of these fluids. However, this threat to man’s sovereignty can be overcome, in part, by constructing a discourse that links the body and its fluids specifically to the realm of the feminine. The feminisation of bodily flows, suggests Grosz, points back to a primal male fear that leads men to ‘disavow their dependence on what they construe as femininity (in themselves)’ (1994, p.200).

The distinguishing fluid of woman, menstrual blood, becomes the primary symbol of her reproductive utility and the code by which ‘the female body becomes a body which leaks, which bleeds, which is at the mercy of hormonal and reproductive functions’ (Grosz, 1994, p.204). Beyond the discursive construction of woman as ‘lack’ or ‘absence’, Grosz questions if, as suggested by Irigaray (1985), the modern, Western female body be more complexly defined as ‘a leaking, uncontrollable, seeping liquid; as formless flow; as viscosity, entrapping, secreting; as lacking not so much or simply the phallus, but self-containment … a formlessness that engulfs all form, a disorder that threatens order’ (1994, p.203). Largely reminiscent of Aristotelian discourse, the modern discursive construction of woman as corporeal seepage, stands in stark contrast to the representation of man’s seminal fluid as that which asserts itself with agency in an active process of fertilisation and production (Martin, 1987/1991; Metoyer & Rust, 2011). Despite its fluidity and equally threatening presence to the boundaries of the material body, semen is discursively reconfigured as a solid (Grosz, 1994). The discursive valorisation of semen suggests man’s attempt to negotiate power over the feminisation of his own corporeal viscous and boundary-less body.

Emily Martin’s (1987/1991) research, in which she analyses the use of metaphors in medical textbooks to describe the function of sperm, eggs and the processes of menstruation and menopause, demonstrates the proliferation of this theory. Her analysis shows that the bodily organs and fluids used as key biological signifiers of woman are described as essentially inferior, weak, passive, and in a constant state of decline and atrophy, in comparison to the valorisation of seminal ejaculation and the heroic role it is ascribed in the journey to penetrate the egg. Twenty years later, Metoyer and Rust (2011) find similar asymmetrical gendered tropes in medical
textbooks. Although Martin’s analysis of metaphorical gendered ideology does not assert the psychoanalytic theory of intrinsic male fear, Chodorow would likely argue Martin’s research explicitly demonstrates that the institutionalisation of scientific objectivity is a defensive mechanism ‘built on a latent structure of anger and repudiation of women’ (1989, p.185). Indeed, this point has been central to radical feminist arguments that suggest men’s formation and control of scientific disciplines such as gynaecology and the subsequent development of reproductive technologies demonstrates one of the ways in which men have attempted to overcome their fear and contempt of women’s generative capacity (Klein, Arditti & Minden, 1984; Corea, 1985). This discussion was not intended to privilege the psychoanalytic model of ‘male fear’ as a universal principle from which woman was discursively constructed, but to demonstrate the complexity of woman’s discursive construction.

*The discourse of maternal instinct*

The second aspect of psychoanalytic theory that is useful to my analysis is the discourse of maternal instinct. This discourse is also linked to the suggestion of man’s fear of the all-powerful maternal figure. The argument suggests that appeals to scientific authority, discursively constructed as Law, allowed man to link woman to an essential biological drive/desire to reproduce. This discursive strategy further supported the construction of a correlative relationship between woman’s inherent psychological instability and her reproductive organs. I will discuss the development of this relationship further when I explore the ways in which woman has been constructed as pathological in psychoanalytic discourse. Before focusing on the psychoanalytic perspective of maternal instinct, it is worth noting other popular arguments which still circulate.

According to Chodorow (1978), most maternal instinct discourses connote both female desire for gestation and nurturance and appeal to either naturalistic or evolutionary arguments. Appeals to nature suggest that woman’s role as both gestational carrier of a foetus and primary nurturer of a child are ‘biologically self-explanatory’ (p.13) given woman’s anatomical configuration. The
social role of mothering is assumed to be a natural consequence of anatomy rather than a social construct. Evolutionary arguments suggest that woman’s maternal role is functional, based on the argument that, at one time, it was necessary for species survival. Social repetition throughout the evolutionary process leads to the assumption that maternal instinct is genetically imprinted. Likewise, this logic supports the claim that man’s predominantly public role is ‘natural.’ For example, I contend that appeals to ‘hunter-gatherer’ societies, in which women are ascribed roles of gestation, nurturance and other domestic duties, is a fictionalized narrative that attempts to naturalise the division of labour. Much indigenous research suggests that more communal societies allowed for a multiplicity of role expression, including men’s and older children’s ongoing involvement with domestic duties and childrearing, and women’s roles in hunting and building (Feinberg, 1996). Although survival of the species no longer relies on women to assume a reproductive role, appeals to a binary sexual division of labour based on evolutionary logic persists as a means to conceptualise maternal instinct.

Psychoanalytic theory complicates these deterministic biological and evolutionary arguments by relating maternal instinct to appropriate female (hetero)sexual maturation. Here, I provide a simplified summary of what is a complex and highly debated aspect of psychoanalytic feminist theory. According to Chodorow’s (1978) interpretation of Freud, pre-Oedipal development differs between girls and boys such that a girl’s love for her mother is prolonged because of the mother’s identification with the girl child, whereas the mother often encourages the boy child to differentiate more readily. This relates to the previous discussion regarding the boy-child’s project to dis-identify with the mother in order to attain proper masculinity. From an object-relations perspective, girls thus become more relational whereas boys become essentially arelational. According to Chodorow, this influences adult women’s desire to provide maternal nurturance, given their motivation to re-locate themselves in the primary mother / daughter relationship. This is in opposition to men, who only need a heterosexual relationship to re-locate the mother, their primary object of love. According to Irigaray’s (1985) reading of Freud, female reproductive function becomes the central instinct from which all other instincts are expressed. Classic Freudian theory suggests the success of the girl-child’s (hetero)sexual maturation hinges on her desire to give birth. The desire for a child (specifically a boy) is said to replace her
childhood penis envy (of the father). The successful creation of a boy child thus becomes the penis substitute. Irigaray’s interpretation suggests that in the nurturance of a son, woman can pass on all of her own suppressed ambition that she gave up when she assumed her proper feminine role.

Not surprisingly, psychoanalytic and bio-evolutionary maternal instinct theories have been critiqued for their essentialist claims that link woman’s primary function and cultural intelligibility to a desire to reproduce. Additionally, these discourses explicitly rely on appeals to heterosexual normativity (Butler, 1990). Despite this, some psychoanalytic feminist scholars such as Kristeva (1980), have attempted to reclaim the maternal as woman’s ideal form of pleasure and meaning outside of the symbolic patriarchal law. Kristeva’s position points back to the previous discussion of matriarchal societies in which the sacred maternal was the centre of society. However, Butler rightly critiques Kristeva when she states, ‘the female body that is freed from the shackles of the paternal law may well prove to be yet another incarnation of that law’ (1990, p.119). In other words, Kristeva’s assertion is a nostalgic perspective for a pre-paternal ideal, which itself also relies on a naturalistic discourse of maternal instinct that cannot be understood outside of its discursive construction.

Thus far, I have visited various theories that attempt to narrate the discursive construction of western woman by exploring a selection of philosophical, biological and psychoanalytic discourses. This was ultimately an exercise to demonstrate some of the conditions within which woman’s discursive construction have been theorised, rather than an attempt to find a specific pre-discursive site of woman’s origin. What becomes clear is the complex, multi-sited and contingent matrix of power relations within which the category of woman evolved. What is obviously lacking here is any consideration of subjectivity, materiality, and agency, issues central to post-structural feminist theory (Blackman, 2008; Braidotti, 2002; Butler, 1993/1999; Grosz, 1994; Haraway, 2003; Heyes, 2007; Irigaray, 1974; McNay, 1992). Given my aim to employ a critical historical analysis of discourse, this research is confined to consider only those research questions outlined on page 58.
Chapter Two: Situating Age-Related Fertility Decline: The Molecularisation of Menopause and the Emergence of the ‘Biological Clock’ Trope

Continuing from Chapter One, in which I considered the discursive construction of sex, I will now turn to discuss how the materiality of female age-related fertility has been discursively manipulated. I discuss what Nikolas Rose (2007) terms the ‘molecularisation of life’ as a theoretical lens through which I consider contemporary ways in which medical discourse frames this material phenomena. I again draw upon Emily Martin’s analysis of medial metaphors of menopause to demonstrate how discourses of the body are specifically gendered. Building upon both Martin’s and Rose’s work, I turn to a discussion of the emergence of the ‘biological clock’ trope in US news media in the late 1970s and analyse the particular socio-political conditions that underpinned the increasing visibility of this discourse. Lastly, I consider the more recent discourse of ‘ovarian reserve’ as evidence of an increasing molecular medical gaze and the inextricable links this discourse shares with the interests of the ART industry and the nascent technique of egg-freezing.

The Discursive Construction of Menopause

According to the Online Etymology Dictionary, the term menopause, used first in 1852, comes from medical Latin menopausis and Greek roots men meaning ‘month’ and pausis from pauein meaning to ‘cause to cease’. Menopause, is thus discursively constructed as the cessation of menstruation, what biological discourse has defined as the material signifier of woman’s fertility. In this way, menopause was generally figured as a change in life. As suggested by Amundsen & Dier’s (1970) summary of the textual representation of menopause in Classical Greek sources (see Figure 2), aside from estimated ages of menopause, there was very little textual narration about the progression of change. Whilst the lack of attention to menopause could simply signify the irrelevance of the concept given shorter life spans during the Classical Greek period,
TABLE 1
Summary of the age at menopause according to classical sources

<table>
<thead>
<tr>
<th>Author</th>
<th>Date</th>
<th>minimum</th>
<th>Age cited</th>
<th>maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aristotle</td>
<td>4th cent. B.C.</td>
<td>40</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Diocles</td>
<td>c. 4th cent. B.C.</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hippocratic Corpus</td>
<td>c. 4th cent. B.C.</td>
<td>42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pliny</td>
<td>1st cent. A.D.</td>
<td>40</td>
<td>50</td>
<td>60</td>
</tr>
<tr>
<td>Somnus</td>
<td>1st/2nd cent. A.D.</td>
<td>40-50</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Oribasius</td>
<td>4th cent. A.D.</td>
<td>35</td>
<td>50</td>
<td>60</td>
</tr>
<tr>
<td>Aetius</td>
<td>6th cent. A.D.</td>
<td>35</td>
<td>50</td>
<td>60</td>
</tr>
<tr>
<td>Paulus Aegineta</td>
<td>7th cent. A.D.</td>
<td>35</td>
<td>50</td>
<td>60</td>
</tr>
</tbody>
</table>

Figure 2: Amundsen & Dier (1970)

Dean-Jones (1994) suggests this lacuna highlights the ‘theoretical death’ of women. In other words, once woman’s reproductive capacity was rendered absent, she became irrelevant or an uninteresting object for the scrutiny of the male medical gaze.

Medical Metaphors of Menopause

Interest in the menopausal body, to whatever extent it might have been absent in the Classical Greek period, has attracted medical and media attention in the modern age. Previous scholars have discussed the increasing significance given to menopause throughout the eighteenth century, (Laqueur, 1990; Moscucci, 1990) during which biological sciences gained epistemological precedence. Rather than summarise this work, my discussion is situated in the late twentieth and early twenty-first centuries. I first conceptualise this increasing medical interest in menopause through what Nikolas Rose (2007) describes as the ‘molecularisation of life’, or a form of twenty-first century bio-politics that is directly related to neo-liberal ideology. Emergent biotechnologies, argues Rose, have opened up new visualisation techniques, enhancing the powers of the medical gaze to define life at an increasingly molecular level. These technologies are more concerned with the reconfiguration of biology and optimisation of the future than the diagnosis and cure of disease. According to Rose, who discusses genetic science and screening technologies as an example of this molecular shift, human beings are experiencing
a new ontology of life in which the demands of biological limits are continually destabilised. Questions regarding who we are, who we can become, and just what the ‘good life’ entails increase alongside the emergence of new diagnostic and enhancement technologies.

Whilst Rose’s molecularisation theory is tenable, it lacks analysis of the specificity of the ways in which female-gendered bodies are subjected by the molecular medical gaze and the targeted tactics of self-governance directed to these gendered neo-liberal subjects. Toward this aim, I will consider the discursive salience given to women’s eggs in metaphorical expression of human reproductive processes. To begin this discussion, I revisit Emily Martin’s work on the gendering of bodily metaphors regarding processes of human reproduction.

In *The Woman in the Body* (1987), Martin analyses bodily metaphors in twentieth century medical textbooks and argues that medical discourses at this time framed woman’s reproductive body as a ‘system’, a configuration that remains the dominant model through which the sexed processes of menstruation, pregnancy, and menopause, are figured to this day. Martin (1987/1997) argues woman’s ‘reproductive body’ was discursively constructed as a hierarchically organised information-transmitting system. This model demonstrates the importance given to hormones in the twenty-first century (Malson & Swann, 2003), which replaced the historical salience given to the ovaries as the site of control in the eighteenth and nineteenth centuries (Ehrenreich & English, 1978; Laqueur, 1990; Mosucci, 1990). The information-system model positions the hypothalamus region of the brain as the control centre or conductor of menstruation, which functions by orchestrating the release of hormones, or chemical signals to transmit messages to the pituitary glands. The purpose of the system is to allow for the transport of the eggs from the ovary to the uterus in preparation of a proper place for a fertilised egg to gestate. As Martin rightly argues, this particular frame draws upon an essentialist paradigm wherein woman is defined as a primarily reproductive being.

The discursive significance given to hormones supported the medicalisation of menopause. Even as recently as 1981, the World Health Organisation (WHO) described menopause as ‘an
oestrogen-deficiency disease’ (p.45), a far-cry from the notion of an unremarkable change in life-stage. This blatant medicalised discourse, I assert, directly relates to the expansion of privatised medicine, transnational reproductive markets (Inhorn & van Balen, 2002; Waldby & Cooper, 2008) and pharmaceutical industries that benefit from this linguistic construction. Moreover, this medicalised discourse supports an expansion of consumers to purchase pharmacological products, such as Hormone Replacement Therapy (HRT), (Harding, 1997) and substantiates ongoing economic backing of the ART industry which, with new technologies such as egg-freezing, construct later-aged or post-menopausal pregnancy as a new possibility (Watkins, 2007). The WHO disease-model definition also demonstrates the salience given to the ‘hormonal body’, a shift which Clarke (1998) suggests supported the development of synthetic contraception in the early twentieth century.

Even when the discourse of menopause is not so blatantly medicalised as in the case of the WHO definition, gendered metaphors sustain a system of gender hierarchy. In other words, I assert that the intelligibility of the system model explicitly draws upon capitalistic logic and configures menopause as a break-down in functionality and ultimately, failed reproduction. This model follows in the tradition of what Martin describes as a capitalistic production frame of the female body, in which the uterus is configured as a machine, the woman as a labourer, the child as a product, and the doctor as an owner or manager. Whereas Susan Sontag (1979) has described the discursive framing of cancer as horrifically out-of-control production, Martin’s (1987) analysis shows how menopause is discussed as the malfunction of each reproductive part’s prescribed role. She compares this discursive frame with the cultural fear of a ‘disused factory’, ‘failed business’ or ‘idle machine’ (1987, p.45) within late-capitalism. In this sense, menopause is not only framed as the failure to (re)produce, but (re)production ‘gone awry, a system making products of no use, not to specification, unsaleable, wasted scrap’ (p.46). Martin’s analysis of medical discourse, in which menopause is described with terms such as ‘atrophy’, ‘failure’, ‘regression’, ‘decay’ and ‘decline’, parallels negative stereotypes and the marginalisation of menopausal women in Western societies (Martin, 1997). This explicitly negative framing, as demonstrated in Chapter One, is embedded in a long history of power relations involved in the construction of woman as essentially inferior to her male counterpart.
In later research (1991), Martin extends her analysis of gendered stereotypes in medical discourse by contrasting the language used to describe the materiality of egg and sperm, which becomes central to the ‘biological clock’ metaphor. This analysis reveals a greater sense of enthusiasm and respect for male reproductive processes. For example, spermatogenesis, man’s production of hundreds of millions of sperm each day, is framed as a remarkably productive process, whereas woman’s finite number of eggs amassed in utero is described as degenerative and wasteful. That the enormity of men’s unused sperm isn’t presented as wastage and women’s stock-piling of eggs isn’t framed as conservation, demonstrates how ‘stereotypes are written in at the level of the cell’, which ‘constitutes a powerful move to make them seem so natural as to be beyond alteration’ (Martin, 1991, p.500). Both Keller (1985) and Clarke (1998) agree with Martin’s analysis that the ‘gendering’ of bodily metaphors naturalise culturally constructed gender asymmetry whilst simultaneously legitimating and stabilising ‘scientific’ claims. Through a Butlerian lens, we can theorise this discourse as a means by which gender is reiterated as a system of ‘truth’.

