

**Women's Reproductive Bodies and Labour as The Premise for The Survival of The Capitalist System**

A Transnational Feminist Inquiry into Contemporary and Speculative Future Forms of Capital Accumulation



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A minor dissertation submitted in partial fulfilment  
of the requirements for the award of  
the degree of Master of Social Science in International Relations

Department of Political Studies  
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2023

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## *DECLARATION*

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to and quotation in this dissertation from the work or works of other people has been attributed and has been cited and referenced according to the Harvard convention.

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## ABSTRACT

*This dissertation examines how capitalism has remained predicated upon women's reproductive bodies and labour in the contemporary moment and its possibilities for the future. Relevant to the current aftermath of overturning Roe v. Wade, this research incorporates the concepts of gender, race, geopolitics, religion, and technology into investigating the transnational reliance of varied capitalist logics of accumulation on women's procreative capabilities. Utilizing a transnational feminist theoretical framework, and a qualitative secondary analysis methodological approach to extract data from secondary literature sources such as academic journal papers and online news articles, this study contends that an abortion ban in the Global North has had a ripple geopolitical effect on the Global South and beyond, exposing the current transnational connection between nation-states to implement foreign-aided family planning, biocapitalism, surveillance capitalism, and terror capitalism via the carceral system, as tactics for extracting capitalist profit from the reproductive bodies and labour of women. Furthermore, this research argues, that as emerging logics of capitalist accumulation are becoming increasingly permeated with advancing technologies, the uterus has materialized as a technologized object, with capitalist elites testing the possible replacement of women's procreative abilities and bodies through present technologies such as agricultural breeding, Assisted Reproductive Technologies, and transnational commercial gestational surrogacy – and speculative nearby-future technologies such as the artificial womb. As tech elites begin to tout the possible creation of the artificial uterus as an emancipatory tool to escort in a post-capitalist gender-equal dawn, this thesis asserts that the quandaries of these technologies begin to transcend national borders, revealing that such problems now exist on an ever-developing interlinked transnational scale and further arguing that artificial wombs could additionally drive the concentration of wealth into fewer hands, not liberate all women from reproductive capitalist exploitation, and plausibly expedite a post-capitalist society with intensified inequalities. The research thus culminates with the contention that women's procreative liberation from a capitalist system that relies upon female reproductive bodies and labour to accrue financial gain does not exist in expropriating and replacing the progenitive capabilities of women – it lies in the alteration of patriarchal control via evoking and instituting the social and political modifications that shall lead to the eventual disruption of the misogynistic capitalistic structure and the elites who continue to engross the past, present, and future of the capitalist system.*

## *ACKNOWLEDGEMENTS*

No words can truly express my deep gratitude to my supervisor for encouraging me along this path. Dr Gavaza Maluleke, without your guidance, patience, understanding, and steadfast support, writing this dissertation would not be possible. Thank you for being the voice of reason throughout this journey. I would like to thank my family and friends for standing by me and constantly reminding me to never give up during this process. It is much appreciated. Your love and understanding are truly irreplaceable. Finally, thank you to the National Research Foundation of South Africa for funding this research.

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## 1. Introduction

On the 24<sup>th</sup> of June 2022, *Roe v. Wade*, the landmark decision of the US Supreme Court to protect a pregnant woman's constitutional right to choose to have an abortion, was overturned (McCammon & Totenberg, 2022). The decision was made on the basis that the fundamental right to have an abortion was "not deeply rooted in the nation's history or tradition" and thus could not be deemed as a woman's right (Boone, 2022). This demonstrated that despite almost 200 years and four consecutive waves of feminism and its arduous fight for gender equality, the overarching prevailing patriarchal edifice still seeks to control, police, and regulate women's bodies within contemporary society (Choudhary, 2020). Because the restraint of women's bodies both as sexual and reproductive entities has always existed as the axis on which the cogency of power in civilization rests, these patriarchal modes of control have persisted at the individual, societal, and institutional levels (Sobhana, 2023). From the male rapist individual who believes that a woman owes him her body (Roberts, 1993: 375); to the policing by a contradictory society that berates women to remain chaste, whilst possessing an ever-growing sex work and sex trafficking industry where women are the main providers of sexual services, be it consensual or not (Grabowska, 2022); to governments of nation states who judge it fair to curtail women's reproductive rights, from sex to pregnancy to birth (Hayes, 2022) – such restrictions have been enacted to endanger women, whose vulnerability compels them to acquiesce to the sexist conventions created to benefit the overriding patriarchal civilization (Richards, 2023). Yet, the oppressive misogynistic rationality for such limitations stems from women being adjudged as mere objects, possessions, and undifferentiated resources to own, whereby at the core of controlling and regulating women's bodies lies the global incentive for patriarchal elites to make money (Comanne, 2020).

### 1.1 Literature Review

The genesis of western society controlling, policing, and regulating women's bodies began when men and women had been distinguished as unequal, with the patriarchal presupposition that men were primordially superior to their female counterparts most plausibly deriving from the 8000 to 3000 BC span when primitive forms of agricultural existence produced a surfeit of agrarian goods (Omvedt, 1987: 1). Thus, the emergence of militarization assisted men to not only take control of the surplus but to also violently seize the principal producers of labour power, the women (Ananthaswamy & Douglas, 2018). Subsequently, as the concept of private property owned by men started to emerge, women were considered assets under male proprietorship (Sweet, 2006: 112), particularly as regulating women's bodies would guarantee men the ability to pass down family property to their own male children (Saini, 2023) – inaugurating the basis of state societies to thus view women as mere commodities, whether sexual or reproductive (Beau, 2018).

European feminist scholars, such as Allison Jager and Gerda Lerner, assert that men's authority over women's sexuality and reproduction is a principal source and consequence of patriarchal repression and that the patriarchy is, therefore, the main reason for women's persecution – the patriarchal requisite to govern women's bodies has always been entrenched in its remunerative advantage for men (Lerner, 1986: 200). Since biblical times when if a man raped an unmarried virgin woman, he had to pay her father for damages (Poltera & Sorial, 2015: 378), all through to the modern era where a 40-100 million dollar per year beauty and weight loss industry profits off of women's insecurities and the control over their bodies to meet certain beauty standards (Song, 2014), the intentional alienation of women from their own bodies has served as a money-making apparatus (Apurva, 2022). The advent of the capitalist economic system and

political ideology exacerbated this quandary, with interactive systems theorists like Iris Marion Young and Heidi Hartmann expressing that the structures of patriarchy and capitalism operate in conjunction with one another to suppress women (Allan, 2021). Thus, the beneficiaries of such a system are not solely the average man but have, since the dawn of capitalism, always chiefly been the patriarchal capitalist elite few who are able to own and manipulate monetary flows (Fors, 2021). This sexist hierarchical framework of who benefits from capitalism persists today, especially as the control of women's bodies as sexual and reproductive resources becomes exceedingly more valorized each day within modern society (Shukla, 2021).

However, the need to control, police, and regulate women's bodies as sexual and reproductive assets for lucrative advantage hinges upon that through a woman's sexual function, she is able to reproduce children (Garcia, 2022). Hence, what those mentioned above, and many other feminist intellectuals have failed to acknowledge, thus resulting in a dearth of the subsequent scholarship, is that the patriarchy seeks to control women's bodies not simply because doing so is just one facet of how capital is accumulated, but rather, that capitalism itself is premised upon what women's bodies can produce and reproduce: babies (D'Atri & Murillo, 2018). Marxist feminist and feminist economist scholars such as Drucilla K. Barker, Ester Boserup, Selma James, and Silvia Federici have contended that because the capitalist system requires the perpetual exploitation of consistent human labour for wealth amassment (Federici, 2010), capitalism's predication on women's ability to reproduce children stems from the female body's ability to produce an enduring workforce for the ruling classes, the state, and the elites (Callaci, 2018). Thus, as women's procreative capacities and the uterus itself arose as the nucleus means of production to manufacture an everlasting labour force to keep the capitalist cog turning (Renault, 2021: 46), women's reproduction had to be tightly controlled and disciplined in society by men within the capitalist elite (Dean, 2020).

Today, this problem continues, albeit on a more transnational level due to globalization, as transnational feminist reproductive scholars like Sigrid Vertommen, Michal Nahman, and Sarah Franklin have proclaimed in relation to procreative labour within the current late capitalist economy, new stages of the capitalist production mode have arisen, with global power shifts and new technologies engendering in novel forms of regulating women's reproductive bodies and labour, transcending the nation-state and resulting in cross-border predicaments (Nahman, Pavone & Vertommen, 2021: 125). Hence, although these scholars have explored this area of knowledge, the ensuing research further investigates how the global interconnectedness of the plight of capitalism being predicated upon women's reproductive bodies and labour still contemporaneously prevails. Therefore, this study fills a scholarly lacuna, by tracing the linkages and trajectories of how the ever-developing new methods surrounding gender, race, geopolitics, religion, and technology are being used to control women's reproductive bodies and labour on a transnational scale, in order to not only assist capitalism in staying afloat, but also to evolve.

## **1.2 Research Question**

*How are women's reproductive bodies and labour implicated in the capitalist system at a transnational level through contemporary and speculative future forms of capital accumulation?*

### **1.3 Research Aims**

The objective of this dissertation is to inquire into how the present utilization of 20<sup>th</sup>-century-esque forms of legal reproductive regulation has led to novel and future forms of procreative coercion as a lifeline for the capitalist system, through the concepts of gender, race, geopolitics, religion, and technology. Through colonization, the introduction of racial, religious, and Global North/South hierarchical classifications engendered the overarching progenitive mode of production of stratified reproduction, thus assigning disparate fiscal value to different women's procreative abilities (Mendoza, 2015: 105). This research aims to inspect how, today, this financially graded ladder of women's reproduction, alongside the remaining sexual/gendered division of labour that constantly depreciates progenitive work and compels women to have babies has escalated (Federici, 2010), largely due to the various current quandaries of late capitalism, including how the profitable mode of production that for hundreds of years was able to contribute a large development of the productive forces (Garcia, 2022), has for many years now emerged as a constraint rather than as a benefit to monetary accrual (Dean, 2020). The dissertation begins by examining how this has effectuated the present-day control of women's reproductive bodies and labour for capitalist gains via basic 20<sup>th</sup>-century-esque forms of legal regulation such as the banning of abortion currently occurring in specific Global North countries. Yet, as global power continues to shift, new technologies continue to arise, and late capitalism continues to falter, the research intends to explore how such novel methods of controlling women's reproductive bodies and labour for capitalist objectives – albeit still imbued with racial, religious, Global North/South, and other pertaining stratified categorizations – have steadily begun to materialize, and what this means for the prospective emancipation for women from reproductive labour exploitation and the future of capitalism.