*The Emergence of the ‘Biological Clock’*

I now turn my attention to discuss the conditions that supported the emergence and mediatisation of the ‘biological clock’\(^5\) metaphor. I consider this as another discourse by which age and female fertility have been constructed, which both draws upon and revisions Martin’s system-model of menopause. This discussion is situated within the socio-political climate of the US in the late 1960s and early 1970s.

Any attempt to generalise the characteristics of an ‘era’ or generation is certainly an exercise of reductionism. I in no way suggest that the following discussion of the socio-political ‘climate’ of the late 1960s and early 1970s captures all the nuances of discursive practices at the time. The

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\(^5\) The term ‘biological clock’ was originally used to describe the physiological operations of sleep and wake patterns, commonly referred to as ‘circadian rhythms’. However, I only discuss this term in relation to its use in human reproductive discourses.
salience or popularity of any discourse at any point in time always results from power relations and a contingent web of social, cultural and economic conditions. The material reality of female fertility decline with age is of course not a new discourse. My aim is to consider how this material phenomenon has undergone various discursive revisions, of which the ‘biological clock’ is one. One might argue that the use of the ‘biological clock’ as a metaphor for the relationship between age and fertility merely functions as a widely-accessible communicative tool to convey a particular ‘scientific fact’. Certainly, metaphors operate as a communicative resource (Lakoff & Johnson, 1980), yet I align with Goatley’s (1997) critical stance, which is that metaphors primarily function as tools of persuasion. Metaphor, from Greek meta (with, after) and pherein (bear, carry), implies movement, both a transfer of meaning and also the evocation of an emotional response, wherein persuasion is made possible.

Fertility rates quite drastically plummeted between the 1960s and early 1970s, as depicted in Figure 3. The contributing factors to this decline in the US include multiple social, economic, and political trends, including economic fluctuations, postponed marriages and partnerships, increased concerns about the impact of population growth on the environment, increased availability and use of contraceptive technologies, liberalised abortion practices, urban migration, and the ‘women’s liberation movement’ that involved an influx of women in the public workplace.

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6 It is important to note that the visual representation of Figure 3 and 4 should not be viewed uncritically. These images depict only one ‘truth’, and as such, are not intended to be viewed as ‘evidence’, but as signifiers of discourse.
Whilst all of these factors contributed to the decline in average fertility rates, the widespread accessibility and increasing social acceptance of the contraceptive pill and intra-uterine device (IUD) was perhaps most significant, given the way in which reproductive manipulation arguably supported women’s involvement in the workforce (see Figure 4), together with absent or delayed childbearing. This relationship allowed for the prolongation of child-free years, a change most significant for the ‘baby-boom’ generation, as they entered adulthood during these decades. During the late 1960s, when the first of this cohort progressed into what demographers considered their primary reproductive years, dire warnings of a ‘population bomb’ infiltrated news media, and the potential national and global implications of such a fertility increase were debated (Ehrlich, 1968). This was also a time when focused political attention was given to the implications of population growth on a global level, with representations of anxiety about the implications of the ‘hyper-fertility’ of certain subaltern regions.

Figure 3: Total Fertility Rates (World Bank, 2014)
A key discursive moment in regard to population forecasts and policy is exemplified in President Nixon’s famous 1969 Congressional address. In this speech, he appointed an official Commission on Population Growth and the American Future, funded by Rockefeller III, founder of the American Population Council (Kasun, 1988) and key player in a lineage of research initiatives and population control strategies throughout the twentieth century. What followed from this appointment was a published report\(^7\) in 1972, which drew the primary conclusion that America was experiencing a ‘population problem’ based on an ideological growth ethic that ‘more is better’. The suggested solution was to ‘modernise demographic behaviour’ by encouraging Americans to consider family planning ‘on the basis of greater rationality rather than tradition or custom, ignorance or chance’. This translated to the mainstream slogan: ‘Stop at Two’\(^8\), which the Commission Report authors argued would positively impact social and family institutions, economic stability and environmental sustainability on a global level.

\(^7\) The full population report is available online at: [http://www.population-security.org/rockefeller/001_population_growth_and_the_american_future.htm](http://www.population-security.org/rockefeller/001_population_growth_and_the_american_future.htm)

\(^8\) See ‘Stopping at Two’, *Time*, 1972.
The media attention given to the potential ‘population bomb’ and stern advice of the Commission report was co-existent with decreased fertility rates throughout the 1970s. It would undoubtedly be presumptuous to draw a direct correlation between demographic trends and political and media discourse, but the parallel is noteworthy. Average fertility rates continued to decline in the 1970s, and according to 2014 World Bank Data, in 1976, US birth rates reached an all-time low at 1.76 children per woman of child-bearing age. This put average fertility below ‘replacement levels’, defined as, on average, 2.1 children per woman of reproductive age.\(^9\) This downward trend incited new national anxieties about population instability, a deflated economy and decreased national security. Not surprisingly, women’s reproductive actions were again put under the spotlight, inciting political attention, demographic enquiry, medical research funding and media air-time. As more women attempted pregnancy in their thirties and forties, the relationship between age and fertility took on entirely new significance.

These key socio-political shifts throughout the 1960s and 1970s were, according to Amir (2006), central to the emergence of the ‘biological clock’ in mainstream US media in the late 1970s.\(^{10}\) Another aspect for consideration is a distinct paradox at work in the 1970s, also important to the use of the ‘biological clock’ metaphor as a tool of governance, which I discuss in greater length in Chapter Three. On the one hand, the 1970s are often described as an ‘era’ of medical mistrust and scientific delegitimisation (Connelly, 2008). Whatever mistrust was present, however, occurred in tandem with the rapid development of ARTs that culminated in widespread media attention given to the first baby born as a result of IVF in 1978. This discursive event fueled a renaissance of medicalised authoritative discourse, the newly constructed disease of ‘infertility’, and an upsurge in doctor’s visits motivated by conception difficulties (Aral & Cates, 1983; Ehrenreich & English, 1979; Marsh & Ronner, 1996; van Dijck, 1995).


\(^{10}\)See Cohen, R. ‘The clock is ticking for the career woman: biological time clock can create real panic’, *The Washington Post*, 16 Mar 1978. This was followed in 1979 with Marilyn Fabe and Norma Winkler’s book: *Up Against the Clock: Career Women Speak on the New Choice of Motherhood*. 

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Just as diagnoses of ‘infertility’ as well as ART development skyrocketed in the 1980s, so too did media circulation of the ‘biological clock’. Two commonly cited aetiologies of ‘infertility’ in the late 1970s and 1980s were sexually transmitted infections, attributed to women’s ‘sexual promiscuity’ related to the ‘women’s liberation movement’, and ‘women’s’ delayed child-bearing in favour of education and career advancement (Marsh & Ronner, 1996; van Dijck, 1995;). Of the two, age is more interesting to this project, yet it cannot be overlooked that both explanations explicitly frame impaired conception as a consequence of women’s ‘lifestyle choices’. These specifically gendered frameworks of ‘infertility’ were also supported in large part by President Reagan’s neo-conservative political agendas and the resurgence of pro-natalist ideology in the 1980s. Additionally, as Amir (2006) suggests, this was a decade in which science once again seized control of the role to provide ‘the conceptual framework in which reproduction was culturally articulated and socially managed’ (p.55). It is in no way surprising, therefore, that scientists, medical doctors and the new burgeoning field of fertility ‘specialists’ expanded and attempted to benefit from the increasing discussion of female age and fertility decline.

Prior to the 1980s, average female fecundity was commonly thought to peak around age twenty-five and continue at a steady level until roughly the age of thirty-five or beyond (Marsh & Ronner, 1996). This claim was neither largely debated nor socially significant. In light of the social conditions I’ve outlined, however, more research was funded to examine the relationship between age and fertility decline as a specifically medical correlation (Amir, 2006). A famous French study in 1982 (Schwartz & Mayaux), was believed to be the first widely-published data set to specifically address this issue with ‘scientific’ methods, that is, by attempting to isolate age as a factor of conception probability. The study was carried out by artificially inseminating a cohort of over 2,000 women over a one year period, whose husbands were diagnosed as sterile. The conclusion of the study led to widespread media attention that women’s fertility dropped considerably at the age of thirty and markedly declined after age thirty-five. In one New York Times article (Webster, 1982) that discussed the study, there was speculation about how this ‘discovery’ might revolutionise either a restructuring of education and labour markets, or women’s decisions to primarily devote their twenties to child-bearing. Although controversy
circulated throughout the medical community, namely that the study only demonstrated the success rates of artificial insemination and that spontaneous conception was very likely during a two to five year period (Bongaarts, 1982), such methodological critiques received little attention in popular news media. Before long, the age of thirty was given salience as a significant turning point in a woman’s reproductive lifespan, and featured prominently as the age at which the ‘biological clock’ began to incessantly tick.

*The Molecularisation of Age and Fertility*

What is also significant, is the shift in the way in which medical discourse began to articulate age-related fertility decline at an increasing molecular level, coinciding with the increased media attention given to the ‘biological clock’ in the 1980s. To extend the previous discussion of gendered metaphors and the re-inscription of sex/gender on material bodies as a regulatory function (Butler, 1990), I will now reflect on the emergent medical discourse of ‘ovarian reserve’, which similarly gives salience to the deterioration of a woman’s oocytes as the primary cause of reduced fertility, and which explicitly attracts the interests of the pharmaceutical and fertility industries.

*Ovarian Reserve*

The discourse of ‘ovarian reserve’ draws upon the established model of woman’s reproductive degradation, wherein significance is given to the quality and quantity of her eggs. According to the ASRM, ‘ovarian reserve’ is defined as: ‘a woman’s fertility potential in the absence of specific pathophysiologic changes in her reproductive system. Diminished ovarian reserve is associated with depletion in the number of eggs and worsening of oocyte quality’ (Leridon, 2012, p. 12). Similar to the WHO definition of menopause, this discourse is inherently medicalised, and therefore benefits the ART and pharmaceutical industries. The circulation of this discourse primarily occurred alongside the development of predictive assessments that
aimed to test the quality and quantity of a woman’s eggs by means of measuring two prominent hormones (FSH and AMH) related to ovulation. The purpose of these tests was to estimate the probability of a woman’s chance for successful conception through IVF. In this way, ‘ovarian reserve’ tests functioned as a gate-keeper whereby women could be weeded out if they were unlikely to contribute to the success rates of a particular fertility clinic, which was a consideration of increasing importance once fertility clinic data was regulated by the US government (Friese, Becker & Nachtigall, 2006). In this manner, a woman can be labeled with ‘diminished ovarian reserve’, a discourse which both conflates a woman’s age with the quality and quantity of her eggs, and reiterates the essentialist construction of woman’s ontology.

Despite the proliferation of these predictive tests for ‘ovarian reserve’, of which at least thirteen are available (Bukulmez & Arici, 2004), according to a publication from the 2012 Conference proceedings between the ASRM and the National Institute of Child Health and Human Development (NICHD), there is still no consensus regarding the ‘bio-markers’ of ‘ovarian reserve’ (Lamar et al., 2013). Concluding remarks from this proceeding, nevertheless, suggest that ‘ovarian reserve is an important driver of fertility, the timing of menopause, and a woman’s overall health and quality of life’ (p.292) and as a result, ‘warrants further research’. This aptly demonstrates how the hegemonic status afforded medical discourse functions as a re-inscription of ‘sex’, whereby woman is constructed as primarily reproductive.

In Chapter Four’s discussion of contemporary news media frames of female age-related fertility decline, I will advance Martin’s discussion of the gendering of bodily metaphors and reflect on the continued use of the ‘biological clock’ trope in discussions of the nascent technology of egg-freezing.
Chapter Three: Theoretical Framework and Methodology

Here, I briefly present key theoretical assumptions of discourse studies in order to introduce Critical Discourse Analysis (CDA) and the emphasis on media framing I will employ. Within a post-structural framework, I assert that CDA’s normative function and explicit political stance are problematic given that CDA generally relies on an assumed hierarchy of truths in order to discuss ‘social injustice’. Although CDA practitioners attempt to validate their ‘biased stance’ with appeals to transparency and reflexivity, I suggest CDA remains insufficient for a discursive analysis of ‘gendered’ discourses. To address this lacuna, I propose CDA projects that focus on gender can be supplemented with Baxter’s (2003) Feminist Post-Structural Discourse Analysis (FPDA) model, which allows for a more nuanced understanding of gendered subject formation without collapsing into relativism.

Theoretical Assumptions of Discourse Studies

The term discourse is defined in numerous ways in the literature, and has been written about extensively within various traditions. Now a rather fashionable academic term made particularly valuable by the writings of Foucault, discourse has become an increasingly vague way to describe multiple contexts, processes, and objects. In Foucault’s writings, discourses can be understood as ‘practices that systematically form the object of which they speak’ (1984, p.61). In elaboration, Baxter describes discourses as ‘forms of knowledge or powerful sets of assumptions, expectations and explanations, governing mainstream social and cultural practices’ (2003, p.7).

The trans-disciplinarity of discourse analysis (DA) aligns with the ‘linguistic turn’ attributed largely to post-structural critical theory. This movement, significantly influenced by de Saussure and the subsequent discipline formation of Semiotics, was popularised in the field of Arts and Humanities by writers such as Umberto Eco and Roland Barthes and used within DA primarily by van Leeuwen and Kress (van Dijk, 2007). DA has siphoned into many divergent approaches,
all of which grew out of scholarship on ‘text grammars’ in the 1960s, mostly notably Chomsky’s (1965) ‘generative grammar’ and Halliday’s (1976) ‘Functional Systemic Grammar’ (van Dijk, 2007). These traditions, argue Weiss and Wodak, are ‘closed theories’ (2002, p.13), given their *a priori* structuralist assumptions of universal grammar that disregard the social dimensions of language acquisition. The movement beyond ‘text grammars’ in the 1960s and 1970s, occurred alongside various social movements such as Civil Rights and Feminism (van Dijk, 2007), which were influential to the development of CDA as a political practice. CDA thus takes an explicit ‘socio-political stance’ (Wodak & Meyer, 2001; van Dijk, 1993). Despite this shared characteristic, CDA has never attempted to delineate a single theory or method, but highlights the importance and value of trans-disciplinary approaches (Fairclough, Wodak & Mulderrig, 2011; Lazar, 2007; Weiss & Wodak, 2002; van Dijk, 2007).

*A ‘Critical’ Approach to Discourse Analysis*

CDA is not a systematic empirical method, but a cluster of various approaches that share similar theoretical assumptions (Wodak & Meyer, 2001). According to Fairclough, CDA is ‘a point of entry into trans-disciplinary critical social analysis’ (2012, p.9). CDA generally takes interest in questions that interrogate the role discourse plays in constructing and maintaining social worlds and subject positions. Rather than assuming an ‘out there’ social reality that can be understand or uncovered through ‘objective’ or ‘empirical’ analysis, CDA is primarily concerned with the process by which epistemological assumptions are situated and normalised within discourses (Wodak & Meyer, 2001). CDA thus understands discourses as forms of ‘social practice’ (Baxter, 2003; Blackledge, 2012; Fairclough, Wodak & Mulderrig, 2011; Weiss & Wodak, 2002) that constitute and are constituted by social, situational and institutional conditions. CDA explores how concepts/phenomenon/objects are constructed, how meanings develop and shift over time, the intertextuality of discourses, how discourses help delineate normative social practices, the role discourses play in empowering or disempowering different subject positions, and how subjects draw on various discourses to legitimate their social positioning and actions (Chouliaraki & Fairclough, 1999; Gee & Hanford, 2012; Jørgensen & Phillips, 2002; Paltridge, 2012; van Dijk, 1993; Willig, 2008; Wodak, 2013; Wodak & Meyer, 2001).
What underlies the trans-disciplinarity of CDA, is a critical approach that takes as its primary focus the relationships between discourse, power, and ideology (Chouliaraki & Fairclough, 1999; Weiss & Wodak, 2002; van Dijk, 2007). The term ‘critical’ refers to ‘critical social analysis’, which, amongst CDA scholars, is often traced to Habermas, Gramsci and the Frankfurt School (Lazar, 2005; van Dijk, 1993; Wodak & Meyer, 2001). Within this tradition, CDA is both normative and explanatory by seeking to describe and morally evaluate existing social ‘realities’ in order to explain these realities as effects or consequences of discursive power relations (Fairclough, 2012). CDA takes an explicit emancipatory aim to ‘change social realities for the better’ (Fairclough, 2012, p.10), a point of contention I take and which I will discuss in greater detail when I introduce Feminist Post-Structural Discourse Analysis.

Key Terminology of Critical Discourse Studies

Fairclough (1995) has described a three-dimensional process of CDA, in that it interrogates three realms: text, discourse, and context (historical, social, and cultural) and the actors, relationships, and practices therein. Texts, according to Fairclough, can be understood as ‘semiotic dimensions of events’ (2012, p.11) that can take written, conversational, symbolic or multi-modal form, as in the case of television. Texts can also be described as ‘sites of production’ (Kress & van Leeuwen, 1996) or ‘sites of struggle’ (Wodak & Meyer, 2001, p.11) wherein social meanings emerge through the relations between divergent discourses that struggle for power. This web of power relations, and the emergence of texts within them, also exists within socio-cultural historical conditions, or contexts, that are equally contingent upon power relations. Texts are therefore ‘always aware of, responding to and anticipating other texts’ in what Bhaktin has termed the ‘dialogicality of language’ (Blackledge, 2012).

The dialogical relationship between discourses and ‘social realities’, makes central the issue of power. CDA takes the position that discourses explicitly contribute to the substantiation of
unequal power relations in society by means of representing and positioning concepts and subjects (Fairclough, 2012). Power, according to Wodak (2013, p.395) has a triplex function in regard to discourse: ‘power in discourse’, or the struggle over terms, meanings and interpretations; ‘power over discourse’, the extent of access to discourse and the degree to which actors are seen and heard; and ‘power of discourse’, the historical significance of macrostructures of meaning and epistemological assumptions. This points to a common assumption within CDA scholarship, which is that language is not inherently powerful, but a system that ‘gains power by the use powerful people make of it’ in the ‘contextual’ or social realm (Wodak & Meyer, 2001, p.10).

Despite the central importance of power, CDA theorists diverge in their understanding of what constitutes power and how it operates. Most CDA scholars consider power through the tradition of the Frankfurt School (Lazar, 2005; van Dijk, 1993; Wodak & Meyer, 2001), particularly noting the works of Habermas and Gramsci. In contrast, other CDA scholars, including myself, adopt a Foucauldian notion of power, and draw from his model of governmentality, in which power is understood as decentralised, multi-sited and ‘productive’ in the sense that, within a web of constantly shifting discourses that compete for claims to knowledge, individual subjects are simultaneously rendered through and positioned within circulating discourse whilst being actively invited to self-identify and self-govern. In this framework, power is not understood as unidirectional and repressive, but as a force that energises and constitutes discourse and social relations, and which is reciprocally constituted by discourse. In this way, power is understood as simultaneously constraining and enabling, allowing for multiple subject formations and subjective experiences. This model suggests that people are continuously re-defined and re-defining self-hood through competing discourses and their interaction (Baxter, 2003) such that a single person may simultaneously inhabit or embody multiple and contrasting subject-positions. This later Foucauldian reading of power and its relation to subject formation is central to conceptualising gender, whilst remaining mindful that gender is only one aspect of subject formation.

Another cornerstone and frequent ‘object’ of investigation is ideology. CDA scholars,
particularly those who adhere to the Frankfurt School tradition, take the position that ideology functions to sustain unequal power relations and dominance or ‘hegemony’ (Gramsci, 1971; Charteris-Black, 2004). I depart from this tradition of ideological analysis, however, and take up a Foucauldian angle by considering of primary importance the historically situated relationship between power and knowledge (Blackman et al, 2008) and the conditions that have supported the formation of ‘truths’. No epistemological framework, from this perspective, is ahistorical, but, as Foucault suggests, all knowledges are discursively constructed fictions that function as ‘truths’ (1970).

Of particular interest to this research is the concept of gendered knowledges, specifically biological and psychoanalytic discourses that have informed theories of sexual differentiation, and discourses of ‘maternal instinct’. A Foucauldian orientation toward the understanding of discourse, power relations, and the historical development of epistemological traditions and discipline formation, ultimately positions CDA as insufficient to meet the demands of conceptualising the gendered discourse of female age-related fertility decline. To address this deficit, I turn to Feminist Post-Structural Discourse Analysis (FPDA).

A Feminist Post-Structural Approach to Discourse Analysis

CDA and FPDA share a common focus on the inextricable link between power and discourse, yet they diverge in a number of ways significant to my research. First, CDA’s emancipatory emphasis is not as explicit within FPDA. FPDA rejects the notion of a superiority of truths, arguing that CDA’s aim to uncover ‘injustice’ typically relies on a unidirectional model of dominance that constructs oppressed subject positions. This model gives little space to consider the multiple and active ways subjects engage with discourse to shape their own sense of self-hood. In other words, the potential for subjectivity to be experienced as simultaneously constraining and enabling cannot easily be accounted for in CDA (Baxter, 2003). Critics of FPDA might argue that the concept of feminism as a political movement and post-structuralism as a theoretical orientation are inherently contradictory, or that a subject’s felt sense of
‘empowerment’ within an ‘oppressive discourse’ signals a consequence of being discursively duped. However, as Baxter (2003) suggests, FPDA allows for a greater recognition of the interplay of divergent discourse and the complexity of intersectional subjectivity beyond a homogenous category of ‘woman’. It is therefore useful to this project in three ways.

First, FPDA rejects the notion of disenfranchised womanhood, or of any individual woman (Baxter, 2003; Jones, 1993). Second, FPDA makes explicit acknowledgement that ‘feminist’ discourses are also constituted through power relations, and argues that research must examine specific temporal and local contexts in which distinctive practices and characteristics of gender relations are performed. Whereas CDA might be more likely to adhere to a universal theory of male dominance, FPDA acknowledges that ‘females always adopt multiple subject positions’ and may be simultaneously positioned as powerful and powerless in a discursive context (Baxter, 2003, p.10). Third, FPDA supports a more nuanced understanding of the dynamics of power and is aligned with Foucauldian scholarship and post-structuralism more generally. For these reasons, critics might suggest that FPDA is relativistic and therefore of little use in the analysis of ‘real life’. As Baxter (2003) suggests, however, FPDA openly acknowledges that discourses can be systematically combined to disempower a large proportion of women within certain historical, cultural and social contexts, without succumbing to generalisation.

Frame Analysis

Within the broader approach of CDA, I will particularly focus on media framing. Frame analysis in media and communication research stems from the early sociological work of Gregory Bateson (1955) and Erving Goffman’s (1974) subsequent elaboration of Bateson’s thesis. Goffman focused on the interactional and contextual dynamics resulting in ‘social frameworks’ (p.24). Subsequent media scholars built upon Goffman’s analyses to consider framing in news coverage. In regards to news media, Gitlin has defined frames as ‘principles of selection, emphasis and presentation composed of little tacit theories about what exists, what happens, and what matters’ (1980, p.7). After an upsurge in media frame analysis, despite inconsistent
methods and terminology, Robert Entman (1993) attempted to conglomerate various fragmented insights to construct a general framing paradigm. His definition, now a standard reference in media frame analysis (Vliegenthart & van Zoonen, 2011), claims that ‘to frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation’ (p. 52). Entman’s definition is arguably quite useful when analysing news media communication of health information (Shaw & Giles, 2009). However, as Vliegenthart and van Zoonen (2011) have insightfully argued, much media frame analysis that relies on Entman’s model has resulted in simplistic evaluation of news communication and often assumes that news frames are a direct result of individual journalists and editing teams without giving consideration of the multiple organisational, social and political power relations, actors and structures that contribute. Vliegenthart and van Zoonen (2011) call for more multi-leveled media and communication analysis that considers ‘the way power relations and news production processes influence the emergence and stabilisation of particular news frames’ (p. 108). I address this gap by means of a historical, Foucauldian-inspired approach to my analysis.

A Foucauldian Perspective

This research is influenced by a genealogical approach to knowledge, in the tradition of Foucault (1971), which, according to Elizabeth Grosz is ‘aimed at unsettling established models of knowledge and epistemological presumptions involved in the production of history, philosophy, and morality’ (p.145). This study can thus be understood as a project that builds upon Foucauldian concepts of power, knowledge and discourse but also extends these androcentric theories to consider the specific ways in which gendered bodies are governed (Heckman, 1996; McNay, 1992; Taylor & Vintages, 2004; Reed & Saukko, 2010). I approach this task by focusing on various conditions that have given rise to divergent and multi-sited gendered discourses, and the ensuing power relations that have sought the authority to name, order, classify, analyse and explain woman and fertility. Rather than ask when or why these discourses emerged, I will investigate how certain discourses have taken precedence over others.
I primarily employ concepts from Foucault’s theoretical framework of governmentality. One of the appeals to governmentality across disciplines is its applicability to a complex architecture of decentralised power relations, subject formation, and governance beyond sovereign power. Thus, rather than asking why problems exist, one is able to question how problems are constructed, made visible, and interconnected with a variety of proposed solutions. Instead of positioning itself as a grand social theory, governmentality is an analytical tool that is flexible, open-ended and therefore always applicable to the present.

Broadly, governmentality refers to the multiple discursive practices, techniques and procedures aimed at governing human conduct from a distance, wherein power is no longer configured as central or sovereign (Foucault, 1978). According to Nikolas Rose (2000), who draws upon and expands a Foucauldian framework of governance, projects that use governmentality as an analytical tool attempt to map fields of knowledge and power by considering the ‘endeavours [which] shape, guide, and direct the conduct of others’ and that ‘embrace the ways in which one might be urged and educated to bridle one’s own passions, to control one’s own instincts, to govern oneself’ (p.3). Rather than focusing on coercive control, governmentality places emphasis on the ways in which government is dispersed amongst multiple platforms of power, whilst also inextricably intertwined with the activity of each subject’s cognition. According to Judith Butler’s appropriation of Foucault, power is understood as ‘that which forms, maintains, sustains and regulates bodies’ (1993, xviii). In this sense, power is configured as productive rather than oppressive. That is, within the field of power relations, subjects are both constituted and become active participants in their own constitution as they negotiate within the discursive limits of intelligibility. Within this configuration of power, government becomes entwined with the very process of thought, such that what is thinkable at the subject level, is ‘made possible by and constrained by what can be thought at any particular moment in our history’ and by ‘the conditions under which certain things become ‘true’ or taken-for-granted’ (Rose, 2000, p.8). The analytical perspective of governmentality and a Foucauldian-inspired emphasis on historicizing the ‘fiction’ of truths, supports the questioning of those things that are discursively
constructed ‘as if they were timeless, natural, and unquestionable’ (Rose, 2000, p.20).

In addition to Rose’s implementation of governmentality, and Butler’s employment of Foucauldian concepts to consider the ways in which sex and gender function as regulatory ideals, there have been numerous side movements that have reworked governance theory. One such movement useful to this project is literature that analyses health discourses through a lens of governmentality (Lupton, 2012; Miller & Rose, 2008; Petersen & Bunson, 1997; Reed & Saukko, 2010; Rose, 2000/2007). Following this line of analysis, I will consider the multi-sited power relations and socio-political factors that have contributed to the discursive manipulation of age-related fertility decline from the latter part of the twentieth century. The rationale for this framework is its provision of space within which to address the primary research questions as listed on page 58. In my analysis, I specifically look at scientific claims to knowledge regarding the relationship between age and fertility decline, and the conditions under which the materiality of this relationship have been discursively manipulated from the latter half of the twentieth century, continuing to present day. An analysis of this kind, which configures governance as relational, discursive, and inextricably bound to thought, is further enhanced through the consideration of ‘neo-liberalism’.

Neo-liberal Governance

Although neo-liberalism has been critiqued as a ‘catch-all phrase’ (McRobbie, 2009), Nikolas Rose, in The Powers of Freedom (2000), describes neo-liberalism as a ‘rationality’, or system of thought comprised of particular conceptions about the nature and ideals regarding principles of authority. Of particular importance to this rationality is the focus on individualism and the value given to notions of freedom, justice, equality, and self-responsibility. This conception of neo-liberalism is echoed by Angela McRobbie (2009) who highlights characteristics of privatization and deregulation versus state control. In this way, neo-liberal governmentality foregrounds how the notion of freedom becomes a useful technique of governance whereby subjects are constituted as rational and self-motivating individuals (Rose, 1999). Discourses are thus
dialogically entwined with the neo-liberal notions of autonomy and choice, such that they become mutually constitutive and substantive of each other.

*Gendered Governance*

One of the key critiques of Foucault and other theorists who draw upon the precepts of neo-liberal governmentality, is the explicit ‘androcentric gender blindness’ (Sawicki, 1996) within discussions of power and subject formation. In other words, what remains largely under-theorised are the ways in which strategies of governance are specifically ‘gendered’. Certainly, Butler has played a pivotal role in highlighting the significance given to the ‘gendering’ of subjects, or the intelligibility of subjects as dependent on normative gendering practices (1990). In Butler’s work on performativity, subjects are understood to be ‘gendered’ within the activity of power relations, whereby the construction of a subject ‘is neither a subject nor its act, but a process of reiteration by which both ‘subjects’ and ‘acts’ come to appear at all’ (1993, xviii). Through these processes of reiteration, gender is maintained as a regime of truth. Aligning with Butler, I assert that the ways in which gendering constitutes, marks and substantiates material existence are key to any analysis of governmentality, particularly my analysis of a fertility discourse that relies on the epistemological legitimacy of biological sexual differentiation. This analysis of the relation between gendered bodies, gendered discourses and governmentality must also consider the ways in which gender and neo-liberalism inter-relate, a task that Rosalind Gill (2008) maintains has also been relatively under-theorised. This relationship, argue McRobbie (2009) and Gill (2008), is worth consideration in any analysis of a contemporary ‘gendered’ discourse, given what they refer to as a post-feminist ‘sensibility’. They understand this sensibility as more complex than a backlash (Faludi, 1992) to feminism, given it espouses both feminist and anti-feminist discourses (McRobbie, 2004). As Gill suggests, on the one hand, ‘women are hailed through a discourse of ‘can-do’ girl power, yet on the other their bodies are powerfully re-inscribed as sexual objects’ (2008, p.442). This points to a similar tension maintained by the ideals of neo-liberalism. In other words, both neo-liberal and ‘post-feminist’ rationalities appeal to values of freedom, choice, and rights, but are simultaneously paired with methods of self-surveillance, self-discipline and sexual essentialism or objectification (Gill,
What remains problematic in this configuration of ‘post-feminism’, however, is the homogeneity ascribed to the category ‘woman’ without the consideration of the particular demarcations by which some women are excluded from such discourses. To address this omission, I will discuss this ‘post-feminist sensibility’ through a post-structural reading of the term woman, whereby greater attention is given to the processes by which bodies are inscribed with multiple signifiers such as race, age, and class (Braidotti, 2002).