### **1.4 Theoretical Framework**

This study shall employ a transnational feminist conceptual framework. A transnational feminist lens refers to the cross-border feminist paradigm that seeks transformative research to disturb gendered subjugation and promote gendered emancipation within global and diverse cultural milieus, whereby it encapsulates the complications of 21<sup>st</sup>-century social alterations and problems still immersed within the intersectional oppressions of women, to provide connecting scholarship to work across and bridge the gap between various regions and countries of the globe (Hundle, 2019: 3). Focussing on the multiple experiences of women who live and exist between, within, and at the borders of nation-states around the world, transnational feminism transcends national boundaries and incorporates a broad range of the diverse interacting powers that affect gendered experiences and relationships within geopolitical contexts (Craven & Davis, 2016: 30).

Developed, founded, and influenced by women of colour feminists in the Global North and “Third World” or postcolonial feminist scholars in the Global North and South, transnational feminist literature strives to decentre occidental epistemologies and destabilize the submerged hegemonies of nationalist doctrines and their heteropatriarchal implications (Mohanty, Russo & Torres, 1991: 20). Hence, by interrogating the postmodern and post-structural binary understandings between the West and the non-West and modernity and tradition, transnational feminism unveils the imbalanced ways in which power and resistances have transpired globally (Grewal & Kaplan, 1994: 5). Because transnational is defined as a “way to name the dramatically increasing flows of people, things, images, and ideas across the borders of nation-states in an era of globalization” (Nagar & Swarr, 2010: 5), transnational feminism is chiefly concerned with how the global capitalist system operates across the convergences of

nationalities, race, gender, class, and sexualities, and how histories of patriarchal gender inequality, colonialism, imperialism, and racism have engendered in global capitalism creating the social, economic, and political suppression of relations of exploitation, exploitative labour, and inequality across the world (Enns, 2020: 16).

Thus, a transnational feminist theoretical framework proves indispensable for this study as it permits the comprehension and exploration of how capitalism remains predicated upon women's bodies and reproductive labour via critiquing the interconnected cross-border valorized procreative injustices between Global North and South women and how the concepts of nationalities, race, gender, and class have transcended both national and progenitive capitalistic borders (Jolly, 2016: 171). Therefore, the first analysis chapter of this dissertation views the current transnational connection between nation-states regarding their capitalistic dependency upon women's reproductive bodies and labour, whilst the second completely removes the boundaries of nationhood, exhibiting how contemporaneously, these quandaries have transcended national borders, in which these issues are no longer confined to the boundaries of nation-states as they have been conceptualized for many years, laying bare the problem which now exists on an ever-developing interlinked transnational scale.

## **1.5 Methods**

The methodological approach which shall be utilized to conduct the research within this dissertation will be attained through a qualitative method, whereby a Qualitative Secondary Analysis (QSA) technique shall be employed to extract data from secondary literature sources such as academic journal papers and online news articles, with the objective of producing ingenious transnational feminist erudition.

Qualitative methods are elucidated by the generally nonnumerical data acquired by a researcher endeavouring to comprehend the social reality concerning the multitudinous aspects of human life (Happ & Tate, 2017: 2). The preference to implement a qualitative method within this thesis is attributable to its proficiency of discerning and interrogating a copious aggregate of consequential details through the evaluation of complex epistemological systems, subsequently illustrating the attempt to effectuate change by generating cognizance of the societal quandaries embedded in this specific study (Johnston, 2014: 625). Simultaneously, the partiality for selecting a qualitative mechanism is entrenched in feminist academia's tenable presumption that within the inherently gendered quantitative/qualitative dichotomy, the rigid parameters of the feigned superior "malestream" quantitative model are inept in comparison to the "feminine" and "emotional" qualitative method, at unveiling the obscured forms of the marginalization of female bodies within civilization (Oakley, 1998: 708). Thus, scholarship instituted upon a qualitative methodology within the diversified fields of social science is either procured by first-hand/primary scrutinization – focus groups, interviews, participant-observation, surveys questionnaires etc. – or via the perusal of secondary information – existing literature sources typical of academic journal papers, online news articles, biographical works, organization reports etc (Chatfield, 2020: 835). To amass such knowledge, a qualitative method of analysis is required to obtain data in correspondence to the researcher's decision to enquire into either primary or secondary references (Happ & Tate, 2017: 9).

A Qualitative Secondary Analysis (QSA), the methodological technique deployed within this dissertation, is therefore explicated by the re-utilization of pre-existing qualitative secondary sources to explore and answer novel research questions within a distinct specialization of inquest (Heaton, 2008: 36). This data extraction strategy endeavours to review and integrate

previously collected information through an empirical task facilitated with evaluative and procedural measures that refute, augment, refine, and verify prior research knowledge to apply a new standpoint or focus to the original data in the designated sphere of concern (Perry & Ruggiano, 2019: 83). Hence, using QSA, this thesis will gather findings exclusively from preceding topic-appropriate literature, in which the secondary sources reviewed, integrated, and utilized to answer the research question shall purely be academic journal papers and online news articles (Addington-Hall, Long-Sutehall & Sque, 2010: 240).

The choice to employ this qualitative analysis technique is ascribable to its practical advantages, whereby the sole usage of academic journal papers and online news articles to obtain information provides a feasible option for a research budget regarding costs and labour as time and resources are limited (Chatfield, 2020: 836). However, this preference is additionally established from an ethical feminist perspective due to the distress which frequently arises in primary data accumulation where female participants are reluctant to disclose sensitive particulars to a researcher or are fearful to give their consent (Appel & Pittman, 2021). Consequently, as this dissertation scrutinizes the subjugation of female bodies internationally, utilizing academic journal papers and online news articles permits the amalgamation of vulnerable women's widespread experiences from all walks of life throughout society as opposed to the employment of primary information collection which standardly focuses on a sole participant population (Manzoor, 2017: 74). This allows for a cumulative, empowering, and inclusive process in contrast to repetitive and exclusionary research (Appel & Pittman, 2021).

## **1.6 Limitations**

The constraints of this study are that no primary source information such as interviews or focus groups was conducted or examined when collating research for this dissertation.

Furthermore, the limitations of the Qualitative Secondary Analysis (QSA) classification of data amassment for this dissertation are exhibited in the factuality that some extant literature might not always be compliant with the novel research objective at hand, at which the hazard of inadvertently modifying or misinterpreting findings is rare but conceivable (Johnston, 2014: 626). Applying an ethically feminist outlook, a supplementary restriction is the passage of time, as academic journal papers written many years ago may indicate a historical prejudice towards certain female bodies, in which these detrimental discourses might be perpetuated against the same group of women in online news articles contemporaneously (Appel & Pittman, 2021). This displays the biased structures of power which seek to silence and limit the uncovering of novel forms of intersectional gendered exploitation and oppression (Oakley, 1998: 729). Equivalently, a dearth of specialized academic journal papers and online news articles on women from a distinct geographic region of interest or on a controversial feminist subject relevant to the research question may pose obstacles to successfully attaining the requisite information (Manzoor, 2017: 75). Therefore, when contending with the limitations of the methodological approach which shall be utilized within this thesis, factors regarding the availability, quality and appropriateness of prevailing data is paramount (Sherif, 2018: 9).

## **2. Capitalist Accumulation and The Transnational Interconnected Dependency of Nation-States Upon Women's Reproductive Bodies and Labour**

### **2.1 Introduction**

With the overturning of *Roe vs. Wade*, at present, thirteen states in the US have enacted an outright ban on abortion, with the preponderance citing no exceptions for rape and incest (McCammon & Totenberg, 2022). Whilst this symbolizes the patriarchal backtracking of women's reproductive rights, choice, and autonomy, prohibiting the federal right to pregnancy termination in America is about more than just old white conservative men attempting to control women's bodies simply for the sake of sexism (Basu, 2022). In fact, it demonstrates the reinforcement of capitalist values of production, whereby coercive and exploitative procreative work engenders a cheaper, meaner pronatalism indicating that the womb is not only essential to keep capitalism on its feet, but that capitalism itself is founded upon the reproductive labour of women (Froio, 2021).

Thus, rescinding *Roe v. Wade* exhibits the legacy of a transnational capitalist phenomenon whereby whenever capitalism has entered into emergency mode, women's reproductive abilities have immediately become curtailed (Basu, 2022). America's elimination of constitutional standards on abortion access and the outright banning of abortion in certain states is therefore attributable to the nation's rapid population growth decline, concurrent with the impending doom of a global recession spurred on by the COVID-19 crisis (Brown, 2022). Precipitating in the worldwide macroeconomic calamity of unparalleled extent, the pandemic, alongside the unabating repercussions of the 2008 financial crisis and the current international stagflationary instability, has engendered in the stumbling capitalist economy experiencing a crisis of reproduction and hence a sharp slowdown in the growth of labour supply (Froio, 2021). This catastrophe, by which an estimated 60% of the world's population now resides in nations where birth rates are steadily declining, has resulted in an estimated 30% of countries now possessing stringent pro-natalist policies, as opposed to only 10% in the 1970s (Bieler & Morton, 2021: 9).

Hence, this has effectuated in corporations and states across the world endeavouring to create new methods to generate capitalistic profit and expand the low-waged labour force through acquiring an increase of free reproductive labour, thus becoming steadily more dependent on the regulation of the female body through pronatalist policies by governments (Reichmann, 2022). Currently, these new interconnected transnational methods of nation-states to generate capitalistic profit and expand the low-waged labour force subsequent to the repealing of *Roe v. Wade* are sundry, however, the stratagems of extracting capitalist accumulation through geopolitics and biocapitalism via the international arena (Berghs et al., 2022: 4), and surveillance and terror capitalism via the carceral system, have emerged as amongst some of the preponderant tactics (Byler, 2021: 26). Thus, hungry for a post-*Roe* world economy, the capitalist elites are attempting to squeeze profit from precarity, in which geopolitical and carceral logics of transnational capitalist accumulation remains firmly established upon women's reproductive bodies and labour (Horne, 2022).

## 2.2 Geopolitical Foreign-Aided Family-Planning, Biocapitalism and Women's Reproductive Bodies and Labour as Capitalist Accumulation in the Global Arena

Nullifying *Roe v. Wade* exhibits that domestic political events of reproductive legalities within America, through the hierarchical commodification of women's racialized wombs, have far-reaching global geopolitical capitalist ramifications (Paun & Payne, 2022). These top-down cascading procreative repercussions of the US to predominantly Global South states derive from the American nation being contemporary society's most successful colonial offshoot of the Eurocentric commercial paradigm which regards women's bodies as both primitive capital accumulation and the means of production for reproductive labour. As acquiring a surplus of children as future labourers was the ultimate agenda, the wombs of women were the greatest asset (Alesina, 2013: 427). Additionally, America's capitalist prowess via coercive reproductive policies is attributable to its adoption of Europe's colonial/modern gender system or Lugones' *The Coloniality of Gender* (2015), the prevailing design of geosocial organization of binary, biologically dimorphic, heterosexist and racist suppositions of gender that permeated the economics, interpersonal relationships, and politics of colonized societies (Lugones, 2008: 3). Hence, selfsame to how these European conceptualizations were espoused by a fledgling US colony for capitalist survival, so have Global South nations dependent on foreign reproductive aid endeavoured to stay afloat whilst navigating the reverberations of America renegeing on federal protections for reproductive rights – especially when manoeuvring through both the current internationally impaired capitalist economy and the humanitarian and emergency quandaries of their own countries (Damavandi & Grabowski, 2022: 3).

Yet, overturning *Roe v. Wade* is not America's foremost affront on women's reproductive capabilities as a capitalist aggrandizing response to a national population growth decline, engendering in global consequences (Basu, 2022). Nor is utilizing anti-abortion propaganda language borne from religious sentiments that mentally and publicly separate the foetus from the gestating mother – women as “host bodies” for babies and proclaiming rights for the “unborn child” – the initial attempt of the US to cheapen female reproductive labour both internal and external of the nation through the physical and ideological violence and oppression of women, when capitalism has gone into bouts of deterioration (DiBranco, 2020). Between 1692 and 1693, arising in the aftermath of The General Crisis and The Spanish Price Revolution, two of the first international economic calamities that characterized global conflict, fiscal instability, and high rates of inflation, innumerable women were indicted and murdered for witchcraft in the Salem witch trials (Johnson, 2022). Chiefly charged with reproductive crimes as female apothecaries who possessed knowledge of herbal contraceptives, “Witches” were women who dared to present reproductive choice to other women, a destabilizing agent in the transforming feudal to capitalist emergent economy, fixated upon exploiting the free reproductive labour of women to accrue more children as a workforce (Doyle, 2019). In *Caliban and the Witch: Women, the Body and Primitive Accumulation* (2004), Federici asserts that the trials precipitated divisions amongst the two sexes within the proletariat, and ultimately depreciated women's reproductive labour (Federici, 2004: 10). This conditioned and contaminated the private feminine sphere of unwaged domestic and reproductive toil, as executing “witches” secured the patriarchal edifice and produced a repressed reproductive labour class of women requisite for American capitalism to thrive and emerge as the richest nation on earth (Lyons, 2019). Christianity, a core linchpin of the Salem witch trials, utilized religious fanaticism as an implement to manipulate and frighten women into birthing as many children as possible, as any repudiation of the heteropatriarchal family standard, the engine of the novel capitalist economy, was touted as grounds for witchcraft allegations (Robinson, 2018). The international implications of the trials – besides the dissemination of fear and

reproductive labour intimidation to women – were demonstrated as a direct side-effect of a disintegration of the regional capitalist authority of the US, whereby plundered and colonized nations of the third world were engulfed by an interminable geopolitical vacuum that has continuously kept them in a cycle of being influenced by the fiscal, social, and political decisions of the first world (Anderson, 2019: 9).

Thus, three parallels can be drawn between the trials and the overturning of *Roe v. Wade*; both are rudimentarily stemming from a ruling class campaign of terror, both are state-sanctioned violence against women, and both are established upon the design of double standards that cater to the racist white narrative (Cichon, 2022). This elucidates the reason why the thirteen states with an outright abortion ban possess a majority-white population, citing “white genetic annihilation”, “white extinction” and the overarching trepidation of a white heritage and ancestry deficit as a rationalization – the latent Eurocentric motive depicts that a repertoire of white pregnant women and white babies equates with a higher monetary status for any nation (Bell, 2019). Such conceptualizations emanate from the feigned colonial ethnological hierarchy of reproductive stratification which situates the wombs of white women at the apex of asset accrual, and the progenerative abilities of black, First Nations, and women of colour as a bottommost budgetary liability (Mendoza, 2015: 101). Whilst both groups of women have been subjected to a global capitalist system of reproductive accumulation, exploitation and domination, a racialized procreative class system serves as an effectual contrivance to thwart the unification of an insurgent white and non-white all-female proletariat against a capitalist structure premised upon the exploitation of their reproductive work (Ballestín, 2018).

Hence, within many Global North states and settler colonial countries, this has prompted a hotbed for the stringent curbing of the national demography via a racialized and gendered capitalist alignment to economic reproductive stratification defined as human population dynamics (Bashford & Klausen, 2010: 9). Population control, relative to neo-classical, neo-Malthusian, eugenics, and marginalist economics aims to transform the surplus population into an optimal size, conceding to the Marxian factuality that capitalist market-based countries produce a population that will be inept in completely integrating the populace into the employed workforce in its entirety (Bongaarts, 2009: 2985). The surplus population has customarily referred to the “unfit” wombs of non-white women upon the realization that enfranchised women of colour, post the abolition of slavery, would enter the workforce as waged labourers as opposed to progenerative slaves, in which an overpopulation crisis with a surfeit of “undesirables” would emerge (Sayre, 2008: 122). Therefore, the endorsement of state-sanctioned programmes to limit the reproductive capacities of portions of the surplus population adjudged as “genetically inferior” have been marshalled to manage an excess populace that would devastate capitalist amassment (Ramsden, 2008: 395). In America, these government-ratified initiatives have largely been characterized by forced sterilization and family-planning enterprises (Andrews, 1999: 10).

Plagued by a history of enacting forced sterilization unto black, indigenous, Latinx, and disabled women, the US government covertly persists in coercively sterilizing “unfit” wombs; in 2020, the ongoing forced sterilization of imprisoned black and Latinx and detained Mexican immigrant women came to the fore (Palomo, 2021: 53). Interestingly, whilst *Roe v. Wade* has been rescinded, *Buck v. Bell*, the American statute permitting compulsory sterilization “for the protection and health of the country” has never explicitly been overruled – reproductive justice activists fear the possibility of a spate of forced sterilizations occurring unto women of colour in the post-*Roe* era (Arun, 2022). Furthermore, US family-planning organizations like Planned Parenthood have masqueraded as a provider of reproductive health services to disadvantaged

American women (Wilde & Hopkins, 2017: 5). However, the promotion of the contraceptive pill and easy access to abortion in communities of colour transpire as functional tools for such institutions to refine the population through selective breeding (Smith, 2022: 68). The “imprudent” procreative potentialities of non-white women are thus held accountable for the burgeoning challenges in working-class communities of colour, whereby the “welfare queen” typecast – first introduced into the public discourse by the Reagan administration in an attempt to thwart social welfare schemes as a response to rising levels of poverty – authorizes the eradication of surplus wombs, benefitting both private firms and the government within a corporatist structure of capitalist policymaking because her womb becomes a burden upon the welfare system (Gilman, 2014: 248). It is this specific reliance upon the welfare system by poor non-white women that expounds how the geopolitical consequences of the annulment of *Roe v. Wade* create fertile ground for the US government to elicit capitalist accumulation through the distribution of American-funded family-planning foreign aid to women in Global South countries (Foley, 2022: 15).

Months after post-*Roe*, President Biden explicated to foreign aid recipients that the reversal of *Roe v. Wade* would not modify US-financed family-planning abortions and programmes abroad (Melton, 2022). Already an outlier with its OECD and G7 peers regarding its judicial retraction of women’s reproductive autonomy – whilst possessing political similarities to right-wing nations like Poland whose restrictive abortion laws precipitated the 2020-2021 women’s strike protests – America, the world’s largest investor in foreign family-planning initiatives has generated worldwide uncertainty and ripple effects surrounding what this denotes for US foreign policy and the international development space, which nations abortion assistance can lawfully be supplied to, and the serious ramifications of the limitations of what US government partners are able to undertake (Paun & Payne, 2022). Such confusion promotes the global stigmatization of abortion, strengthening American federal laws that impede government foreign funding for abortion like the 1973 Helms Amendment to the Foreign Assistance Act and the now-repealed Global Gag Rule or The Mexico City Policy of 1985 reinstated during the Trump-Pence administration (Damavandi & Grabowski, 2022: 8). Whilst foreign-financed family-planning aid has indisputable benefits for females in lower-income countries, such as the provision of legitimate and requisite reproductive healthcare and choice for young women and for victims of sexual violence in medical emergencies, these initiatives are instrumentalizing women, gender equality, and procreative rights as mechanisms for a capitalist business venture, rather than as a goal for increasing development and defeating poverty in these nations (Yachot, 2022). US-funded International Non-Governmental and Governmental Organizations like the International Planned Parenthood Federation (IPPF), United Nations Population Fund (UNFPA), President’s Emergency Plan for AIDS Relief (PEPFAR), and the United States Agency for International Development (USAID), have utilized an “empowerment” oriented agenda implementing language such as “women’s reproductive rights” and “reproductive liberation for women” for Global South women, to conceal the core capitalist extraction stratagem (Ethelberg & Komu, 2015: 1-6). This perpetuates an ideologically imperialist assumption that western donor nations and organizations have attained a state of enlightenment surrounding ideas of women’s reproduction (Rust, 2010: 75), reminiscent of how European society conquered the female body and earmarked it with a perceived monetary value in accordance with racialized reproductive stratification (Melton & Mdivo, 2021).

Foreign-funded family-planning is thus a passive population control method coercively bestowing the illusion of reproductive emancipation to Global South women of colour within a developmental discourse whilst clandestinely limiting fertility rates in developing countries

for remunerative advantage (Weydner, 2018: 142). Hence, controlling the reproduction of these women clears avenues for natural resource extraction of Global South states by western donor countries and family-planning organizations evocative of early capitalism's core tenet of asset theft from colonies, established upon the tyrannical repression and regulation of the racialized woman's womb in order for the elites to procure maximum profit (Chude, 2018). In fact, the National Security Study Memorandum 200 or the Kissinger Report, a highly classified document drafted by the United States National Security Council in 1974 by former US secretary of state and national security advisor Henry Kissinger, explicitly enunciated that global human population planning initiatives funded by America disguised as foreign-aided family-planning programmes, were not employed to ameliorate and empower Global South women's reproductive choice and rights as it purported, but were ratified to furtively pillage the resources of developing countries (Zubrin, 2012: 40). Restricting birth rates in lesser developed countries therefore sanctions the protection of American and other western businesses abroad from the hindrance of nations striving to support their enlarging populace and for the foreign natural resource obtainment, via curbing routes of obstruction such as the political sovereignty of underdeveloped states, and the prevention of a growing anti-imperialist, anti-establishment youth population from being born (Sharpless, 1995: 45). The US government has thus enacted an influx of coercive mandatory population control measures over the last few years, such as withholding any food or disaster aid until lesser-developed countries accept foreign-funded family-planning aid for fertility rate reduction, pecuniary inducements for states to increase contraception, the brainwashing of children and women, secret enforced sterilizations, and pressurizing nations to decriminalize abortion whilst America itself endeavoured to criminalize its own federal right for pregnancy termination (Damavandi & Grabowski, 2022: 8).