**Key Research Questions**

a. How does U.S. news media between 2003 and 2013 frame age-related fertility decline, or the ‘biological clock’?

b. How do these news framings function to culturally re-inscribe the discursive construction of sexual differentiation and normative gendered behaviour as a ‘regime of truth’?

c. How do these news framings function to discursively construct culturally appropriate mothers?

d. What historical discourses are being drawn upon in these contemporary discursive constructions?

f. What do these contemporary discursive constructions achieve? In other words, who benefits, or what is gained, and for whom, by deploying them in this way?

g. What subject positions are made available, marginalised, or absent within these discursive constructions?

h. What possibilities for self-governing actions are mapped out in these constructions?\(^1\)

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Chapter Four: Case Study Analysis and Discussion

Pilot Study: Determining Key Discursive Events and Constructing a Corpus

I took a purposive sampling strategy to construct my corpus around key discursive events rather than attempting to quantify, through Content Analysis, the occurrence of this particular fertility discourse over a selected number of years. My approach was justified given there were no known existing studies with pre-defined media frames of age-related fertility decline from which to model an analysis.

Step One: 1970 was chosen as a starting date, in order to explore media representations regarding the increasing social trend of later-aged childbearing and decreasing fertility rates at this time. In an effort to familiarise myself with circulating discourses in US news media, I conducted a search with the following terms: ['biological clock’ AND fertility] and [women AND age AND fertility] in the New York Times, given its wide circulation. I allocated the dates 1970 to 2013. This produced 68 total articles that were read and grouped thematically, in order to delineate discursive trends by decade. In the 1970s, articles focused mainly on demographic trends and included references to the National Fertility Study and President Nixon’s Federal Commission on Population Growth and the American Future. After the reported birth of Louise Brown, the first baby born as a result of IVF in 1978, news articles first began using the term ‘infertility’, described in one article as a new medical issue ‘emerging from the closet’ and thought to affect 1 in 5 American couples. Then, in 1982, the publication of the seminal French study, mentioned in Chapter Two, was also a key turning point as this was one of the first widely published studies that attempted to isolate age as a factor of fertility. The interpretation of this study popularized the age of 30 as a new turning point in a woman’s fertility. Throughout the 1980s, the social, political and demographic implications of later-aged childbearing garnered increasing media attention. Discussions about surrogacy and the use of donor ova to allow post-menopausal pregnancy circulated as did debates about legal definitions of mothers and the extent to which governments and medical professionals should limit the age at which women can become pregnant through the use of ARTs. Donor eggs were linked with debates about the implications
of out-smarting the ‘biological clock’, and egg-freezing technologies were discussed as being in a ‘development phase’. By 1997, the first successful pregnancy from the insemination of a frozen egg was reported. Articles at the turn of the millennium and up to the end of 2013 perpetuated similar themes regarding the advances of technology and their various ethical and legal implications, including the increasing use of egg-freezing for elective reasons, the on-going trend of later-age childbearing including celebrity examples, the ups and downs in national fertility rates, male ‘biological clocks’, and debates regarding a correlation between fertility drugs and cancer risks.

Step Two: Toward the dual aim of exploring medical discourses, I conducted a search with the following terms: ['biological clock' AND fertility] and [women AND age AND fertility] in the two medical journals associated with the top fertility governing bodies representing the US and EU – Fertility and Sterility and Human Reproduction, respectively. Fertility and Sterility, however, is only available online from 1997 and Human Reproduction from 1986. Abstracts were read for general themes throughout the 1980s and 1990s, but given the scope of this project, the systematic inclusion of medical literature was eliminated at this stage.

Step Three: Key discursive events from 1970–2013, as discussed above, were annotated for contextual discussion, and further background reading was conducted, particularly regarding Nixon’s Federal Commission on Population Growth. This finding led to my exploration of literature regarding the politics of human reproduction, and alerted me to the role the US played in the dissemination of ‘third world’ population reduction strategies since the early 1900s. This body of research led me to question whether I might see any evidence of eugenic discourses in contemporary discussions of fertility decline with age, a point to which I’ll return in my analysis. I determined that the construction of my corpus around four decades was much too broad. Given the pairing of discourses of the ‘biological clock’ with debates about the nascent use of egg-freezing for ‘elective’ purposes, a procedure that was first privately commercialised in the US in 2004, I decided to focus specifically on the ways female age-related fertility decline was framed in US news media between 2003 and 2013. Although Australia and the UK have been equally key players in the development and proliferation of ARTs, I chose to narrow my focus to US news media given the early private commercialisation of egg-freezing in 2004. Additionally, given my Foucauldian, historically-focused perspective, my background research suggested the
US played a pivotal role in the development of population politics in the early twentieth century. As Connelly (2008) argues, the US was first to pursue the implementation of world population control strategies, ‘played a leading role in institutionalizing both the science of demography and the political strategy of family planning’, and ‘created standardized population control programs, that were largely funded by public and private sources in the US’ (p.11).

Data Collection

The previously mentioned search terms were used in major newspaper search engines, including LexisNexis, ProQuest, and Factiva. Factiva (Dow Jones, 2013) provided the most comprehensive collection of articles, and allowed me to specifically sort according to which publications had the most citations. For both search term items, the highest number of publications were in the same four national dailies: the New York Times, Washington Post, Wall Street Journal, and Boston Globe. Although readership of print newspapers is declining as online readership grows, print media still operates as a key player in the dissemination of information (McGaurr, Lester & Painter, 2013). Online articles were included, however, but only if their content was different from print versions. After an initial reading, the total 55 articles were further sorted according to relevance. The final corpus was reduced to 39 articles that specifically address female age-related fertility decline. Articles that debated male ‘biological clocks’ (n=7), or only anecdotally mentioned ARTs without specifically relating to women and age-related fertility decline or egg-freezing, were excluded based on the parameters of this study.

Coding

Coding categories were developed inductively through extensive readings of the texts themselves, and the strands of literature upon which this project was based, including post-
structural feminist theory, governmentality studies, and critical studies of science, and science communication. Texts were read chronologically and coded manually for key words, metaphors, narratives, cited sources, published studies, and noted institutions. A table of emerging themes was constructed and focus was given to the implicit elements of power relations and historically-constructed knowledges. Specifically, I considered Wodak’s (2013) triplex analysis of power including the struggle over terms, meanings and interpretations, the extent of access to discourse and the degree to which actors are seen and heard, and the historical significance of macrostructures of meaning and epistemological assumptions.

**Discussion of Limitations**

It is imperative to acknowledge that Factiva is only one database among many used for media research and the use of LexisNexus or ProQuest might have rendered slightly different results. Visual imagery and original page formatting are absent in Factiva, which impedes integral discussion of the graphical organisation of news and semiotic components. Given the focus of critical discourse analysts on the textual communication of power and knowledge (van Dijk, 2006), however, this limitation was not determined problematic for this analysis. The scope of this study also necessitated the exclusion of other relevant media forms, such as TV, radio and internet news. Analysis of alternate media platforms and non-textual components warrants future research.

**Bias and Reflexivity**

I approach this analysis with explicit acknowledgement that the formation of my research questions, corpus construction, analysis and discussion are purposeful processes, or ‘frames’ in themselves. In other words, each stage was informed by my own theoretical stance. I make no
claim that my analysis uncovers an ‘objective’ truth or ‘real world’ beyond what is represented in the news media that comprises my sample. Neither do I intend to offer a comprehensive answer to Goffman’s question, ‘what is going on here?’ (1974). This research therefore does not conform to ‘scientific’ epistemological values such as validity and reliability, given that I am not attempting to report on an objective or phenomenological ‘reality’. Indeed, the notion of reproducible results is futile given that discourse analysis explores multiple and divergent understandings of phenomena (Phillips & Hardy, 2002).

US news media frames of age-related fertility decline: analysis and discussion

As noted in Chapter Three, in which I outline my methodological approach, my intended focus is to explore the ways in which US news media frames female age-related fertility decline. Particularly, I focus my analysis on what information is selected, emphasised, and how this information is presented. One of the key findings was the significant use of ‘human interest’ stories (Hartsock, 2000), or narrative journalism, within this corpus. I take the position that a human-interest story is ‘rhetorical’ in the sense that one of its key aims is to motivate a cohort of targeted female readers toward more diligent fertility self-governance. My stance follows Kramer’s (2000) argument that, ‘…sensory reports engage readers, drawing them into the pleasurable illusion of immediacy’ (p.6). This aligns with the perspective of governmentality, wherein media representations of science, bodies, and health discourses are understood to function as strategies that shape and guide the cognition and conduct of subjects (Rose, 2000). Additionally, I assert that narratives are used as a technique to conjure wider cultural acceptability and persuade funding communities to continue economic support of the reproductive sciences. The use of narrative in this corpus is an important strategy relevant to all the frames I go on to discuss. For example, narrative strategies that rely on a greater use of figurative language, likeable protagonists and the resolution of characters’ traumas, not only sustain and heighten readers’ attention and engagement (Taylor, 2005; Zdvc, 2008), but de-emphasise underlying power relations, a historical perspective of the discursive development of
age-related fertility decline, and a range of ideological assumptions. These understated ideologies include heteronormative romantic relationship structure, kinship norms that give preference to biologically-linked children, the valorization of science as an ‘objective’ source of ‘truth’, pro-natalism aimed at middle-class, educated women, and neo-liberal ideals, wherein individual consumers are foregrounded within discourses of rights and personal control. Throughout this analysis I will focus on the ways in which these ideological constructs are reiterated and substantiated, while often being simultaneously de-emphasised at the textual level.

A detailed discussion of the role journalists, scientists, and governmental agencies play in the development and dissemination of news is beyond the scope of this analysis, but a number of scholars agree that science journalism or news about technological development has changed significantly since its growth in the 1970s, including periods of awe and marvel, mistrust and skepticism. One trend discussed in critical science communication studies is referred to as ‘churnalism’ (Williams & Gajevic, 2013). This is a term that captures the journalistic practice wherein information is copied and pasted from commercially-funded press releases. Press releases, like other information sources such as interviews, conferences, and selected journals, are rhetorically packaged forms of information targeted toward journalists as a means to simplify and promote certain scientific and medical perspectives and recommendations (Nelkin, 1989). Although my research did not involve an analysis of sources, it is worth noting that some articles in this corpus discuss analogous medical studies in a similar timeframe, and present a comparable framing of the information. I thus argue it is a relatively safe assumption that, to some extent, the information disseminated in these selected articles originated from commercially-funded influences, such as press releases.

Another notable trend is the use of ‘human interest stories’ in science-related journalism. As Condit (1994) argues, narrative journalism, especially prominent in the representation of ARTs in the 1990s, was a particular strategy of ART promotion. Throughout the decade, these

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12 For example, the New York Times article, ‘For Women Worried About Fertility, Egg Bank is a New Option’ and Washington Post article ‘Putting Your Eggs in a Different Basket’ were published on the same day (21 Sept 2004) and similarly report on the private company, Extend Fertility, and the growing trend of elective egg-freezing.
narratives and the use of ‘every-day characters’ helped create an aesthetic appeal to ARTs and normalised their presence. Despite the popularisation of short-news formats and online publishing since the 1990s, narrative journalism proliferates. The view that narrative writing transforms facts into news continues to inform the journalistic culture of some media outlets (Neveu, 2014). The extent to which readers of print or on-line news read complete articles is largely unknown, however, which means the value of the headline and leading paragraph remains an essential macrostructure of communication (van Dijk, 1985). Within this corpus, a significant number (n=14) of articles were written in narrative style.

*Article Distribution*

As noted, 39 total articles were included in this analysis. The distribution of these articles across the decade is represented in Figure 5. The greatest number of articles discussing female age-related fertility decline and egg-freezing were published in the year 2013, a finding which will be discussed in greater detail in the ‘mainstreaming’ frame.

![Figure 5: Distribution of articles across the sample population, by year: 2003-2013](image)

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13 Figure 5 and 6 should not be read as ‘objective’ measures, but merely as visual signifiers of the corpus to aid reader comprehension.
Figure 6 shows the distribution of articles by publication. The most articles on this topic were published in *The Boston Globe*. This is significant given that Boston IVF is the largest infertility clinic in the US and partnered with the private commercial enterprise, *Extend Fertility*, in order to seek better scientific data on egg-freezing.

![Bar chart showing the number of articles by publication](chart.png)

*Figure 6: Number of Articles by Publication*

The types of articles in this corpus were also classified according to style and length, as represented in Table 1. Articles considered ‘news’, were determined according to what is popularly known as an inverted-pyramid format, in which the most ‘newsworthy’ information is presented in the first paragraph. These news articles were further classified according to length. Articles less than 200 words were classified as ‘short’, those 200-499 words as ‘medium’, and those more than 500 words as ‘long.’ Feature articles, or those written in narrative style, are listed according to the section in which they were published. Not surprisingly, the largest number of features were published in Health and Lifestyle sections.
<table>
<thead>
<tr>
<th>Article Types</th>
<th>Number of Articles</th>
<th>% of Total Articles</th>
</tr>
</thead>
<tbody>
<tr>
<td>News (inverted pyramid)</td>
<td>18</td>
<td>46.1</td>
</tr>
<tr>
<td>- News Short</td>
<td>2</td>
<td>5.1</td>
</tr>
<tr>
<td>- News Medium</td>
<td>3</td>
<td>7.6</td>
</tr>
<tr>
<td>- News Long</td>
<td>13</td>
<td>33.3</td>
</tr>
<tr>
<td>Features (narrative)</td>
<td>14</td>
<td>35.8</td>
</tr>
<tr>
<td>- Lifestyle</td>
<td>2</td>
<td>5.1</td>
</tr>
<tr>
<td>- Weekend Investor</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>- National</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>- Sports</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>- Health (and Fitness)</td>
<td>4</td>
<td>10.2</td>
</tr>
<tr>
<td>- Style</td>
<td>2</td>
<td>5.1</td>
</tr>
<tr>
<td>- Work and Family</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>- Metro</td>
<td>1</td>
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<tr>
<td>- Second Chance</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Opinions and Analysis</td>
<td>5</td>
<td>12.8</td>
</tr>
<tr>
<td>- Op-Ed</td>
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<td>7.6</td>
</tr>
<tr>
<td>- Editorial</td>
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<td>2.5</td>
</tr>
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<td>- Opinion</td>
<td>1</td>
<td>2.5</td>
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<tr>
<td>Other</td>
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<td>2.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>39</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Table 1: Types of Articles

Frame One: The Biological Construction of Fertility Decline

I suggest that, within this corpus, the representation of female fertility decline with age, namely represented with the ‘biological clock’ trope, is a discursively constructed knowledge that nevertheless functions as a taken-for-granted ‘truth’ (Foucault, 1970). The intelligibility of this metaphor depends on the epistemological privilege given to biological sciences. We can recall Laqueur’s (1990) argument that the development of biological discourse was the basis of sexual
differentiation upon which normative gendered hierarchy still depends. To contemporize this discussion, we can revisit Amir’s (2006) argument that with the rise of pro-natalism in the US in the 1980s, and the sustained national decrease in birth rates since the 1970s, science and medicine re-established a powerful role in the representation and management of human reproduction. As she argues, these shifts fueled the funding of research that investigated the correlation between female age and fertility, and it was during the 1980s when the ‘biological clock’ metaphor was popularised in media representations. I believe this trope was used not only to simplify the biological perspective of fertility decline, but also to construct representations of subjective experiences of this material phenomena. As I will discuss throughout this chapter, the biological framing of fertility decline serves normative, stratified and commercial aims. This line of argument, as we can recall, aligns with Goatley’s (1997) assertion that metaphors are tools of persuasion meant to activate affective responses in subjects.