Reverberations of rescinding *Roe v. Wade* is therefore resultant of novel forms of geopolitical access to the US for capital extortion from third world states, as exploiting the human right of Global South women to secure reproductive healthcare for the manipulation of birth rate diminution of lesser-developed countries become the predication for such capitalist accumulation (Paun & Payne, 2022). Because the preponderance of Global South women are racialized as non-white, their wombs come to be a substantial threat to American and Global North capitalist ascendancy, as a burgeoning population of colour in the third world endangers an already-shrinking white population into surplus workforce territory, and since a large white population is linked to greater capital accrual, a dwindling white labour force equals in the dearth of both national and western capitalist expansion (Hartman, 1997: 15). Hence, banning abortion engenders as a capitalist amassment enterprise for the US within the geopolitical realm as whilst it attempts to proliferate an interior steady flow of white pregnant women, the repressed progenerative capacities of American women of colour and Global South women culminates in reproductive abuse becoming a profitable hegemonic contrivance that is perpetrated in an internal/external dichotomy (Horn, 2013: 201). The same projection of disparaging subordination asserting that the wombs of non-white American women are vexatious to the welfare system is thus utilized to frame Global South women as incapable of making strategic reproductive choices, whereby the use of foreign-financed family-planning is positioned as having positive developmental outcomes for lesser-developed countries (Serumaga, 2013). Therefore, by manipulating the public to believe these women's supposed inferiority, and that their procreative abilities are both vile and costly to taxpayers and financiers, through promulgating that they are less receptive to policies purportedly envisaged to escalate social mobility, then their worth to the moneymaking performance of the geopolitical capitalist labour market is lessened, becoming a defective part of the global population and hence the main targets of population control and surplus extermination

(Puaschunder, 2019: 1-16). Foreign-funded family planning initiatives prove to be a subtle, less visible, yet potent geopolitical method to eliminate surfeit third-world populations, as opposed to the antiquated outright genocidal modus operandi of mass or graphic public killing. This technique makes it arduous to hold liable those who enacted it, in which only future unborn generations shall experience the consequences (Berer, 2023: 203).

Furthermore, the US inflated its funding into Global South family-planning programmes in the early 70s, a period when numerous African states were reconstructing their societies after acquiring independence from colonial rule, and America was depleting its own resources, making these African nations prime victims for natural resource extraction (Penovic, 2022: 4). Analogously, the US is currently facing the worldwide fiscal cataclysm of the COVID-19 pandemic and since it utilizes 25% of the world's resources whilst only making up 5% of the global population, America and most western first-world nations have become increasingly reliant upon lesser-developed countries for mineral imports (Khanal, Nyamato & Skuster, 2020: 75-78). Thus, the immense funds pumped into foreign family-planning by the US after overturning *Roe v. Wade* signifies that constraining the fertility of Global South women to maintain the present world population of 8 billion (Saldinger, 2023) – the optimal global labour force size goal for America since the 70s as stated within the National Security Study Memorandum 200 – permits the circulation of food, textiles, forest products, and other renewable resources to the US, allowing the retainment of capitalist hegemony (Bendix & Schultz, 2017: 275). In *“Smart Economics” within Family Planning: An Analysis of the Framework of Family Planning Initiatives and Their Relation to “Smart Economics”* (2022), Göransson states that the reproductive dignity of Global South women becomes a geopolitical pecuniary instrument in the name of development, whereby these transnational capitalist forces exploit the “untapped potential” of women to gain remuneration from reproductive labour and feminine healthcare (Göransson, 2022: 19). Wielding foreign-funded family-planning initiatives as “female empowerment” relies upon capitalism's paradoxical nature of co-opting feminist imagery and language for its own corporate gains (Prata et al., 2017: 721). Providing poor women of colour in developing nations with “reproductive choice” is a manipulative strategy to propel these women into the world's labour force by dissuading them from bearing many children, in which their labour and income get funnelled back into western nations and corporations as a form of global capital accumulation sustainment, making them partake in being part of the international workforce (Berghs et al., 2022: 4). This creates the double-burden of workforce toil and unpaid domestic labour for indigent global South women, ultimately reinforcing patriarchal gender roles and deepening the feminization of poverty North/South divide (Gharib, 2022).

Yet, these Global North/Global South imbalances through the asset extrication from impoverished and developing countries to fund richer developed states additionally extend into an international reproductive economy that uncovers the disparate relations which support the production processes and the accruing extraction of surplus value by those further up the chain (Nguyen, Tronto & Zavoretti: 2017: 203). The severe social and economic drainage of resources from Global South nations has instigated a global trade in domestic and social reproductive labour, effectuating a maternal dispossession in poorer countries and a maternal profusion in affluent states via global care chains. Delineated as a globalized labour market predominated by women who supply care-intensive work such as healthcare, eldercare, and principally childcare, global care chains have greatly contributed to the economic developmental discourse of first-world states (Yeates, 2012: 143). Many women in Global South nations therefore emigrate to developed countries to perform care-intensive labour that permits them to send remittances back home to their families, thus filling gaps in the labour

market of the Global North whilst deleteriously producing transnational families and a scarcity of formal workers to attend to the children, elderly, and the ill within migrant nations (Ehrenreich & Hochschild, 2002: 205). The immense demand for care-intensive social reproductive labour such as women working as nannies and au pairs originates from the impacts of neoliberalism, whereby mass-scale wage reduction and social security and public service cuts forced middle-class women to become part of the workforce, and working-class women to work longer and harder shifts and hours (Nadasen, 2017: 125). Resulting in a chasm left in domestic labour within the household no longer being occupied and no one to care for the children, families by the means began to outsource housework and childcare labour, usually to poor, sometimes illegal, immigrant women (Orozco, 2009: 7). This emerged as an apparatus within the capitalist system for extricating emotional surplus, characterized by the distribution of emotional advantages and expenses from the migrant women's own children transferred to the children who they are paid to care for (Balabanova & Simonstein, 2010: 190), and the subsequent psychological procedures utilized to work around the sacrifices of this separation (Hochschild, 2014: 9).

However, with the advancement of assisted reproductive technologies, this withdrawal of emotional surfeit in tandem with the alienation of women's care-intensive labour, whether they are Global South/North/East women (Barbagallo & Vertommen, 2021: 33), has additionally transcended from social reproductive toil to embodied labour within global fertility chains interlinked to the reproductive bioeconomy (Nahman, Pavone & Vertommen, 2021: 124). Referring to the multitudinous ways procreative tissues, services, workers, bodies, customers, and data are interpolated into capitalist modes of accumulation, global fertility chains explicate the reproductive bioeconomy as a linkage of interconnected transactions, operations, and practices between countries, households and enterprises, whereby progenitive commodities and services are produced, distributed, and consumed (Cooper & Waldby, 2013: 10). This nexus, through a reproductive colonial lens of biopolitics, value, biology, and technoscience, aims to replicate uneven geographies of whiteness and Europeaness as white procreative tissues and the gestation of white children prevails as the most lucrative reproductive asset, resituating assisted reproductive technologies, infrastructures, and markets within ongoing histories of colonialism and neocolonial racial biocapital (Haddad, 2015: 7). Yet, the overturning of *Roe v. Wade* has had far-reaching ramifications for the global fertility industry and the women who are within it, such as how the wording or interpretation of some laws could throw the legality of IVF – where surplus embryos are frozen or discarded – into question, as well as posing a threat to standard IVF and other assisted reproductive technology procedures designed to safeguard both parent and unborn child like selective reduction, which lowers the number of foetuses in a single pregnancy to boost the chances of success (Duster, Schneider & Sneed, 2022). Hence the dependence upon women's waged and unwaged reproductive labour, in which the networked capacity of various actors at numerous scales are cognizant of the integral function of supranational states in generating demand, arranging the supply, and assisting the dispersal of surplus value, has resulted in the establishment of biocapitalism or “genomic capitalism”, a novel stage of contemporary or late capitalism (Peters & Venkatesan, 2010: 105). Biocapitalism within the procreative context thus revolves around the primary processes of valorization of materials sourced from human bodies, reliant on biocommodities (productive industrial capital) and stock (speculative commercial capital), through capitalist accumulation tactics connected to alterations of reproductive exploitation, reproductive modes of labour, and reproductive subjectivation (Oksala, 2019: 15).

Nicknamed the “Romanian Egg Scandal”, in 2009, Israeli doctors in Bucharest, were revealed to be coercing underaged Romanian girls, some as young as 15, into donating their ova, at the

SABYC Fertility Clinic – their eggs were then purchased by the Israeli government and private Israeli buyers (Shalev, 2010: 73). Many of the young Romanian women endured infertility issues, Ovarian Hyper Stimulation Syndrome, blood clotting, and ovarian torsion, all ramifications of being given Menopur, an ovulation stimulator, and gonadotropins, an artificial reproductive hormone – the girls were either poorly remunerated or pressurized into donating their eggs for free (Jones, 2009). Described as “Caucasian Ivy League Eggs” by the Israeli government, although Judaic matrilineal standards state that Jewish ancestry is passed down through the mother, the obtainment of white human eggs – the most sought-after ovum within the human egg trade – from fiscally precarious gentile women aided Israel in both its endeavoured assimilation to whiteness and its assertion as a global leader within the biocapitalist economy (Nahman, 2009: 70). Israel’s majority demography is constituted of Ashkenazi Jews, a Central and Eastern European group perpetually relegated to the outskirts of whiteness within western civilization; from the Christian feudal civilization which ostracized and possessed little monetary concern for the Jewish community to the atrocities of genocide and the plundering of their resources during the Holocaust, Eurocentric sentiments of anti-Semitism have remained steadfast in fiscally disenfranchising Ashkenazi Jewish individuals in a capitalist economy (Sheridan, 2016: 9). Due to the Ashkenazi possessing physical attributes more closely associated with whiteness as opposed to other non-white groups, Israel has propelled its Ashkenazi population into the white space via the utilization of the wombs and reproductive materials of women, aspiring to be incorporated into the optimal-sized capitalist labour force, as opposed to the surfeit, and thus attain capitalist power (Yuval-Davis, 1989: 106).

This requisite to reproduce whiteness stems from capitalism’s socioeconomic reproductive stratification which remains Eurocentric in nature, perpetuating the fallacy that non-white women were subordinate and unsuitable for industrial society based on possessing deficient and maladaptive genes, permitting them to be exploited and categorized as the excess population, and positioning them as ripe targets for extermination; equivalent to what the Ashkenazi experienced in the Holocaust (Brodkin, 1998: 280). Thus, because this would ultimately promise safety and stability for Israel, its people, and the Jewish future, a grandiose proliferation of the country’s population was required, underlying the religious and gendered capitalist need to make up for the millions of their people murdered in the Holocaust (Sherwood, 2013). Subsequently, Israel has launched an aggressive pronatalist fertility regime crusade, boasting a maintained baby boom, with the highest rate of population growth per capita within the Global North (Shalev & Werner-Felmayer, 2012: 5). Incentives provided by the state such as financial inducements for bearing as many babies as possible, exceptionally high child allowances, and great social benefits for mothers who work, all ratified through various institutionalized committees, are supplied to encourage Israeli women to procreate (Birenbaum-Carmeli, 2016: 22). Selfsame to how European civilization used Christianity as an implement to manipulate and frighten women into birthing as many children as possible, the Israeli state has employed religion as a tool in coercing women to reproduce, with the Judaic tenets of “*be fruitful and multiply and replenish the earth*” and childless women being diagnosed as a “*deviation of the natural order in Jewish life*”, consistently promoted by the government (Weiss, 2002: 50).

Hence, in *State of The //ART// of the state: a political economy of assisted reproduction in Palestine/Israel* (2017), Vertommen asserts that with the Fordist/neoliberal end of the 70s, when Israel began to locate itself as a remarkable competitor within the global health and research market, women were not only gauged as gestational labourers for the state but were also encouraged to be suppliers of raw biological reproductive materials (Vertommen, 2017:

290). Regarded as one of the most flourishing repro-tech sectors in the world, Israel possesses a prosperous world-class knowledge-intensive biocapitalist industry in its capability to advance innovative medicines and therapies founded on experimental reproductive biomedical research (Cooper, 2008: 5). Positioned as second in the world for bio-pharma proprietary rights per capita, much of the repro-tech research has been funded through copious amounts of government endowments, with Israel spending the most money on developing civilian, reproductive and biomedical research in the world – the expenditure of this core arena of investment is a tremendous 4.4% of its gross domestic product (Birenbaum-Carmeli, 2016: 18). Israel has thus established Jewish survival on its ability to be a global leader in reproductive biotechnology, whereby the nation and its people becomes indispensable to a world clamouring to acquire biomedical information (Hashiloni-Dolgev, 2006: 136), therefore assimilating to the space of “whiteness” by emerging as part of the optimal-sized necessary labour force within a capitalist society, simultaneously augmenting the biocapitalist economy (Franklin, 2006: 76). Hence, biocapitalism capitalizes on the biomedical mode of reproduction, as just like the industrial labour force possesses no rights over the commodities it produces, so do the donor women, through alienation and exploitation, fall short of any control over their progenitive tissue (Haddad, 2015: 7). The altruistic nature of women’s reproductive labour thus becomes imperative for the sustainment of biocapitalism in that it does not tamper with the encompassed systems of labour and intellectual proprietary (Vora, 2015: 14). The valorization of reproductive labour within the research area of bioeconomy is therefore reinforced by a misogynistic Cartesian dualism of the body and mind; underpinning the binary that only knowledge labour of the mind, stereotypically contemplated as a male scientist, is adjudged as competent of creating surplus value, as opposed to the exploited embodied labour of female tissue providers deemed merely as taciturn and passive instruments that supply the biocapitalist economy with “natural” products (Dickenson, 2001: 213).

This demonstrates that whilst any biomaterial provided by a woman for the purpose of repro-tech research is exempt from being patented, the biomedical products generated from the tissue and sold for immense capitalist profit can, without any difficulty, enter intellectually licensed schemes (Rajan, 2006: 15). Take the production of Pergonal for instance, a fertility drug developed by Israeli scientist Bruno Lunenfeld, who, in the 1960s, discovered that gonadotropins, hormone cells used to help treat infertility, could be extracted from menopausal women’s urine via the kaolin-acetone method (Lunenfeld, Sulimovici & Rabau, 1962: 3). Thus, millions of litres of menopausal urine was collected from Jewish nursing homes for the disabled and elderly in Israel (Terry, 2018). In an interfaith act of assistance – based on Lunenfeld’s partnership with an Italian pharmaceutical company called Serono and simply to accumulate profit on both ends – Pope Pius XII arranged for nuns in his old age homes to donate their urine, where the outsourced labour of hundreds of women from Italy, and thousands from Argentina and Brazil, was implemented. In the early 1970s, the sales of Pergonal skyrocketed, with the first test-tube baby being conceived with the usage of the drug in 1978 (Lunenfeld, 2013: 8). This intensified the need for menopausal urine, but the evolution of recombinant DNA technologies permitted the unlimited amount of synthetic gonadotropins that lessened the possibilities of biological pollution and disease transferral to be developed (Terry, 2018). Serono and the Israeli scientists obtained this patent for the genetically modified gonadotropins, locating themselves as world trailblazers and the third biggest repro-tech company in the fertility economy, possessing an appraised 60 percent market share (Lunenfeld, 2013: 15). However, none of the women who donated their urine were compensated and were instead condescendingly thanked by being part of the advancement of technology and science in the Land of Israel and their reimbursement was “*the mere moral satisfaction of being part of something great*” (Vertommen, 2017: 283). This accounted for the exploitative gendered

division of labour and its subsequent profitable outcome, whereby the financial gains acquired rested not only upon the accumulated biolabour of the women donating urine but additionally on the uncompensated Israeli and outsourced women who served as experimental trial participants to test the drug (Cooper & Waldby, 2013: 10). As of 2018, Israeli biotechnology firm BTG has developed Rekovelle, a new-generation fertility treatment based upon the augmentation of the effectiveness of Pergonal (Solomon, 2018).

Hence, the Pergonal project, initiating a ripple effect from the 70s to the contemporary moment, is symptomatic of a current global quagmire of biocapitalism being predicated upon the reproductive materials and labour of women, whose procreative biological matter is harvested as “res nullius” (nobody’s thing) for the furtherance of inventive and prospectively profitable medical therapies as a process of primitive accumulation (Dickenson, 2007: 20). Women are thus placed within a crucial yet not so privileged situation, as with processes of reproduction being as important as relations of production, the biolabour behind providing these progenitive materials results in them being unrecognized generators of surplus biovalue (Cooper & Waldby, 2013: 5). Israeli biocapitalism thus relies upon Judaic postulations that express no grievances against the use of reproductive stem cell research, engendering in a maternal-embryonic nexus that turns women ensnared in the fertility industry into unwaged labourers (Vora, 2015: 12). Comparably, since passing the Law on Egg Donations in 2010, a year after the “Romanian Egg Scandal”, the Israeli government has received an influx of egg donations mainly from young Israeli women to aid couples struggling to conceive, but principally for stem cell research therapies (Birche & Tyfield, 2012: 312). Not only does this yet again rely upon the donor woman’s altruistic side through state regulations, it additionally emphasizes the Marxist notion of alienation, whereby women’s biological matter becomes alienated from them, due to an elemental dearth of property ownership over their bodies in relation to law enactments (Thompson, 2005: 4). Furthermore, the premise of biocapitalism upon women’s reproductive labour and the alienation of their embodied labour extends beyond the scope of Israel and into transnational fertility flows, in which the everchanging non-static locale of the global fertility industry moves through racialized and penurious female bodies and from one nation to another as the legislation to regulate it is passed in each successive location, accumulating biocapital as it moves (Nahman, Pavone & Vertommen, 2021: 130).

With the overturning of *Roe v. Wade*, the international reproductive bioeconomy has experienced far-reaching repercussions, whereby women who donate or sell their reproductive materials or wombs, particularly those from Global South countries, have suffered the most (Duster, Schneider & Sneed, 2022). These cascading reverberations include the possibility of granting embryos, fertilized eggs and fetuses similar rights to children through supposed fetal “personhood bills” that could leave innumerable reproductive tissue donor women uncompensated, to the ban on abortion preventing gestational surrogates from third world nations living in the US or other Global North nations on accessing pregnancy termination in the case of fetal abnormalities or being abandoned by the biological parents (Carlisle, 2022). Thus, although Israel possesses its own laws on abortion, the rescindment of *Roe v. Wade* in America has put a strain upon the Israeli repro-tech enterprise, resulting in Israel enacting aggressively exploitative methods unto mainly Global South women existing within the transnational fertility flows linked to the country, as a way to extract an abundance of biocapital accumulation (Shalev, 2023: 5). As Israel is one the chief states to outsource, exploit and underpay gestational surrogate women typically from Thailand, Nepal, and India, the surrogate’s body, under these novel aggressively exploited methods becomes a highly policed and disciplined “mother-worker” (Oksala, 2019: 24). This is evocative of how women’s reproductive bodies and labour continues to be regulated within the context of population

control, as whilst women in the Global South are discouraged from procreation, their wombs emerge as remunerative chattel for the reproduction of white children or for countries endeavouring to enter the coveted space of whiteness (Nahman, Pavone & Vertommen, 2021: 127).

Both the reproductive tissue extraction and the gestational labour from foreign women in Israel's transnational fertility avenue are symptomatic of the wide-ranging and asymmetric geographies existing within global fertility chains through core and peripheral processes (Peters & Venkatesan, 2010: 105). These core processes include the monetary and reproductive technology-concentrated procedures such as the finance, marketing, diagnostics, and transport occurring in the Global North, as opposed to the peripheral, labour-rigorous methods which are outsourced from and predicated upon women's bodies in the Global East and South – reproductive bioeconomies thus denotes a diverse assortment of state-driven neoliberal biocapitalism (Shalev & Werner-Felmayer, 2012: 20). Such modes of accumulation within these global reproductive avenues, in tandem with biomedical repro-tech industries in Global North nations like Israel unveil a rationalization of targeted exploitation of waged procreative labour and inexplicit appropriation of the natural reproductive processes of women's bodies and the unwaged labour associated with it (Weiss, 2002: 150). Hence, national procreative bioeconomies amalgamate into a political economy foundation which interconnects the logical, scientific, and political concerns within global techniques of biocapitalist accumulation premised on the transnational reproductive labour of women (Dickenson, 2001: 208). The integral governance position of Israel as a nation-state invested in globally organizing the supply, creating the demand, and aiding the formation and dispersal of reproductive biomaterial and gestational labour surplus value, uncovers how the outsourced female body from a foreign land or an exogenous group of people is subjected to the gendered and racialized essence of value creation and labour within biocapitalist reproductive economies (Vora, 2015: 9).