The mediatisation of female age and fertility decline, in this corpus, was found to be framed both as a ‘biological reality’, and as potentially malleable with ongoing bio-technological developments such as egg-freezing. An article in the Washington Post (11 March 2004) titled, ‘Study Casts Doubt on Limits to Fertility’ captures the way in which the ‘biological clock’ functions as a taken-for-granted assumption. The opening paragraph reads as follows:

For more than half a century, textbooks have taught that female mammals – be they mice, cows or women – are born with all the eggs they will ever have. The result is one of the great sexual disparities. Males, which make fresh sperm daily, can sire children at virtually any age, whereas females gradually deplete their limited supply of eggs to the ticking of a the biological clock.

To unpack this quote, it’s useful to recall Emily Martin’s (1987/1991) work on medical metaphors of the body, as discussed in Chapter Two. According to Martin, capitalistic metaphors are frequently used to describe processes of the human body, which privileges male spermatogenesis as productive and female’s inability for oogenesis as wasteful. This discursive construction both naturalises pre-existing gender asymmetries and upholds the hegemonic status of science and medicine (Martin, 1987; Keller, 1985; Clarke, 1998). In the aforementioned quote, a gender hierarchy established in Classic Greek writings is also apparent, wherein woman
is classified alongside the natural/animal world (Laqueur, 1990). I assert these historically constructed gendered orderings are proliferated as *a priori* assumptions, despite their obfuscation in contemporary representations. These historical discourses clearly provide the necessary foundation upon which contemporary discussions of female age and fertility decline depend. As Butler (1990) argues, discursive repetition of gendered knowledges are what maintain gender as a regime of truth. Moreover, the biological frame of gender found within this corpus, largely conflates woman’s ontological status with the quality and quantity of her eggs. As noted in Chapter Two, the shift to a focus on eggs, sustains a legacy of the medicalisation of the female-gendered body and life-course (Lupton, 2012; Reed & Saukko, 2010). I believe this emphasis is directly linked to the development and proliferation of egg-freezing and the ART industry in general, much like the configuration of a ‘hormonal body’ substantiated the development of synthetic contraception (Clarke, 1998).

Despite the way in which a woman’s ‘biological clock’ is presented as a ‘fact’ in the previous quote, the rest of the article proceeds to discuss the potential malleability of biological imposition, by presenting recent research about the use of stem-cells to support oogenesis and the social implications of ‘extended fertility.’ The concept of ‘extended fertility’ remains a prominent theme throughout the corpus. As we can recall from the discussion in Chapter Two, this relates to increased longevity, the social trend toward later-aged childbearing, trans-national population politics, and ideological shifts that valorise technological development, as seen in the expansion of ARTs that make post-menopausal pregnancies a new possibility (Watkins, 2007). Age and fertility, as I will go on to argue, remains a highly lucrative field of study.

In this corpus, early media attention centres around the commercialisation of egg-freezing as a ‘lifestyle’ choice in 2004, and the cleverly named first private egg-freezing company in the US, *Extend Fertility*. This mediated excitement regarding the potential for egg-freezing to overcome biological limitations reiterates the way in which the malleability of biology has become an important component of neo-liberal regimes of governmentality. We can recall the discussion in Chapter Two, regarding Nikolas Rose’s (2007) work on the ‘molecularisation of life’ and his
argument that biotechnologies render the medical gaze at an increasingly molecular level not for the purpose of developing cures, but as a means to reconfigure biology and potentially ‘optimise’ the future.

The tension between age and fertility is represented in the sense that whilst longevity has increased, fertility, from a bio-evolutionary perspective, has not kept up. As one doctor is quoted as saying in a Washington Post article titled, ‘Ready or Not, Your Eggs are Almost Done’ (23 Feb. 2010), ‘society has changed, but the ovaries will take another million years or two to catch up to that.’ In one sense, this provides space for media focus on the nascent development of egg-freezing as a potential means to ‘pause the biological clock’ (30 Sept. 2013). On the other hand, however, a contingent discourse circulates, regarding the urgency of reorienting women to the ‘biological reality’ of female fertility decline (23 Feb. 2010). For example, within the same Washington Post article, women are reminded of the various risks associated with later-age childbearing, listed as follows:

The older you get, the more difficult it is to get pregnant, and the higher the chances of miscarriage, pregnancy problems such as gestational diabetes and hypertension, and chromosomal abnormalities such as Down Syndrome, among other concerns. A study published this month in Autism Research found that the risk of autism increases with a mother’s age.

This article highlights ‘mixed messages’ in the media by noting ‘studies filled with doom-and-gloom statistics on advanced maternal age and pregnancy’ in stark opposition to ‘the myriad photos of 40- and 50-something celebrities in glossy magazines, gleefully holding their bouncing baby, projecting the image that fertility isn’t as finite as it seems’. Accordingly, women are urged to regulate lifestyle factors ‘such as stress, smoking and being overweight’. The bottom line reads as follows:

Women do need to start thinking proactively about their own reproductive health, and protecting it, as time passes. Staying healthy in general may give you a bit of leeway, in other words, but being realistic – and in the know – could be the best medicine of all.
In this way, the women targeted in this discourse are exhorted to attune to increased modes of self-governance. It’s not just older women who are allegedly misinformed about the reality of fertility decline with age, however. In the same Washington Post (23 Feb. 2010) article we read of a recent study published in the ASRM-sponsored journal Fertility and Sterility, which reports that ‘female undergraduates significantly overestimated their fertility prospects at all ages.’ These representations of female ignorance not only substantiate more media attention given to the topic of fertility decline with age, but also implicitly suggest fertility planning is a social and moral responsibility for women of the appropriate demographic. Placing the onus on women to overcome various physiological and moral ills dates back to at least the beginning of the twentieth century, as various ‘experts’ emerged to offer their advice to women (Ehrenreich & English, 1978). In this contemporary discourse, I suggest the focus on individual women’s fertility responsibility functions as a mediator between technological optimism and biological realism. In this way ‘hope’ in bio-technology is only presented in tandem with a discourse of reorientation to fertility decline and increased diligence toward modes of fertility self-governance.

This discursive tension between technological optimism and biological realism also relates to what Rose (2007) describes as new demands of ‘biological citizenship’. Accordingly, certain privileged subjects are confronted with increasing ways of knowing themselves at molecular levels and, as a result, challenged with the individual task of sorting through conflicting information and nascent technological possibilities in order to optimise their reproductive futures and presumably the futures of their imagined progeny. Although absent in Rose’s work, it’s key to remember that this model of ‘biological citizenship’ is gendered, particularly when we examine the gendered discourse of female age and fertility decline. Useful to this discussion is Martin’s (2010) argument that contemporary age-related fertility discourses construct a new ontological category or risk identity wherein targeted women are encouraged to orient themselves toward a future of ‘anticipated infertility’ or risk of childlessness. This discursive construction demands these subjects remain open to and knowledgeable of technological intervention and expansion, whilst practicing diligence in their engagement with established modes of self-regulatory practices to ensure the greatest probability of successful future
reproduction. It’s helpful to draw upon the framework of governmentality to recall that, according to Foucault (1978/1991), discourses form the objects and subjects of which they speak. In other words, ‘anticipated infertility’ can be understood as a discursively constructed ‘problem’ that privileges the fertility industry and upholds essentialist gendered constructs.

What remains central to this analysis, is that representation of female fertility decline and age have remained discursively pliable since receiving increasing media attention in the 1970s. Media attention to this issue has remained consistent as child-bearing levels have steadily hovered around ‘replacement levels’ (Kasun, 1988). Within this corpus, a variety of ages are represented as female fertility cut-off periods. In one Wall Street Journal article, it’s reported that ‘fertility rates gradually begin to decline around age 32 and then rapidly decline after age 37’ (4 June 2013). In another article, we read that ‘female fertility peaks in the teens and early 20s’ (23 Feb. 2010). This diversity led one op-ed writer to poignantly ask in a New York Times piece titled, ‘We Need to Talk About Our Eggs’ (23 Oct. 2012): ‘considering that fertility figures are averages (while one woman may need fertility treatment at age 36, another can get pregnant naturally at 42), when is the right age to sound the alarm?’ The answer to this question, as framed within this corpus, boils down to: the sooner the better, or, in other words, it’s never too soon. This perspective is demonstrated in the repetition of articles that encourage women and their doctors to prioritise the development of individualised reproductive strategies given the bottom line framing of a woman’s eggs is: ‘use ‘em or lose ‘em’ (23 Feb 2010).

Whilst the emphasis placed on fertility planning seems directly targeted toward younger women, older women who are ‘bumping up against a baby deadline’ (4 May 2013) are also urged to practice modes of fertility self-governance, and a privileged few are given a range of new options to support fertility planning. The most prominent intervention represented in this corpus is egg-freezing, which I go on to discuss in detail. Another option is tests for ‘ovarian reserve’. Discussed in a Boston Globe article titled ‘Is There a Way for a Woman to Tell Her Fertility is Declining Before It’s Too Late’, we read that:
Many women assume that as long as they are still getting their periods, they have plenty of healthy eggs left. But this is not quite true. There may be some eggs, but they tend to be of such poor quality that they stop dividing soon after fertilization or implantation in the uterus.

Again, women are represented as misinformed, and therefore dependent upon a molecular medical gaze to interpret the ‘truth’ of their fertility potential. As noted in Chapter Two, the development of ‘ovarian reserve’ discourse conflates women with their oocytes, which reiterates an essentialist paradigm whereby women are defined by their reproductive potential. We can also recall Kristeva’s (1982) work on gendered representations of bodily orifices and fluids in Chapter One, in which she argues that the female body and its reproductive processes become signifiers of limited autonomy, a link to nature, and the implication of death. I suggest that ‘ovarian reserve’ discourse follows in this tradition by reiterating woman’s link to nature, defining her within the terms of reproduction, and positioning fertility decline as an abject signifier of decay and death. Moreover, we should not ignore the process of medicalisation at work in this discursive construction, in that ovarian reserve tests were initially developed to determine the likelihood of a woman’s response to IVF treatment, and thereby act as a gate-keeper to support fertility clinics’ aims to publish the best success rates possible (Friese & Nachtigall, 2006).

*Frame Two: Maternal Desire as Natural*

In this frame, I assert that representations of female age-related fertility decline within this corpus, launch from an *a priori* assumption that maternal desire is an innate female biological drive. It’s useful to revisit the discussion in Chapter One, in which I outlined two historically dominant maternal instinct discourses from which this assumption is typically formulated. These are the bio-evolutionary and the psychoanalytic model. The bio-evolutionary perspective, critiqued at length by Chodorow (1978), suggests that maternal instinct has become genetically imprinted as a result of evolution, in which women assumed functional roles as mothers in order to sustain species survival. Accordingly, women’s presumed desire for gestation and nurturing activities are figured as ‘biologically self-explanatory’ (Chodorow, 1978, p.13), or a natural consequence of anatomy. That motherhood is no longer a stringent requirement for species
survival remains irrelevant according to this argument, given the implication that maternal desire is genetically encoded. Certainly this logic lacks universal application, as increasingly more women in Western societies choose to live child-free. Moreover, some women who do bear children may not demonstrate any desire for or competence in nurturing activities. These aberrations, however, do not undermine the persistence of the biological model wherein woman’s reproductive capacity is what essentially defines her as distinct from man (Laqueur, 1990).

We can also recall psychoanalytic feminist readings of Freud’s writings on sexual maturation. For example, Irigrary’s (1985) interpretation that successful female (hetero)sexual maturation is accomplished with the desire to give birth. Not only is a female expected to desire childbirth, but also to pursue attachment to and nurturing of a child. From an object-relations perspective, Chodorow (1978) argues that a girl’s love for her mother is prolonged because of the mother’s primary identification with the girl child. This is opposed to the mother’s relation with the boy child, to whom she is more likely to encourage differentiation and disidentification in order that he might attain proper masculinity. Accordingly, girls are theorised as more relational, which, according to Chodorow, contributes to the presumption that adult women experience strong maternal desire.

Within this corpus, allusion to maternal desire is both overt and subtle. When maternal desire is represented in first-hand narrative accounts of egg-freezers, the cohort of protagonists discussed at length in the mainstreaming frame, it is explicit. As other media scholars have argued, the use of storytelling is a potent tool to elicit emotional response in readers (Allan, Fairtlough & Heinzen, 2002). In this corpus, it was found that protagonists expressed maternal desire and framed their confrontation with the ‘biological clock’ by using emotive words such as ‘anxiety’, ‘fear’, ‘panic’, and ‘desperation’. In this way, these narratives read as time-constrained epics in which protagonists embark on a journey to secure their own biologically-linked children before it’s ‘too late.’ In one narrative, a sense of female-desperation to solve this trauma is linked with suicidal ideation. We read in a New York Times article titled ‘A Dream Deferred, Almost Too Long’ (30 Aug 2010) of a professional female tennis player, Gigi Fernandez, who postponed
childbirth to focus on her sport. Presented with her self-description as ‘so selfish in those years’, we’re told she eventually decided she wanted children and subsequently pursued five years of IVF, spending US$100,000 in a ‘quest to become a parent.’ Discussing the perils of the hormone treatments, Fernandez is quoted as revealing:

I don’t say I was suicidal, but I had suicidal thoughts. My thought was, what’s the point of living if I can’t have a child. There’s this implication that women are here to bear children, and if you can’t bear children, you’re useless.

That the ‘dream’ of motherhood is framed in opposition to representation of the protagonist’s ‘selfishness’ for not planning her fertility earlier in life, functions to remind the reader to prioritise self-fertility planning as a proper feminine behaviour. It’s only when the protagonist attempts and repeatedly fails to become pregnant that she is reported to experience a sense of valuelessness, given the equation of female self-worth with the ability to bear a child. This is clearly a reiteration of a long-standing essentialist discourse. As the narrative progresses, more failed attempts at IVF are dramatised, until narrative resolution eventually details the protagonists’ birth to twins in her mid-forties. The closure of narrative trauma is summarised by a friend’s quote about the changes motherhood effected in Fernandez:

I see the biggest change in Gigi. It’s not about her. It’s about the kids. She’s so selfless and giving and thoughtful and responsible and down to earth.

In this way, the child functions as the mediator between the protagonist’s prior ‘selfishness’ in what could be considered a ‘masculine’ pursuit for success at sport, and her transformation toward appropriate femininity as she gracefully assumed her ‘natural’ and essential mother role. She is even quoted as confessing, ‘I felt almost like I wished I would have never played tennis.’

Despite the narrative resolution, it remains an imperfect story. Fernandez is quoted as saying, ‘I really deep down wish they were genetically mine.’ In this way, the reader is cautioned that it might not be possible to have genetically-linked children if one waits too long. The way in which this quote constructs a hierarchy of kinship norms additionally forecloses acceptance of other
modes of parenting or child-free living. A frame of caution to younger women, particularly female athletes is presented by Dr David Keefe, chairman of Obstetrics at a New York medical centre, who is cited as admonishing, ‘professional athletes in their early 20s consider freezing their eggs.’

The framing of maternal desire as desperation were found woven throughout the corpus. Another example is a 2013 Boston Globe article, in which we are introduced to the protagonist, Deb, a 40-year old business consultant who decided to freeze her eggs. Although it’s reported that Deb’s doctors warned her that ‘even if they were able to retrieve eggs, they’d have a slim chance of turning into a pregnancy’, Deb reportedly ‘pushed and pushed to undergo one more round of hormones.’ Deb’s character is also utilised to ‘urge younger women to freeze eggs if they’re considering the procedure’. The obvious implication is for the reader to avoid a similar sense of despair. The desperate female seeking fertility treatment is a well-discussed trope in feminist media analysis (Franklin, 1997; Harding, 1997; Throsby, 2010). According to Throsby (2010), desperation is a strategy by which normative femininity is discursively constructed. As she argues, this applies to representations of IVF users, as well as ‘shopaholics’, ‘surgery junkies’, and ‘obsessive dieters’. Shopping, fertility, weight control and beauty practices are all normative locales of ‘femininity’ that require a balancing act whereby women are encouraged to engage to an appropriate level, but avoid tipping over into obsession. The trope of female desperation, argues Throsby, is often discursively linked to the constructed ‘hormonal body’ in which women are depicted as erratic, disordered and unruly. This is in opposition to the construction of their male counterparts who are often portrayed as the rational observers of such hysterical behaviours.