Yet, the exploitation of women's reproductive labour has aided not just in Israel's biocapitalist venture, but additionally, in the country's Zionist enterprise, as the reproductive-industrial complex of the country emanated at the intersection of the continuous backgrounds of biocapitalism and Zionist settler colonialism (Vertommen, 2017: 285). Because Zionism is thus a capitalist operation in nature, due to its use of land expropriation, exploitation, dispossession of the Palestinian natives, and forced proletarianism, the same pronatalist policies utilized to burgeon national population growth and its biocapitalist sector, have been invertedly employed against the Palestinian women's ability to reproduce, hence propelling them into a surplus labour force categorization (Kanaaneh, 2002: 104). Israel has achieved this via its biomedical repro-tech industry materializing as a biocapitalist authority that additionally assists in establishing a stratified assisted reproduction hierarchy with Muslim Palestinian at the substratum and Ashkenazi Jewish Israeli women at the vertex; many Palestinian women living and working in Israel have been denied the assisted reproductive technology treatments which are readily provided to Ashkenazi Israeli women (Bloomfield, 2009: 240). Therefore, with its intermeshed rationality of capital accumulation and demographic elimination via the persuasion of the settler population to procreate, Zionism has been founded upon the elimination of Palestinian women's reproduction (Hopkins, 1999: 200). Analogous to other settler colonies, Israel's Zionist undertaking is fundamentally postulated upon demography, in which the justification and objectives of population management relates to the Eurocentric belief that the settler populace may only be expanded at the expense of the native Palestinian womb (Denes, 2011: 250) – much like the geopolitical ideology of attempting to proliferate the birth of white women in the US through the annulment of *Roe v. Wade*, whilst striving to exterminate the growing Global South population (Damavandi & Grabowski, 2022: 8). Thus,

the native Palestinian population, existing both externally and internally of the Israeli border prevails as a ceaseless danger to Israeli biocapitalism, its capitalist Zionist undertaking, and the collective Jewish consciousness (Vertommen, 2017: 305).

### **2.3 The Carceral System, Surveillance and Terror Capitalism, and Imprisoning the Womb as an Implement for Capitalist Extraction**

Since 2004, young Palestinian women have been smuggling their imprisoned husbands' sperm out of Israeli jails as an act of biopolitical reproductive subversion against the capitalist Zionist undertaking, and a universal penal system that has relied upon the manipulation of women's reproductive capacities, labour, and rights as a site of capitalist accrual for the elites (Chaim-Rispler, 2020: 4). Portrayed as pre-modern, hyper-fertile procreators, Israeli politicians, journalists, policymakers, and researchers have publicly regarded the Palestinian womb as an "existential danger" that will precipitate in a "demographic intifada" and "velvet holocaust" to the national security, biocapitalist regime, and Zionist venture of Israel; the Eurocentric carceral structure materializes as an ideal tool to control these women's supposed surplus fertility (Shalhoub-Kevorkian, 2016: 1205). Hence, incarcerating Palestinian men intercepts their ability to impregnate their wives, as jailed within Israeli prisons for varied terrorist crimes, with no conjugal visitations permitted and often imprisoned for life, these young men are unable to start a family, as opposed to their jailed Israeli male counterparts who are permitted this privilege (Vertommen, 2016: 175). When visiting their husbands during platonic visitations, Palestinian women have received pens, cigarette lighters, chocolate bar wrappers, fruit, and even wafer biscuit packets filled with semen from their husbands (Hamdan, 2019: 526). Smuggling it out of the prisons, these women traverse the treacherous Erez Crossing at the Gaza-Israel border, travelling to the Razan Centre's Nablus Clinic and other fertility clinics in the West Bank, who, usually at no cost, then perform IVF (Chaim-Rispler, 2020: 5). For the sperm to be kept alive, the women must carry out this dangerous task within a period of less than 48 hours (Chaim-Rispler, 2020: 5). As of 2021, 96 babies, named the "freedom ambassadors" have been born this way (AbuGhosh & Joyner, 2022).

Sperm smuggling thus emerges as a seditious tactic towards Israeli pronatalist policies, as the same assisted reproductive technologies which Israel forbids Palestinian women from using becomes technologies-in-action that are exceedingly appropriated through embodied sabotage that aid in the obstruction of Zionist capitalism, demographic-economic stratagems, and the Israeli biocapitalist accumulative establishment (Rexer, 2022: 16). Furthermore, the act is indicative of a novel form of preserving the nation that evades engendering in the occidental assimilation to the space of whiteness in the way Israel and other western nations have endeavoured to, revealing how the capitalist stockpiling of many non-Western nations today is constructed upon an economic-reproductive revolution that beats the West at its own game by ridding itself of placing white reproductive labour at the pinnacle of monetary accrual (Yuval-Davis, 1996: 18). The Palestinian woman's womb is therefore constructed in relation to the carceral system through her imprisoned terrorist husband, becoming a basis for emotional capitalist extraction (Rexer, 2022: 18). Believing that it is her duty to bear children for her country at war, these women are subjected to an emotional-reproductive capitalist paradigm which displays that due to postmodern civilization being effectively solicited, mobilized, and shaped by emotional-reproductive influences, postmodern women concurrently become emotional, reproductive and economic actors (Bokek-Cohen & Gonen, 2014: 245). Her heightened emotions regarding smuggling the sperm out of the prisons and across the border become commodified, whereby economic connections emerge as emotional, and the act of birthing these children becomes determined by pecuniary and political doctrines and duties,

such as ensuring the continuation of the next generation of her people (Bokek-Cohen & Gonen, 2014: 247). Both the sperm and the process of artificially inseminating the women become commodities within the capitalist realm, as the male reproductive cells and the female reproductive body are premised upon fiscal elucidations of scarcity and the gendered conventions of fatherhood and motherhood in relation to the penal institution (Rexer, 2022: 20).

However, in *The Informal Economy of Incarcerated Women*, Maldonado expresses that this biopolitical act of resistance is symptomatic of the much larger global quandary of how the carceral system is thus an augmented microcosm of gendered biopolitical capitalism, which utilizes predominantly non-white and Muslim women's reproductive bodies as a paramount location of disciplinary constraint in the creation of a submissive subject, to generate capitalist accumulation for those who have incarcerated her or restrained her procreative ability in relation to imprisonment (Maldonado, 2015: 25). With the nullification of *Roe v. Wade*, this predicament has been exacerbated, as the utilization of mass incarceration of women for social coercion and the construction of a jailed womb in abeyance has experienced a resurgence, particularly in the wake of worldwide fiscal uncertainty following the COVID-19 pandemic, growing wealth imbalances, and a population decline in the Global North and highly industrialized developing countries (Alfonseca, 2022). In the US, overturning the federal right to abortion has engendered the worsening of brutal practices done by the state to jailed pregnant women (Weill-Greenberg, 2022). Preventing pregnancy termination has seen an increase in incarcerated pregnant women facing subpar medical care, higher risk of miscarriage and premature delivery with worse maternal health outcomes such as giving birth whilst shackled and chained to prison infirmary beds – many of these women are pregnant due to rape, sometimes even from male officials – or being forced into solitary confinement whilst pregnant (Adams, 2022). These women are also coerced into paying for abortion procedures from their prison bank accounts, as well as being required to cover compensation for jail staff members who transport them to abortion providers – this should be rightfully provided by the state without charge (Canning & Lewis, 2023). Whilst this demonstrates women's reproductive restrictions of their environment and the loss of their bodily autonomy within the carceral system, it additionally exhibits a deleterious history of profiting off of the reproductive abilities of women of colour and religious minority women in jails (Alfonseca, 2022).

The formal imprisonment of criminals originates from European society within the modern period as a form of social organization – in the last 40 years, the amount of incarcerated women in nations like America, the country with the most people in prison, has doubled in comparison to that of jailed men (Berger, 2019). The incarceration of women thus stems from a history of enacting social control unto those who dared to exist outside of the heteronormative patriarchal society – explaining why lesbian and bisexual women are eight times more likely to be imprisoned than their heterosexual counterparts (Moreau, 2017). From being accused of witchcraft during the era of witch trials for offering apothecarial reproductive choice to other women, to those who wanted to live as financially independent from men, these women were confined to institutions of discipline and punishment (Mitchell, 2021). The gendered history of captivity validates that the carceral system distinctly preyed upon women prisoners due to their role in familial connections as social and sexual reproductive vessels, which largely assisted the burgeoning of mercantile capitalism within the 19<sup>th</sup> and 20<sup>th</sup> centuries (Balakrishnan, 2023: 10). Yet, as women of colour have historically been relegated to the surplus population, in America, black, Latina, and Native American women are imprisoned at a much higher rate than their white counterparts due to a history of settler colonialism, white supremacy and slavery, displaying the eerie similarities between controlling the slave woman's womb on the plantation

to restricting the woman of colour's uterus in prison, both for capitalist extraction (James, 2021).

Hence, instead of acknowledging the defects of domestic programmes such as the New Deal and Great Society in the early 20<sup>th</sup> century, poor women of colour in America were pathologized as reproductively irresponsible with “pathologically criminal” traits and therefore blamed for the government cutting these social programmes (Mitchell, 2021). As the surfeit reproductive populace and the hardest hit sectors of communities ravaged by the economic policies of the capitalist elites, these women therefore faced a dearth of employment opportunities, were pushed to the peripheries of society and then criminalized for it, in which characterizing them as a procreative deviant criminal class permitted slotting “undesirable” women into the penal structure due to their supposed sexual licentiousness (Kelly, 2018). Rooted in the double standards of patriarchy, women's crimes were interpreted by the American state as revolving around their reproductive abilities, either in a sexual or moral nature (Mitchell, 2021). Therefore, one of the largest and longest mass-scale incarceration programmes of women in history was the American Plan or the Chamberlain-Kahn Act, a US government-mandated public health programme between 1910 and 1970, which detained and quarantined hundreds of thousands of women suspected of being prostitutes or having sexually transmitted diseases (Athmann, Kunz & Turner, 2022: 1). Almost exclusively targeting working-class women of colour, the detainees were held in detention facilities or “farm colonies” for weeks or months on end, and if infected with STIs, were subjected to compelled examination and rape by male physicians who would “cure” them either with the injection of mercury or coerced sterilization (Stern, 2019). The intentions of the state regarding the Act were inextricably linked to capitalist accumulation, as it is alleged that many of these women upon release were knowingly sold by the state into human trafficking syndicates, paving the foundation for the multibillion-dollar domestic sex trafficking industry in the US which targets formerly imprisoned women in present-day America (Castle, 2022). Moreover, the imprisonment of these women profited government officials as detainment facilities were often contracted to private firms, in which “undesirable and promiscuous” women could be legally removed from the rest of the population as a method to eliminate them as a surplus population and prevent them from relying upon the welfare system when bearing children, particularly if they had been coercively sterilized (Kelly, 2018).

Yet forced sterilization of the “othered” woman within the carceral system remains a steadfast but exceedingly covert method still utilized in America today (Ainsworth & Roth, 2015: 8). In a documentary called *Belly of The Beast*, it was uncovered that in 2020, American black and women of colour incarcerated at the Central California Women's Facility prison had undergone, and were still being subjected to, involuntary sterilization sanctioned by the federal government (Fitzgerald, 2020). These women had been compelled into accepting the medical procedure when prison gynaecologists led them to believe that they had cervical cancer cells that urgently needed to be removed, only to receive a forced hysterectomy (Fitzgerald, 2020). Similarly, in September 2020, a whistleblower working at the Immigration Detention Facility in Irwin County, Georgia, revealed that around 60 young Mexican migrant women detained at the centre had been forcibly sterilized by a well-known gynaecologist who either coercively injected them with Depo-Provera or through tubal ligations (Palomo, 2021: 58). In both of these cases, when the state was questioned about their actions, their rationalization was citing the fact that these women were a fiscal burden on the welfare system (Palomo, 2021: 58). Analogously, these women's prospective labour has inherently been cheapened, a requisite for a nation and the entire world currently approaching a possible recession; once again proving that a capitalist economy in danger effectuates in the tightening of the control enacted unto

women's reproductive bodies within the penal institution (Shelden & Brown, 2000: 42). For the citizen women of colour at the Central California Women's Facility prison, on release, would have to search for menial jobs due to her criminal record and with her forcibly sterilized status, would be unable to bear children, meaning that she could continue to put in cheap labour work into the economy whilst never burdening it for child support (Schoen, 2005: 23). Similarly, the coercively sterilized illegal Mexican migrant women are prevented from reproducing so that if they re-enter America, whether illicitly or legally, they will not have children who will require assistance from the government (Patel, 2017: 10). Many of these women can provide cheap progenitive labour for the country – as cheapening migrant labour produces even greater capital surplus in the nation's core (Schoen, 2005: 26). Furthermore, forcibly sterilized women of colour in jail and the detained Mexican migrant women demonstrates the deeply worrisome issue of how the American carceral system has used the poor incarcerated woman of colour's body as a footing for capitalist accumulation (Ainsworth & Roth, 2015: 10). Demographics of jailed women in America reveal how the carceral system exhibits the social repercussions of capitalism, as the current sharp increase in imprisoned women of colour in the United States stems from the government gutting social services, escalating repression, and being on the economic offensive since the late 1970s (Ainsworth & Roth, 2015: 8). In *The Economic Breeding-Out of Surplus Blacks: The Political Economy of Eugenic Sterilization and Genocide in North Carolina*, Darity and Price state that controlling incarcerated women of colour's wombs through coercive sterilization allows for free market trade, fiscal plundering, and international outsourcing of the lowest-price labour policies to materialize via exterminating the surplus workforce, all whilst deepening the feminization of poverty (Darity & Price, 2020: 20). Thus, forced sterilization of undesirable women within carceral complexes as the surplus labour force permits a principal-agent symmetry of decreasing wages whilst proliferating worker effort, whereby racial and gender inequities channelled through reproductive abuse and coercion in jail is congruous with the intentions of optimizing fiscal amassment for both governments and private firms within a market categorized by capitalist competition (Darity & Price, 2020: 21).

Yet, with the overturning of *Roe v. Wade*, novel forms of late capitalism like surveillance capitalism have burgeoned both within America and the non-western world, whereby new prediction and profiling technologies within jails observing the reproductive choices and lives of incarcerated women have emerged as a new method of extricating capitalist benefits (Rizzo, 2023: 19). In *The Age of Surveillance Capitalism*, Zuboff delineates surveillance capitalism as the extensive, omnipresent gathering and commercialization by states, corporations, and conglomerates of personalized data, propelled by financial gain inducements reliant upon both the processing and collection of such data (Zuboff, 2019). This escalation of areas of social life emerging as spaces of corporate saturation through online observation and connection is ensuant of capitalism's escalating fiscal pressures aimed at acquiring remunerative benefit via the supervision of action – precipitating consequential repercussions for the authority over and vulnerability of privacy within society and effectuating the attack on fundamental societal principles of freedom, human autonomy, and democracy (Zuboff, 2019). As a new market formation and a distinct logic of capitalist accrual, surveillance capitalism, contemplated as the descendent of neoliberalism, is an extremely detached and extricated development of information capitalism. Established upon digital reality being commodified, this is explicated by the analysis and sales of modified collected behavioural data for capitalist accumulation, showcasing that the axis of corporatist power together with government regulation of citizens is a direct actuality at the core of the digital age (Beydoun, 2022: 770). Whilst surveillance capitalism permeates every aspect of daily life, it occupies great ascendancy within the carceral system notably because the observation of jailed individuals operates at a more intense and

optimized level, engendering a twofold means of capitalist extraction, through the commercialization of the private information of prisoner behavioural data, and the old-school method of utilizing the penal institution as a mode of monetary accumulation (Garrett, 2021: 3).

Because both the carceral system and surveillance capitalism rely upon further marginalizing already marginalized groups within society to extricate financial gain, the procreative body of the incarcerated woman of colour or religious minority woman becomes the most remunerative asset to surveillance capitalist withdrawal (Rizzo, 2023: 21). And since the world currently faces economic extremities due to the COVID-19 pandemic effectuating in countries like America enacting drastic pronatalist policies that possess the potentiality to either criminalize women who disobey the dissolution of *Roe v. Wade* or further control the reproductive abilities of already-incarcerated women, surveillance has been changing power structures in the information economy – potentially shifting the balance of power further from isolated nation-states and towards large corporations and the globalized employment of the surveillance/carceral system capitalist logic (Rockandel, 2022). This means that nations, both western and non-western have become increasingly reliant upon each other to sell data analytics to one another on how they have controlled the reproduction of incarcerated women through surveillance technologies, culminating in a transnational Orwellian Big Brother-esque control over female procreation for capitalist accumulation (Rizzo, 2023: 21). Hence, just as with the racialization of incarcerated women, religion contributes to religious minority women, predominantly Muslim women, falling prey to this surveillance/carceral capitalist system.

Muslim women emerge as the most docile subject to slot into this structure due to a history of surveillance and incarceration originating during America's imperialist War on Terror (Purdie *et al.*, 2021: 20). Post 9/11, the western practice of imprisoning Muslim men and women was disguised as an effort to combat terrorism, constructing Muslim men as *terrorists* and Muslim women as the *terrorist womb* (Byler, 2022: 168). These Islamophobic sentiments most plausibly originate from when Christians assumed the pinnacle of the spiritual pecking order over other faiths in the western world, via the punitive ecclesiastical domination of society first initiated by the Roman Empire, uncovering that the Church's true intentions were to attain social, political, military, judicial, and principally, economic power, at all costs (Scribner, 1987: 16). Christianity as the default religion thus became an enshrouded tool utilized to persuade the masses into believing that the elites were destined to superintend society's finances, whilst the rest of the populace remained indigent and dependent (Chengdan, 2010: 6690). This aided in enforcing the severe social stratum of religious categorizations which forcibly placed Islam and its followers amongst the lowest class of religious peoples, as a ruse to keep western people in a perpetual state of fearing and hating Islam, in order for the elites to extract profit from Muslims as a moulded terrorist subject (Purdie *et al.*, 2021: 20). With more Muslim men and women jailed on US soil, this meant that the imperialist access to raw material resources within the Middle East would increase and essentially acquire unparalleled investment into the possession of domestic labour, infrastructure, and security related technologies for America (Chandrasekhar, 2003). Not only did this permit the American government to expand its markets, secure capital accumulation and maintain its degradation of labour power, but it additionally elicited terrorism in other spheres to authorize state encroachment on civil liberties and also sanction the extensive amounts of wealth into the palms of private capitalists and private contractors of prison-industrial complexes (Chandrasekhar, 2003).

Commending this form of capitalist acquisition, many western nations or nations attempting to westernize adopted America's perspective on terrorism, whereby the formulation of the incarcerated Muslim terrorist emerges as the ideological figure which accredits perpetual investment (Featherstone *et al*, 2010: 170). As the War on Terror industry was predicated upon the colonial/modern gender system's racialized-gendered framework of the imprisoned Islamic terrorist, western countries came to the realization that to either eliminate this group for better access to their resources or retain them as a cheap labour force, was to control the imprisoned Muslim woman's womb (Alimahomed, 2011: 150). Keeping both Muslim men and women incarcerated and thus eternally separated from one another – much like the experiences of the Palestinian sperm smuggler women – would prevent the women from birthing the next generation of male “terrorists” – indicative of the Eurocentric religious patriarchal notion that children originate from the father; from his name to his genes (Featherstone *et al*, 2010: 175). Moreover, the incarceration of Muslim women has often been veiled as a chance to assimilate and “liberate” them from their oppressive male counterparts who deny them autonomy by “compelling” them to be submissive, religiously devout, and traditional (Alimahomed, 2011: 150). Inherently, these gendered Islamophobic sentiments have incited the Muslim womb to form the bedrock of surveillance/carceral system capital accumulation via social domination through incarceration that has paired capitalist modernity and its attendant structures of violence such as the War on Terror, with 21st-century material realities of the digital realm and its digitized prison (Rizzo, 2023: 30).