The dualistic tension between female engagement and obsession is demonstrated within this corpus, wherein the construction of emotionally labile female protagonists are often positioned against the ‘logic’ or ‘rationality’ of scientific discourse. In this way the representation of female affect functions as a rhetorical signifier of sexual differentiation, or a way in which sexual differentiation is discursively reformulated. For example, in a 2004 Washington Post (21 Sept.) article, the reader is introduced to a male reproductive endocrinologist, who describes egg-
freeing as ‘a logical thing to do’ for women who are ‘thinking of their career, don’t have time to get pregnant, have the resources and there’s no Mr. Right.’ He is quoted as declaring:

The purpose of offering egg-freezing is not to intimidate, it’s not to push women into doing something they don’t want to do. I think that knowledge is power, and when you have the option then you can decide. And you can’t come in my office at 42 and cry your brains out and tell me no one told me this before.

The representation of the male doctor’s frustration with the female patient, recalls the discussion in Chapter One, in which I presented a feminist psychoanalytic perspective of the rise of male dominance as directly resulting from man’s contempt of woman’s power derived from her ability to gestate (Braidotti, 1997; Chodorow, 1989). From this perspective, one could read this representation as a reiteration of a historically-constructed gender hierarchy, in which women are discursively constructed as emotionally erratic, innately ignorant, and manipulated by the whims of their uteri and hormones (Laqueur, 1990; Ehrenreich & English, 1975). To add a contemporary layer to this perspective, the cited doctor also frames some women as cultural dupes, vulnerable to the representation of aged celebrity pregnancies. This clearly demonstrates the paternalistic model of medicine whereby consumers, especially women, are constructed as subjects in need of both education and protection in order to support individualistic and socially-responsible reproductive decision-making. Whilst a theory of male contempt is viable, it’s reductive to argue that anger or disregard of women is the primary or sole motivator of ART development and its representation. It remains equally important to consider how economic and population control factors motivate fertility research and media representation.

Although the cited doctor’s quote proclaims egg-freezing isn’t a scare tactic, I suggest that the rhetorical use of protagonists’ affective confessions function to stimulate reader attention to a particular frame of maternal desire wherein motherhood remains an essential component of socially-legitimated femininity. In many of the articles that use first-hand narrative accounts, female protagonists are represented as anxiously aware of a looming ‘biological clock’. Although most of these characters do not tip over to the desperate female trope, their emotive responses remain central to their constructions. The mediated emotional relationship between
women, aging and fertility decline is largely represented with terms such as ‘fear’, ‘stress’, ‘anxiety’, and ‘worry’. For example, the second woman reported to freeze her eggs with *Extend Fertility*, Grace Drake, is quoted as stating in a 2004 *Washington Post* article titled: ‘Putting Your Eggs in a Different Basket’:

I see the revolving door of women [with fertility problems] coming into the office. How can I not be frightened to death?

Another prominent protagonist, Sarah Elizabeth Richards, describes her struggle with ‘fertility anxiety’ in the article ‘Why I Froze My Eggs (And You Should, Too)’ (4 May 2013) in the following way:

I spent the majority of my 30s alternatively panicked about my love life or feeling kicked in the gut every time I saw an adorable child.

Not all representations, however, equate women with fertility ignorance or maternal desire with a sense of immediacy and desperation. In some representations of first-hand narrative accounts of negotiation between fertility and age, we read more neutral words regarding maternal desire, such as ‘want’, ‘urge’, ‘goal’, or ‘priority’. I suggest that terms such as ‘want’ and ‘urge’ more explicitly link to bio-evolutionary and psychoanalytic discourse as discussed in Chapter One. The terms ‘goal’ and ‘priority’, I suggest, are more representative of neo-liberal ideals of self-determination, proactivity and time management. These words, however, are also essentialist by linking women to motherhood, wherein motherhood remains a naturalised and normalised signifier of femininity. In one article, for example, we read that for Megan Griswold, an actress and author, ‘becoming a mother is No. 1 among her priorities’. Cited as ‘lacking the right partner’, Griswold reportedly froze her eggs at age 36, and remains ‘still intent on marrying and having babies the traditional way, but sees egg freezing as maximising her opportunities for motherhood.’ This protagonist construction encapsulates a naturalised maternal ideal, embodies neo-liberal proactivity, and neutralises egg-freezing by linking it to more socially normative modes of child-bearing.
Representation of a presumed biological urge for motherhood is often pitted against one form of
cultural clash or another, including the demands of career advancement or other life
circumstances such as the lack of a heterosexual partner (e.g. ‘Mr. Right’). This is rather
unsurprising given the targeted demographic of this particular discourse seems to be middle-
class, career-orientated Western women. The reiteration of this clash, however, becomes a
productive domain wherein egg-freezing can be introduced as a bridge between the nature /
culture divide. Exemplified in a 2010 article titled, ‘Ready or Not, Your Eggs are Almost Done’,
we read:

… many women thinking of having children are left with the predicament of balancing the personal,
primal urge to partner up and procreate with worthwhile social goals such as pursuing higher education
and a successful career – not to mention economic stability.

Within this text we read an explicit appeal to bio-evolutionary logic in the use of the term
‘primal urge’. I also argue that by foregrounding a tension between nature and culture, this
construction provides the necessary space for the introduction of technological heroism. In other
words, the representation of this ‘clash’ supports the framing of egg-freezing as a potential
solution to the protagonist’s distress. An agenda wherein women are urged to orientate and
carefully plan their lives according to a reproductive life trajectory is also reiterated. This is
acutely demonstrated by the ways in which protagonist’s narratives are resolved. In contrast to
IVF narratives, in which protagonists’ narrative traumas are typically resolved by a ‘miracle
baby’ (Franklin, 1997), egg-freezing narratives rely on accounts of the affective and lifestyle
changes protagonists experience as a result of the procedure, given ‘take-home’ babies remain
future imaginaries. See Table 2.
Table 2: Protagonist’s Cited Effects of Egg-Freezing

| Cited Effects of Freezing:                                                                                     |
| 'eases pressure from family members'; 'calmness'; 'relieves dating pressure'; 'stopped sadness about losing chance of child'; 'soothed pangs of regret for fritter away 20s and wasting 30s with man unsure if he wanted children'; 'took away pressure to seek new mate'; 'more relaxed'; 'makes you commit to your goals'; 'own your desire to be a mom'; 'in control of dating life'; 'makes women more open to science to explore alternate routes to family creation'; future full of possibility |

As seen above, affective resolution includes protagonists’ accounts of feeling more ‘hopeful’, ‘relaxed’, ‘calm’, and ‘relieved’ after choosing to freeze their eggs. The most detailed egg-freezing narrative is a *Wall Street Journal* op-ed written by Sarah Elizabeth Richards (4 May 2013), titled ‘Why I Froze My Eggs (and You Should, Too). In the introductory paragraph, we read that Richards spent US$50,000 to freeze 70 eggs when she was aged between 36 and 38. Describing this ‘baby insurance’ as ‘the best investment I ever made’, Richards proceeds to detail various narrative resolutions the procedure afforded:

Egg freezing stopped the sadness that I was feeling at losing my chance to have the child I had dreamed about my entire life. It soothed my pangs of regret for frittering away my 20s with a man I didn’t want to have children with, and for wasting more years in my 30s with a man who wasn’t sure he even wanted children. It took away the punishing pressure to seek a new mate and helped me find love again at age 42…As soon as I woke up in the recovery room, I no longer felt as though I were watching my window to have a baby close by the month. My future seemed full of possibility again.

Later in the article, Richards discusses the interviews she conducted for her book, *Motherhood Rescheduled: The New Frontier of Egg-Freezing and the Women Who Tried It*. In regards to her participants, she states:

In fact, they said that egg freezing motivated them to take charge of their lives. They relaxed. They dated, married, and thawed. They became ready to be mothers. When a woman freezes her eggs, two things happen: She comes to terms with the fact that her fertility is fading, and she invests significant time, energy and money in protecting that asset by seeking medical help. The combination puts the issue front and centre and makes you commit to your goals…you truly own your desire to be a mom.
This quote captures the overall storyline repeated in egg-freezer narratives. First, the inciting incident, in which we read of the protagonists’ personal trauma in facing fertility decline with age, wherein the bio-evolutionary model of maternal desire is implicit. Second, the quest begins, as the neo-liberal, self-efficacious protagonists research their options and begin constructing a fertility plan. Third, protagonists make the critical choice to seek medical attention and decide to freeze their eggs. Lastly, after freezing, protagonists ‘own’ their maternal desire and commit to the goal of motherhood with a sense of confidence and optimism in having ensured they’ve done everything possible to increase the likelihood of future childbirth. Rather than resolving with the miracle-baby trope, an affective conclusion ensues. That is, after purchasing the commodity of egg-freezing, often described by analogy to insurance or investment, protagonists are represented to embody culturally esteemed neo-liberal values. These include feelings of control, confidence, goal-orientation, freedom, and choice to find a suitable partner, focus on career or educational pursuits, and envision a future with blood-related children. In this way, narrative accounts of egg-freezers, sustains the representation of motherhood as the central component of female desire, purpose and fulfillment.

Frame Three: The Teleological Perspective of ARTs

In this section, I discuss how egg-freezing is framed as a narrative of progress, which I relate to a Western epistemological framework, in which science and technology generally, and ARTs, specifically, are often discursively positioned as signifiers of development. We can recall the discussion in Chapter One, in which I discussed how, during the ‘Scientific Revolution’ and development of a positivist paradigm, science gained epistemological precedence by largely defining the limitations by which other epistemes must be judged (Woolgar, 1988). Throughout this corpus, it was found that various bio-technological ‘advances’ that have the potential to extend fertility are discussed, including research into the use of stem cells for oogenesis, embryo freezing and ovarian tissue transplant. I focus predominantly on elective egg-freezing given the other procedures were only discussed in single articles, whereas egg-freezing was represented throughout the corpus.
The persistent tension between science and nature featured prominently in Francis Bacon’s writings, an exemplary voice of the positivist paradigm. Bacon explicitly advocated that nature was a force to be conquered by means of scientific rationality (Ferrell, 2006; Rowland, 1992; Woolgar, 1988). As noted in Chapter One, the privileged status afforded to this scientific rationality depended on its successful differentiation from nature, a realm to which Woman remains essentially linked. This dualism made synonymous the human body, especially female bodies, to unchartered geographical space open to male exploration and colonisation. The oppositional pairing of a masculine scientific rationality against nature/woman ultimately legitimates the framing of science as ‘progress’, wherein technologies, assumed to be ‘applied science’ (Ferrell, 2006), are often represented as symbols of improvement (Raymond, 1995) or reform. Based on an assumption of objectivity, science and technology are often framed to supersede any prejudice or special interests (Ehrenreich & English, 1975). This perspective is evident in this corpus. For example, in a *New York Times* article titled ‘You: The Updated Owner’s Manual’ (2 Aug 2009), it is reported that:

The most powerful revolutions of our age aren’t happening in Washington, the Muslim world or the global economy. They’re happening in science and technology. At a pace our ancestors couldn’t have imagined, we’re decoding, replicating and transforming the human body. These revolutions are changing how we live, what we think and who we are.

In this text, technological transformation is presented as revolution, and as an overthrow of the established system of nature’s laws, which are rendered malleable via methods made exclusive to the respected disciplines of science and medicine. The revolutionary frame is, however, not the only one. In regards to ARTs, Stanworth (1987) argues there are typically two predominant media frames: a progress/benefit frame and a frame of doubt, which includes speculation about associated ethical, social, and moral implications. Media representations that give voice to anxieties, doubts and moral dilemmas regarding technological developments vary in degree and in relation to the stage of technological development during which the reporting occurs. Whereas IVF media coverage, particularly in the late 1970s and early 1980s constructed more sensationalised representations of IVF’s potential to employ ‘Brave New World’ tactics to human reproduction, throughout the 1990s, and to present day, representations of IVF have become largely normalised. In this corpus, one retrospective article in the *New York Times* (15
July 2003), written around the time of the twenty-fifth anniversary of the birth of Louise Brown, the first baby born as a result of IVF, in 1978, claims:

By today’s standards, Louise Brown’s conception seems rather conventional…in the last 25 years, doctors have improved every aspect of in vitro fertilization.

Two years later, an article in the *Boston Globe* (14 Nov 2005) titled ‘In Vitro Field Facing Slowdown; Aging Baby Boomers, Costs, Success Rates Cited’, we read:

For more than two decades, the field expanded explosively, revolutionizing a whole generation’s concept of babymaking.

The article goes on to suggest a lull in ART expansion as a result of aging ‘baby-boomers’ and the increasing efficiency of IVF. This slowdown is said to ‘undermine dire predictions that reproduction is becoming so high-tech that it will soon enter an era of ‘designer babies’ in which parents routinely select embryos or alter their genes to get lots of tall, blond, blue-eyed geniuses (3 Oct 2005). Yet, the suggestion remains that the ART industry hasn’t completely ‘grown up’, and room for improvement always persists. The same article suggests:

The last great infertility hurdle remains, however: poor egg quality among older women…perhaps egg-freezing will eventually help solve that problem.

That age-related fertility decline is described as ‘the last great hurdle’ of ART development, provides justification for sustained research funding to study the potential malleability of this biological reality made possible by the development of new bio-technologies. In this way, egg-freezing is linked to a well-established and largely normalised representation of the everyday use of ARTs, which substantiates the ongoing funding of egg-freezing and that aims to increase cultural acceptance of egg-freezing as a respectable and benevolent endeavour. Given this increasing normalisation of ART media coverage in the last four decades, it’s rather unsurprising that critical assessments of egg-freezing were found to be severely underrepresented in this corpus.
The absence of critical representation relates to one of Condit’s (1994) arguments, which is that one of the key rhetorical strategies of science-related journalism is to create a middle ground between binarised radical voices which, by means of omission or dilution, sustains the hegemonic representation of science and technology as disproportionately benevolent. Media representations of ARTs fit within this tradition and since entering mainstream media in the late 1970s, have cycled between endorsement and doubt. Representations of doubt, however, are kept at a minimum. As Raymond (1995) argues, doubt ‘must translate into almost absolute peril before a technology loses its promise’ (p.113). The representation of egg-freezing in this corpus follows Condit’s thesis, such that egg-freezing is largely presented in terms of a ‘middle ground’ whereby the technology is presented as a step of progress toward ‘the last great fertility hurdle’ (3 Oct 2005). Social critique is rendered largely irrelevant by the rhetorical strategy of framing the technology as a commodity, wherein personal choice and rights to access supersede ethical argument.

The sparse representation of critical assessments of elective egg-freezing could more appropriately be termed cautionary representation, given there are only two op-ed pieces that focus solely on social commentary. Curiously, there are only two articles that are self-proclaimed ‘feminist’ assessments of egg-freezing. One is an opinion piece published in the Wall Street Journal by male author James Taranto (2013), in which he critiques elective egg-freezing advocate, Sarah Elizabeth Richards, and her new book, Motherhood Rescheduled: The New Frontier of Egg Freezing and the Women Who Tried It. Whereas Richard’s thesis is that egg-freezing provides a ‘new frontier in reproductive choice feminism’, Taranto argues egg-freezing merely ‘enables women to do things with their bodies that men are able to do naturally’.

Suggesting egg-freezing is as invasive as abortion, Taranto speaks on behalf of all men when he writes, ‘it seems to us that if healthy men had to subject ourselves to an abortion-like procedure in order to achieve ‘equality’, we’d make peace with inequality.’ In this way, Taranto employs bio-evolutionary logic that privileges naturalistic assumptions of gendered ordering. In other words, he resorts to sexual differentiation as an a priori natural law which, to him, women would be wise to accept. Similar to the discussion in the previous frame, Taranto promotes the perspective that women are illogical, misinformed and desperate in their decisions to pursue reproductive technologies. Thus his argument is in no way ‘feminist’, given he neglects to
address the structural dimensions of sexual inequality or provide a historical perspective regarding the masculinisation of technological development itself. Instead, Taranto reiterates a frame that positions the locus of blame on women.

The other article that focuses explicitly on critical social commentary is a shorter piece titled ‘The Ethics of Egg Freezing’, published in the Wall Street Journal (4 May 2013). The text highlights three underrepresented critiques. These include the notion that if, as proponents of egg-freezing suggest, the procedure would allow women to ‘have it all’ (career/family), this might also create new social expectations that could undermine workplace accommodation and flexibility. Secondly, the text links elective egg-freezing to cosmetic surgery and argues it supports a cultural denial of ‘natural aging’. Third, egg-freezing is suggested to likely influence increased use of pre-implantation genetic diagnosis (PGD), and people’s sense of entitlement to pursue ‘designer babies’. These are all pertinent points, however the text’s conclusion negates these debates, with the following bottom-line: ‘Assuming there are no long-term health risks to egg freezing, none of these ethical challenges justifies banning or restricting the practice’, and ‘the danger lies not in a particular technology but in how it might allow us to indulge our hubris and pretend that we and our families are not subject to the relentless march of time’. Like Taranto’s article, this opinion piece ultimately aligns with bio-evolutionary logic by highlighting the sovereignty of nature’s imposed laws and by equating the use of egg-freezing with a sense of pride. Hubris, in Greek tragedy, was understood as defiance against the gods. In this context, appeals to hubris frame technology as an attempt to subvert the supreme role of nature. Despite this text’s seemingly cautionary framing of egg-freezing, its use of bioethical logic ultimately deduces egg-freezing to individual choice. This neutral position aligns with Ferrell’s (2006) argument that the bio-ethical regulation of ARTs relies on democratic logic, such as consumer rights, which ultimately safeguards ART development.

Other cautionary perspectives are found seeded throughout the corpus, but remain interwoven with optimistic and enthusiastic perspectives of egg-freezing. I suggest this juxtaposition ultimately supports the progress narrative, functions as a promotional model of egg-freezing and
thus serves the interests of the fertility industry (Nelkin, 1995). Overtly optimistic perspectives are rhetorically disseminated by the use of first-hand narrative accounts of women who have pursued elective egg-freezing and the use of fertility ‘specialist’ quotes. In the beginning of the decade, the cautionary issue discussed most frequently is the lack of data to declare the egg-freezing ‘successful.’ Quotes from numerous fertility ‘specialists’ are used to warn against premature endorsement of the procedure, given the lack of actual babies born from frozen eggs. The gap in data is nevertheless frequently superseded with a narrative of optimism related to the rapid evolution of better egg-freezing techniques, such as vitrification. For example, in a 2004 New York Times article titled ‘For Women Worried About Fertility, Egg Bank is a New Option’, Dr Mark Fritz, professor of Obstetrics and Gynecology at the University of North Carolina and Chairman of the ASRM’s cyropreservation committee, is quoted as proclaiming:

The American Society of Reproduction feels it’s premature to openly market this now, but these technologies are quickly evolving and the limited body of evidence we have is encouraging.

In the same year, Dr Owen David, member of the ASRM Board of Directors is quoted in a Boston Globe (29 Aug 2004) article to say, ‘The American Society for Reproductive Medicine expects to publish its first guidelines on egg-freezing in October, when it has indicated it will recommend the procedure be considered experimental at this point and not marketed as a way to defer reproductive aging’.

As previously noted, the ASRM functions as the national regulatory board of ARTs in the US, publishes a top journal in the field, Fertility and Sterility, and hosts numerous international fertility society collaborations. In this way, the ASRM largely controls medical discourse on egg-freezing and is therefore unsurprisingly framed as a source of authority in media representations. That media texts report on the ASRM’s labeling of egg-freezing as ‘experimental’, again points to a strategic aim to construct a middle-ground stance of the technology, such that women and fertility doctors are warned to exercise caution until enough data has been collected to establish the procedure as legitimate and efficacious according to normative scientific criteria. At the same time, the use of authoritative quotes from ASRM members are an explicit strategy to justify sustained research funding. I assert that funding relies heavily on positive media representations
of the ideological view of technological advancement; thus, the aim of constructing a progress narrative surely aligns with a strategy to win cultural and economic support for the broader scientific agenda (Kitzinger and Williams, 2005; Nelkin, 1995).

The positive framing of egg-freezing as a means to secure sustained funding is clearly evident in this corpus. For example, in a 2005 article in the Boston Globe titled ‘A Baby Step Closer to Freezing Eggs’, it’s reported that Boston IVF, the largest infertility clinic in the US, recently partnered with the private commercial enterprise, Extend Fertility, in order to seek better scientific data on egg-freezing. This allegedly involved recruitment of volunteers from East and West coast US clinics to conduct clinical trials to garner the necessary numbers needed for doctors to more readily recommend the procedure. This clinical trial is described by one doctor in a New York Times article titled ‘For Women Worried About Fertility, Egg Bank is a New Option’ as ‘the kind of large, carefully run clinical trial that specialists say is just what is needed for egg-freezing to gain scientific legitimacy’ (21 Sept. 2004). Surprisingly, the funding source is disclosed, an ‘unrestricted grant from Serono’, one of the largest fertility drug companies active since the 1970s. This funding disclosure, however, is not a source of political critique, but framed as a benign and generous endowment. In other words, the clinical trial is represented as a utilitarian activity by the suggestion that consumer demand for egg-freezing is the primary motivating factor. This stance is demonstrated with statements such as the following: ‘Many are eagerly waiting for egg-freezing to come of age. When it does, women will be able to effectively stop their biological clocks…’ (3 Oct 2005) and ‘demand is rising, doctors say’ (26 April 2007).

I suggest this utilitarian frame is better understood as a rhetorical strategy which, rather than primarily responding to consumer demand, additionally stimulates consumer desire. In other words, this framing strategy functions as an institutional advertisement for egg-freezing and positions medical researchers as benevolent and objective responders to external demands. Additionally, consumer focus avoids discussion of the underlying power relations and the potential for status, power and economic gain inherent in the free-market fertility industry. The competitive climate of ART development, in which individual doctors and private clinics race to
be the ‘first’ to develop or test a method, is rarely represented in this corpus. There are a few subtle hints of this contentious environment, however. For example, in one *New York Times* article (21 Sept 2004), the reader is introduced to Dr Michael Tucker, scientific director at Georgia Reproductive Specialists in Atlanta, described as ‘the clinic credited with producing the first baby from a frozen egg in the United States’. He is quoted as stating, ‘The joke is that anyone can freeze eggs, but can you thaw them, fertilize them and actually make babies from them?’ Housed within this single quote are the subtle dynamics of power and status, scientific competition and the by-now familiar dualistic pairing of masculine/science against feminine/nature. We can also recall Martin’s (1987) discussion of the capitalistic logic by which gendered bodies are hierarchized, wherein male doctors are figured as owners or managers, women as labourers, eggs as parts of the larger reproductive machine, and babies as the desired product. In this way, women are discursively stripped of agency and conflated with their eggs whilst the doctor figure, often male, maintains privileged status.

The utilitarian frame of egg-freezing is also promoted by the rhetorical use of narrative. For example, in the lead paragraph of the *Boston Globe* article, ‘A Baby Step Closer to Freezing Eggs’ (3 Oct. 2005), the reader is introduced to a married couple described as lucky participants in the fully-paid Boston IVF clinical trials to test the success of frozen donor eggs. The couple’s trauma from previously spending $50,000 on unsuccessful fertility treatments sets the tone for their represented excitement at being included in the clinical trial, described as ‘the fertility equivalent of a winning lottery ticket.’ The use of narrative in this way allows scientific research and technological development to be framed as an act of heroism, in which ‘real’ people can overcome their personal traumas (Franklin, 1997). The article concludes with a quote from the husband that further promotes the utilitarian frame of medical research: ‘Of course we hope it helps us, but in the bigger picture, it would be cool to move this forward.’ In this way, as Raymond (1995) suggests, the future promise versus the actual performance of technology is foregrounded.
The media representation of the ASRM’s official label of egg-freezing as ‘experimental’ and the initiation of the Boston IVF clinical trials to address the lack of data, situates the authoritative stance on egg-freezing within the confines of medical discourse. The ‘experimental’ label is a discourse in its own right. Despite the ASRM’s explicit recommendation against the commercialisation of elective egg-freezing, however, the privatised ART industry in the US allowed some companies such as Extend Fertility to press onward with their attempts to expand a market of consumers. Although seemingly opposed, I believe private and regulatory institutions work together toward the similar aims of increased research funding and cultural acceptance of ARTs. The ASRM’s ‘experimental’ label is used to construct a cautionary stance, yet caution is typically subsumed by a frame of optimism given the suggestion that with more data, the ban will be lifted. In October 2012, it was reported that after four randomised control trials revealed little difference in the effectiveness of using fresh versus frozen eggs in IVF, and which revealed no increased risk of birth defects or developmental problems in children born from frozen eggs, the ASRM experimental ban was lifted (23 Oct. 2012).

I anticipated a significant amount of media excitement around this discursive event of the lifting of the experimental ban, but within this corpus, it was only briefly mentioned in four articles in the following year. This suggests that the momentum of media attention given to the procedure of egg-freezing had already been significantly accumulated throughout the decade, and that, given the largely privatised free-market ART industry in the US, the delay in an ‘official statement’ from the ASRM didn’t significantly impinge on the commercialisation of the procedure. Reports about the removal of the ‘experimental’ label, however, featured as a rhetorical strategy for the project of mainstreaming, particularly allowing for the suggestion that more women and more doctors were now open to the elective use of the procedure as a result of better data. For example, in one article titled ‘Pausing the Biological Clock; Egg-freezing Allows Women to Try to Widen their Child-bearing Window but Results Aren’t Guaranteed’, we read that the ASRM lifted the experimental ban a year prior and that, ‘Now more women are asking themselves: Should I freeze my eggs?’ (30 Sept. 2013).
Frame Four: Mainstreaming of Egg-Freezing

Here, I discuss the use of rhetorical strategies to mainstream egg-freezing, which are both made possible by and contribute to the teleological frame. In other words, I assert the Western cultural value placed on science as an esteemed source of knowledge stimulates excitement about the malleability of biological constraints. I assert it is thus historically situated knowledges and their contemporary reiteration that create the conditions wherein egg-freezing can become an alluring media story.

In early media representations of egg-freezing, particularly with the advent of the first privately commercial enterprise in the US, *Extend Fertility* (2004), individual female characters are often framed as spokeswomen to express excitement about the nascent technique. As mentioned previously, I suggest the use of individual protagonists is, in part, a strategy of endorsement. Consider for example, founder of *Extend Fertility*, Christy Jones, and her first-hand account of the decision to freeze her eggs at the age of 34, just as she launched the company. Jones is represented as an everyday woman with the presumably universal female burden of negotiating a fertility deadline with instinctual maternal desire. She’s also represented as a powerful, proactive woman with a strong orientation toward career success. In this way, Jones presents the ideal mix of a ‘feminine’ desire for motherhood and a ‘masculine’ drive for success, a construction reiterated in protagonist representations throughout the corpus.

Not including first-hand accounts of embryo freezing, use of donor eggs, or ovarian tissue transplantation, six narratives focus specifically on first-hand accounts of egg-freezing. These articles provide similar introductions of an ideal protagonist by listing characteristics that highlight the character’s struggle to balance the tension between maternal and career goals. These introductions further detail demographic characteristics of these protagonists as a means by which to frame the targeted audience. These include geographic location (all major urban areas in the US), age (range from 22-45 years old), occupation (all white-collar career women or pursuing advanced degrees), and marital status (typically discussed in terms of their relation to
seeking ‘Mr. Right’). I suggest that these ideal protagonists strategically construct socially-appropriate mothers, or from a perspective of population politics, those deemed most ‘fit’ to reproduce and contribute to nation building.

For example, Grace Drake, the second woman reported to freeze with Extend, is featured in an article published in the New York Times and the Washington Post on the same day (21 Sept 2004). In the New York Times article, we read the following introduction:

Grace Drake still hopes that someday she will meet Mr. Right and have a family the old-fashioned way. But as the program director of a fertility clinic in Austin, Tex., Ms. Drake, 35, sees women every day who are in their 30s and 40s and want desperately to have children but cannot. So she decided to take out some insurance. She froze her eggs.

In this text, the normalisation of the desperate female trope becomes a motivating factor for the protagonist to enact the neo-liberal values of proactivity and self-governance. Additionally, egg-freezing is linked to natural, or ‘old-fashioned’ conception, which is a strategy to frame science and technology as benevolent and trustworthy extensions of the natural (Franklin, 1997). I suggest these first-hand accounts are an overt marketing strategy for Extend Fertility, and simultaneously used toward the broader goal of increasing awareness and acceptance of egg-freezing as an ‘option’ for privileged women. In the Washington Post article (21 Sept 2004), ‘Putting Your Eggs in a Different Basket’, we explicitly read, ‘Christy Jones is trying to help egg freezing enter the mainstream.’ The media introduction to egg-freezing via Jones’ story is largely framed as altruistic, wherein Jones is represented as a business-savvy woman intent to address a presumably shared tension between female age and fertility.

By 2007, in a Washington Post article titled ‘Women Hedge Bets Banking Their Eggs; As More Freeze, Debate Expands’, the President of the Society for Assisted Reproductive Technology (SART) is quoted to say:
I think we’re sitting at that tipping point between technology that is quasi-experimental and tipping over into fairly widespread use. It’s one of the most exciting areas in our field right now.

In the same article, we read that *Extend Fertility* has expanded to include clinics in six states and signed up more than 200 women. It’s likewise reported that a recent survey of 430 nationwide fertility clinics revealed that 138 were providing egg-freezing services. The article structures itself in a point/counterpoint format to present a handful of views regarding egg-freezing, but it begins and ends with positive endorsement including the bottom-line perspective by a Sociology and Women’s Studies professor who is quoted as saying in regards to egg-freezing:

This buys more time to find someone who you both love and want to be a parent to your child. This could mean women would no longer be slaves to their biological clocks.

The use of various sources, including academic and medical authorities, creates a promotional frame aimed to increase widespread acceptability. Female protagonists are also used to voice various pros and cons of egg-freezing, but they similarly endorse the procedure overall. In one *Wall Street Journal* article titled, ‘Why Some Single Women Choose to Freeze Their Eggs’ (14 Feb 2008), the reader is introduced to another *Extend* client, ‘Lucia Vazquez, 33, a single New Yorker medical-supplies saleswoman’. Vazquez is quoted to say she ‘knows the odds, but her heart speaks louder’. This quote reiterates dual purposes of the protagonist, who, apart from embodying neo-liberal ideals of proactivity, pragmatism, and informed consumption, also represents a presumably instinctual maternal drive. Here, the discursive construction of maternal instinct as natural not only proliferates an established gendered hierarchy, but is also a rhetorical device by which lacking data in the procedure’s success rates is minimised. The article concludes: ‘Pros and cons aside, more women are embracing the technology for their own, highly personal reasons.’

Egg-freezing is thus simultaneously framed as a growing trend amongst career-driven women and ultimately an individual choice worth any physical, psychological or financial burden. I assert that the use of protagonists to ‘embody progress’, aside from aestheticizing egg-freezing
and promoting science and technology, can also be read as a strategy of mainstreaming. In other words, egg-freezing is framed as an increasingly commonsense option, or, as in the case of Ms Vazquez, the only option to offset the implied risk of childlessness (14 Feb 2008).

Over the course of the decade, reported growth in egg-freezing popularity is more frequent, but the reader is also introduced to a glitch in the protagonist ideal, that is, the concept of being ‘too late’ to freeze her eggs. A 2007 article in the Boston Globe titled, ‘A new fertility gamble for women; Limits are found to egg freezing’ captures both a mainstreaming and cautionary discourse whereby women’s individual decision-making to avoid waiting ‘too long’ to freeze is foregrounded as an essential component of likely success. Previously discussed by media scholars, is the use of gambling metaphors in representations of IVF, particularly as a means of normalising repeated trials (van Dijck, 1995). The framing of egg-freezing as ‘a new fertility gamble’ thus follows in this tradition by situating responsibility on the individual woman. In this way the subject is obligated to hedge her bets carefully by freezing a significant number of eggs at an age that will increase her future chances for conception. Returning to this article, the reader is introduced to protagonist Ziva Cohen, a law school admissions officer in Manhattan, who embodies a mainstreaming frame of egg-freezing when she is quoted as proclaiming, ‘It feels like it’s all around us. It’s on everyone’s minds.’ Yet, three paragraphs in, the reader is warned with the following:

The bad news is that as egg freezing gets off the ground in a few urban centres, it seems to meet an essential clash between female biology and female psychology. Cohen’s friends tend to be about 38 or 39, a common age for egg-freezing clients, early research suggests, but far from an ideal one. Positioning blame on ‘female psychology’, a rather vague term, implies a fundamental flaw in a woman’s disposition, personality, or character that influences irrational or misinformed decision-making. We can recall that the onus of ‘infertility’ in the late 1970s was similarly represented as resulting from women’s sexual promiscuity and flawed decision-making (van Dijck, 1995; Marsh & Ronner, 1996). This allocation of blame strategically avoids discussion of structural or cultural tensions within which women must negotiate reproductive decisions. Returning to the same article, Christy Jones, is quoted as stating, ‘…Extend is trying to spread the word that egg-
freezers should do it sooner rather than later because of the fall-off in fertility.’ The admonition to not wait too long is reiterated throughout the decade, such that by 2013, in an article in the Boston Globe titled ‘Pausing the biological clock; Egg-freezing allows women to try to widen their child-bearing window. But the results aren't guaranteed’, we read that, according to two cited fertility doctors, the ‘optimal’ time to freeze is before age 30.

Overall, a chronological reading of the articles reveals a coming-of-age story of egg-freezing. I suggest that the earlier narrative accounts of egg-freezing aim to establish optimism in order to facilitate and stimulate consumer interest and sustain research funding. Additionally, egg-freezing is introduced as a common sense approach linked to the constructed ideal neo-liberal protagonist. This generates the idea that, despite a myriad of risks and lacking data about success rates, egg-freezing is an exciting and logical option for women to delay childbearing. A reading of the progression of headlines in the latter end of the decade clearly reveals a mainstreaming agenda, as depicted in Table 3.

| ‘Things to consider before freezing your eggs’ (26 July 2010) |
| ‘Freezing human eggs is gaining in popularity, but declaring it a success would be premature’ (26 July 2010) |
| ‘Egg freezing: The rundown’ (30 Sept 2013) |

Table 3: Mainstreaming Headlines

Toward the end of the decade, articles revert to shortened, inverted-paragraph format, in which the key points of the article are mentioned in the lead, and rely on literal versus figurative language. This suggests that representation of egg-freezing has, by this time, established sufficient cultural awareness, such that only the ‘new basics’ or ‘rundown’ needs to be communicated.

Younger female readers are also increasingly targeted toward the end of the decade. For example, in the last article of the corpus (30 Sept 2013) we read, ‘the increasing buzz might also
mean that interest in the technology is filtering down to younger women.’ Reverting to a narrative style, we are introduced to Deb, 45, who reportedly has six eggs waiting for her. Instead of focusing on her own experience, however, she is reported to ‘urge younger women to freeze their eggs if they’re considering the procedure’ and ‘wishes she had been similarly encouraged when she first asked the question at 35.’ This demonstrates a new rhetorical use of the protagonists, in which they are framed as wise aunts or friends to encourage the younger generation of women to make different, and presumably more ‘informed’ fertility choices. Sarah Elizabeth Richards, author of three op-eds in this corpus and the book: *Motherhood, Rescheduled: The New Frontier of Egg Freezing and the Women Who Tried It*, is the most prominent ‘aunt’ figure. Aside from her own detailed story of egg-freezing, she also overtly encourages younger women to consider the procedure. Her article titles clearly demonstrate these dual aims. These include a 2012 article in the *New York Times* titled ‘We Need to Talk About our Eggs’ and an opinion piece titled ‘Why I Froze My Eggs and You Should Too’. This points to a broader trend in which an expansion of supporting characters becomes a rhetorical strategy aimed to promote fertility governance. Aside from aunt-like figures, other supporting characters include prospective grandparents and health practitioners.

Family members are introduced as supporting characters in the latter articles in the corpus. By 2012, in an article in the *New York Times* titled ‘So Eager for Grandchildren, They’re Paying the Egg-Freezing Clinic’ (14 May) it’s reported that doctors are seeing a new trend in which parents are getting involved in their daughter’s fertility planning, and some are paying for all or part of egg-freezing costs. We read that one clinic, in response to this growing trend, now offers the ‘Gift of Hope’ to potential clients, whereby the whole family can get involved to purchase an egg-freezing gift certificate for the future freezer, complete with a silver charm bracelet. No longer is the female protagonist the sole decision-maker/consumer, but consumption becomes a family investment based on the cultural assumption that ‘everybody wants to experience being a grandparent.’ For example, in this article, we’re introduced to supporting character, Candace Kramer, 61, who reportedly convinced her daughter to take up egg-freezing. She is quoted as declaring, ‘By the time Allison was 35, I felt the clock was tick-tick-ticking’ and ‘I viewed it [egg-freezing] as opening up an opportunity for her.’ In this way, the prospective grandparent is represented as an altruistic benefactor rather than an authoritarian or coercive antagonist.
Health practitioners are also similarly represented as supporting characters who, like prospective grandparents, encourage women to take charge of their own personalised fertility plan. Their roles are more overtly paternalistic, however. For example, a 2013 Wall Street Journal article titled, ‘Your Health: More Doctors Broach Delicate Topic Of Women's Age and Fertility Rate’ (4 June), reported on the newest guidelines from the American Congress of Obstetricians and Gynecologists (ACOG). These read: ‘Clinicians should encourage women to formulate a reproductive-health plan and should discuss it in a nondirective way at each visit.’ Framed as a new approach to educate women about fertility-decline, the suggested routine procedure is portrayed as more effective than previously used public service campaigns, critiqued by some as relying on scare tactics. The former ASRM president is cited in the article as believing women are now more informed about fertility and age, and reportedly states he supports more direct and routine discussions between women and their gynaecologists. A handful of doctor’s quotes are used throughout the article that advocate for routine fertility discussions and the suggestion of egg-freezing to female patients. The most cited doctor of the narrative, Dr Jostes, is quoted as stating he sees himself like a ‘relationship counselor’ who ‘discusses with patients how they might balance their desires for careers, finding the perfect man and a desire to have children’. His approach is initially introduced by the main protagonist of the article, Ms Erwin, 37, also his wife. In the leading paragraph her character gives credit to Dr Jostes for discussing her fertility goals with her when she was 34 and ‘giving her the kick in the pants she needed.’ Even though the phrase ‘kick in the pants’ connotes authoritarian paternal discipline and positions the female protagonist as weak, naive, and undisciplined, the rhetorical focus on the female protagonist’s gratitude for the advice, neutralises the paternal medical role.

Just as younger women are increasingly targeted as egg-freezing candidates, they are also more generally targeted to take responsibility for their own reproductive futures. In an article in the Boston Globe titled ‘For the New Generation, the Dreaded Life Crisis Starts at 30’ (4 Sept 2005), we read that ‘30 is the key age to have career goals in place’ and that ‘for women, there’s an

14 Here I am referring to the ASRM’s 2001 ‘Preserve Your Fertility’ public service campaign, that featured an upside down baby in an hourglass.
added dimension of turning 30: the biological clock.’ The represented solutions to this tension echo advice given by the previously mentioned familial and medical supporting characters, which is the admonition to take a proactive stance toward fertility planning. In this article, advice includes starting a business ‘as a great way to ensure that you can control your time as 30 approaches’ or ‘managing the convergence of fertility and finances by negotiating upfront with [a] partner’.

Despite the emphasis on fertility self-governance, egg-freezing is simultaneously framed as an expansion of choice for women, at times corralled with ‘reproductive rights’ and linked with the contraceptive pill. This representation constructs an individual consumer-subject presumed to have full agency to make her own informed choices, and simultaneously positions egg-freezing as essentially linked to ‘gender equality.’ Extend Fertility founder, Christy Jones, states in a 2007 (13 May) article in the Washington Post:

In the same way the birth control pill gave women in the ‘70s a whole new set of options, I think egg-freezing can do the same with this new generation of women – giving them more control over their fertility and giving them more options.

This perspective of ‘gender equality’, I assert, can be unpacked through a ‘postfeminist’ reading. We can recall that a ‘postfeminist’ perspective builds upon a cultural assumption that sexual parity has been achieved and that women are free and equal to pursue self-individualisation. This sensibility of freedom is also central to neo-liberal ideals (McRobbie, 2009), in that both mentalities foreground the individual and celebrate consumer lifestyle choice (Budgeon, 2009). When egg-freezing is framed as supportive of a woman’s career advancement and thus aligned with ‘gender equality’, I suggest this strategically de-emphasies a proliferation of structural inequalities in the workplace and persistent gender essentialism with promotes a reproductive imperative.

The following year (14 Feb 2008), in a Wall Street Journal article, Jones is quoted as arguing, ‘Women should be informed about the technology and allowed to decide for themselves.’ Egg-
freezing is thus positioned as an individual decision, and the focus is placed on recommended strategies to maximize the potential success of egg-freezing. Adherence to guiding principles, such as freezing eggs at a younger age, promotes ideals of self-regulation and time management rather than last-minute desperation. Grace Drake, the second woman to freeze with Extend represents this stance when she is quoted as stating, ‘I just think that being proactive is very important and if it didn’t work, I would know I had done everything I could do’ (The Washington Post, 21 Sept 2004). Similarly, in a New York Times article printed on the same date, Drake is quoted as declaring, ‘I would like to have children someday and I like knowing that I have taken advantage of everything currently available in order to give myself that option.’

This points to a key issue, which is that the very availability of the technology and its media representation requires targeted subjects consider its use as another means by which to potentially exercise risk-reduction to ward off future regret and potential social judgment for not having tried everything possible to have genetically-linked children. This emphasises a culture that continues to valorise blood-related kinship norms as superior to other forms of parenting. I also align with Sandelowski (1991) who argues that the preponderance of pro-natalism in Western society constructs ARTs as overtly compelling, such that, not only is there a risk of the failure to reproduce, but the failure to try. The new subjects formed within this particular fertility discourse, or as Martin (2010) argues, those constructed as being at risk of ‘future infertility’ are, according to their privileged access, confronted with new norms of reproductive decision-making. These norms require subjects to negotiate the technological choices made available to them. Of course there are many non-technological alternatives including child-free living or unconventional forms of parenting. Omission of these alternatives, however, increases the normalisation and naturalisation of bio-technologies in support of pro-natalism, whereby privilieged Western women are targeted as prime contributors to nation-building. Moreover, egg-freezing relies on sustained financial backing, made available by pharmaceutical and governmental funding. This frame thus diverts economic resources that could be put toward basic health care needs of trans-national communities of women (Inhorn & van Balen, 2002; McNeil, 1990).
Conclusion

We can recall that the initial aim of this research was to analyse the ways in which female age-related fertility decline is framed in contemporary American news media (2003-2013). Identification of media frames was determined as the entry-point to consider the relationship between contemporary representation, historically-constructed discourses, and the power relations within which these discourses emerged and have continually evolved.

An analysis of power relations suggests that the discursive economy in which female age-related fertility decline is communicated within this sampling of media, affords the fields of science and medicine unequal access to and control over the ways in which this discourse is publicly communicated. Because of this, I assert that these institutions largely maintain the discursive parameters within which a select cohort of women are invited to think and know their material bodies. This privileging is argued to be, in large part, based on the epistemological preference given to ‘positivist’ science and what I have termed the ‘teleological perspective of ARTs’, a framework that constructs bio-technologies, such as egg-freezing, as largely utilitarian. I suggest the privileged status afforded to science and medicine relies upon and sustains historically-constructed discourses, such as an essentialist formulation of woman’s ontology as based upon a reproductive essence.

A framework of neo-liberal governance was found useful to analyse various aspects of representation. Of prominent theoretical consequence was the preponderance of narrative journalism used to represent the topic of female age-related female fertility decline during the decade surveyed. From a perspective of neo-liberal governance, I suggest that representation in this sample is best understood as a rhetorical strategy that aims to influence both the targeted readers’ cognition and conduct by increasing interest and engagement with the topic of female age-related fertility decline, and which supports increased research funding allocation to the fertility industry.
A theory of neo-liberal governance was also found useful when considering broader themes of population politics. Pro-natalist sentiment was suggested to be implicit within the representation and valorisation of neo-liberal values such as rights, control and choice. This was predominantly found in representation of the nascent bio-technology of egg-freezing. In the few instances when egg-freezing was framed as a ‘gender equaliser’, neo-liberal and post-feminist rationalities were also assumed to be implicit. This was determined by the focus placed on the individual consumer, which renders silent the ways in which egg-freezing substantiates a gendered reproductive imperative, proliferation of structural gender imbalances, and economic privilege maintained by the fertility industry.

Sexual differentiation was found to be represented as ahistorical, which I assert provides the framework to reiterate a discourse of maternal instinct as natural. An essentialised representation of female reproduction is thus maintained. However, intersectional analysis highlights the ways in which a gendered reproductive imperative is simultaneously stratified, explicitly according to class distinction. I suggest that only a small cohort of middle-class, Western women are the primary targeted audience of this discourse. This, I assert, is suggestive of an implicit discourse of positive eugenics, or a reorientation of middle-class Western women toward fertility planning and reproduction. This targeted demographic suggests these subjects are determined most ‘fit’ to reproduce. I also assert these representations rely on an implicit cultural bias for blood-related kinship norms, which is presented as one of the benefits of egg-freezing. I take the position that this focus significantly forecloses the social acceptability of alternative forms of parenting such as adoption or other non-normative roles of nurturance.

What becomes clear through this analysis is that the notion of individual freedom, rights and choice remain paradoxically central to contemporary forms of gendered reproductive governance. Analysis of diffuse and decentralised power relations, the reiteration of historically-constructed discourses and the stratification of reproduction within representations of female age-related fertility decline highlight the on-going problematic nature of the notion of ‘reproductive choice’. When elective egg-freezing is linked with ‘reproductive choice’, I suggest this bio-technology cannot be generalised as contributing to universal reproductive choice. In the
event that egg-freezing supports ‘choice’ for a select few privileged women, it remains presumptuous to assume that increased quantitative choice directly translates to qualitative life improvement, given the financial cost, lack of success rates, and under-explored potential for social, psychological, and physical burdens resulting from this procedure.

This research is significant in the way it highlights the on-going problematic nature of gendered reproductive discourses and their representation, despite the ways in which these discourses are often framed as a benevolent ‘public health’ or ‘educational’ service to women. Although neo-liberal and post-feminist sensibilities sell the idea that women can ‘have it all’, where ‘all’ equates to career and family, I suggest this discourse, particularly when it involves the promotion of egg-freezing, remains illusory and harmful. In other words, mass media representation of normative gendered reproduction averts critical analysis of the economic benefactors of this discourse, the structures that maintain unequal power in the dissemination of this discourse, and the myriad women who are excluded from this discourse based on reproductive stratification. It is thus imperative that future research continue to address the concerns raised in this thesis. It would be particularly useful for future research to investigate how those subjects who are discursively activated within this selection of media representations actually experience and negotiate reproductive decision-making and encounters with health professionals. Additionally, with increased discourses addressing male ‘biological clocks’, a comparative analysis is warranted.
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