Since 2014, a large preponderance of Uyghur women, part of a Muslim minority Turkic ethnic group from East and Central Asia, are currently imprisoned in internment re-education camps by the Chinese government, in the Xinjiang province in China (Hoshur, 2018). Subjected to continuous genocidal human rights abuses, an estimated one million Uyghur people have been detained in these indoctrination labour camps, which since World War II, has become the largest-scale draconian incarceration of religious and ethnic minorities (Dooley, 2018). Whilst both men and women have been subjected to forced labour, torture and brainwashing, the women have bared the brunt of rape, gang rape, forced birth control, forced abortion, and forced sterilization, in which the women's wombs, as in most genocides, have become a salient implement for the subjugation of the group (Cassin, 2021). Such atrocities underpin a sinister history of reproductive abuses administered by the Chinese state, at first to Han Chinese women; the hauntings of the one-child policy whereby women not adhering to this legislation were forcibly sterilized, forced to abort babies, or watched their infants being murdered by government officials, still lingers (Huang, 2012: 3). Contemporaneously, China has completely reneged on its aggressive agenda to lessen the Chinese population, and with a steady birth decline of Han Chinese people, both China's and the world's largest ethnic group, the government along with its momentous strides in the reproductive biotechnology industry, have taken bold steps to increase the birth rate (Dooley, 2018). With monetary incentives for prospective mothers and the promise of lowering the cost of childcare and education, the need to increase its national population stems from the paradoxical nature of the one-child policy, which now endangers the very economic prosperity it aided in precipitating (Beech-Jiquan, 2013).

The stringent family-planning system, combined with the market reforms instituted simultaneously, is praised as expediting China's modern pecuniary transformation into a capitalist powerhouse (Chan, 2023). With fewer citizens to feed through preventing the proliferation of a surplus population, the Chinese state converted a hand-to-mouth nation into the world's second-largest economy (Beech-Jiquan, 2013). China's post-Mao conversion to a capitalist economy thus arose from a multitude of factors, including embracing liberalized

markets, the introduction of private property ownership, and requiring no specific consent for foreign direct investments (Huang, 2012: 5). With the attempts to encourage Han Chinese women to have more children failing to produce any quick results, the government has refocused its attention on subjugating and imprisoning ethnic minorities residing in the region as an answer to obtaining a subservient factory labour force (Chan, 2023). Yet, much of China's propensity to achieve becoming the world's second-largest economy and possessing this subservient factory workforce through the reproductive coercion of minorities is predicated upon the dichotomy of the government both repudiating whiteness and mirroring it simultaneously (Beech-Jiuquan, 2013). China, under Xi Jinping, has emerged as a Han nationalist country, in which the concept of Chinese power equates to Han superiority and the need to proliferate its population (Chan, 2023), via the oppression of non-Han, non-white individuals in the nation such as the Uyghurs, achieved through eliminating their people through reproductive coercion and atrocities (Fallows, 2009). This demonstrates the gradual international shift away from whiteness, whereby although the racial hierarchy is evolving within late capitalism to no longer situate being white at the apex of the global pecking order, racial hierarchies have strengthened in that those in power have become preoccupied with propelling their own race, whichever race that might be, to the summit of the stratum for global domination (Fallows, 2009). With attaining a white population no longer a requisite for the obtainment of capitalist accumulation, this exhibits that the problem does not prevail within who occupies the racial apex of the hierarchy, but that the true quandary is in the existence and persistence of racial hierarchies in itself, and how it continues to permeate women's bodies through racialized reproductive stratification for economic and political amassment via the apparatuses of late capitalist agendas such as the surveillance/carceral system regime (Hoshur, 2018).

Thus, China in its quest to subjugate the Uyghurs, has emulated America's rationalization of its War on Terror through the imprisonment of Muslims and the control of their reproductive capacities for the obtainment of capital investment and access to their labour and land as the group's main resource – albeit in more advanced methods (Anderson, 2017: 9). The concept of fear regarding Islamic extremist terror is part of this guised tool, purporting the notion that Uyghur extremism is apparently hellbent on destabilizing China's powerful economy (Horton, 2017). Main acts of Uyghur extremism fabricated by the Chinese government thus include preventing the circulation of normal commodities on the grounds that they are not *halal*, protesting against the West-East Oil and Natural Gas Pipeline and Infrastructure Programme that drives the Chinese extraction economy, and any international money transfers between Uyghurs or Muslim-majority countries (Byler & Moseman, 2017: 5). As Islam is this group's dominant religion, the Uyghur individual is thus constructed as the Muslim *other*, in which the religious typecasts associated with Islam, therefore, becomes a masked apparatus to warrant the extraction of low-waged labour as the subservient factory workforce which China so desperately needs as a mode of pecuniary amassment (Brophy, 2017). As both male and female Uyghurs are incarcerated in the Xinjiang internment labour camps, Uyghur men are rendered responsible for the acts of extremism and the women are accountable for reproducing these terrorists (Dooley, 2018). Therefore, in order to control men as menial workers and women as reproductive labourers, the highly technologically advanced Chinese state has implemented the logics of dataveillance, a type of surveillance using data analytics to search for patterns in data and legal frames of exclusion, intrinsically creating a novel frontier of global capital; terror capitalism (Byler, 2022: 182). Highlighting the arrangement of mass detention, terror capitalism within the prison/terror-industrial complex refers to the ethnoracialization of defining a specific group as potential terrorists or security threats via high-technology

surveillance, whilst simultaneously promoting settler colonialism and generating immense profit (Byler & Boe: 2020).

In *Terror Capitalism: Uyghur Dispossession and Masculinity in a Chinese City*, Byler states that capital accumulation in terror capitalism is thus attained through three interlinking methods; highly remunerative state contracts are handed to private companies to construct and install policing technologies to regulate and surveil the victim group, the large amounts of biometric data taken from the victim group are then sold by the private corporations to other companies, organizations or countries, and finally, the victim group, through direct duress and coercion, and concomitantly through stigma, emerges as an already-prepared source of enslaved or cheap labour (Byler, 2022: 176). China has demonstrated this by transferring Uyghur people from re-education camps to factory/industrial-security complexes built by government agencies and affluent companies which incorporates a one billion dollar investment in surveillance and infrastructure to make the movement of the workers exceedingly curtailed (Fisher, Rauhala & Shapiro, 2018). Subsequently, Chinese tech firms that rival Silicon Valley companies, through private and public partnerships have invested an estimated ten billion dollars into computer-vision AI projects and systems in Xinjiang, in which the collection of data surveillance of the Uyghurs has allowed these companies to produce and develop new analytical tools that are marketed both within the province and worldwide (Zitelman, 2019). China thus utilizes the aims of social credit which emulates the digital surveillance and internment apparatus in Xinjiang through the force of a system of disincentives and incentives that reengineers the Uyghur people into an acquiescent proletariat able to supply the requisite labour for the province's incorporation into global supply chains (Fisher, Rauhala & Shapiro, 2018). This aids in the national development agenda by touting China as a leader of the fourth industrial revolution and at the forefront of the developing artificial intelligence industry (Anderson, 2017: 10). Yet, the preponderance of data surveillance and analytical tools that are being marketed globally by the Chinese government and Chinese private tech firms from the re-education camps in Xinjiang province is the collection of the reproductive behaviours of Uyghur women confined to labour camps (Byler & Moseman, 2017: 6). Monitoring the implementation of methodical forced sterilization, coercive IUD insertions, and gynaecological examinations, authorities have been able to track coerced abortions and prevented abortions of Uyghur women imprisoned within the prison/terror-industrial complex (Leibold & Ruser, 2021: 5) – a coveted asset for nations in the current zeitgeist of enforcing pronatalist policies unto their populace (Hoja, 2023).

Capital is therefore accrued and based upon imprisoned women's reproductive bodies and labour via older primary methods of utilizing the carceral system and novel forms of monetary extrication via the dataveillance of their reproductive behaviours (Byler & Boe: 2020). These older primary methods of the carceral system as a locus of capital extraction are premised upon imprisoned women's reproduction as economic calamities in capitalist society – such as the current fiscal repercussions of the COVID-19 pandemic ensuing in the US and a few other nations to enact ban abortions – has often led to the mass incarcerations of oppressed people, minority women in particular, in the last century (Byler, 2022: 176). Engendering in a penal catastrophe, this has produced a reactionary reproductive carceral administration that has escalated progenitive repression as in the case of the Uyghur women (Hoja, 2023). Like the Palestinian sperm smuggler women and the coercive sterilization of the black and brown women in American jails and the Mexican migrant women in US detention facilities, the Uyghur women have emerged as the embodied reproductive labourers within the carceral system as an object of investment either through the alienation of their reproductive capacities or by utilizing their wombs to reproduce more labourers, in which ethnicity and/or religion

masks the reproduction of racial, religious, and differential valorization (Cockerell, 2019). Present economic precariousness and growing wealth inequalities validate that the penal institution relies upon women's reproductive bodies and labour for maximum capitalist accumulation activated via the growth of for-profit prison conglomerates connected to the state that depends on the forced prison labour specifically of females. Incarcerated women whose reproductive abilities are curtailed thus remain loyal labourers for the state, never requiring time away from work within the prison-industrial complex to birth a child and therefore no longer a potential capital-loss threat (Nurmuhammad, 2023). These women thus emerge as a reproductive neo-slave entity, faced with a *prison of the womb* reality, resting upon the intentionally thin line between that of convict and concubine, much like the slave women during colonial times who experienced the legal doctrine of *partus sequitur ventrem*, whereby all children of enslaved women would be born into slavery (Weinbaum, 2019: 18). Hence, the caged womb functions as the centre of demand and consumption as post-industrial capitalist economies typified by persistent catastrophes of demand and declining population growth, become contingent on the mass incarceration of the female reproductive body to coerce minimally market-associated civilians to partake in the market in the capacity in which they are most needed; as consumers (Goodwin, 2019: 905). This is created through the estimation of the increase of the national population via national aggregate demand affiliated with female incarceration, as women imprisoned en masse in a country equates to the addition of a small nation of consumers in relation to the national economy that is able to offer free reproductive bodies or labour for countries in dire need of fertility growth (Leibold & Ruser, 2021: 23). Thus, both Chinese tech firms and the government in its incarceration of Uyghur women have employed older primary methods of utilizing the prison-industrial complex to extract capital through the restriction of their wombs, albeit reengineering it with surveillance capitalist logics of accumulation (Cockerell, 2019).

As of 2022, following the overturning of *Roe v. Wade*, China's biggest clients purchasing its data analytics of the Uyghur women's reproductive behaviours are private American data brokers who have employed China's surveillance AI technologies of a repressed incarcerated female class to utilize concealed algorithms online to trace women in the US who seek illegal abortion or travel to other states for the procedure – this information is then sold from the private tech-firms to the American government (Bhuiyan, 2022). The monitoring of US women's purchases of contraceptive pills and extracting information from their period-tracking apps are also currently being collected, sold, and purchased from American data brokers to the state (McDonald, 2022). This has been made possible through the purchase of Trojanized spyware melded with computer-vision AI systems utilized by Chinese government-backed hacking groups that masquerade as Android apps in Xinjiang to target Uyghur people (Bhuiyan, 2022). Two predicaments thus emerge that exhibit how the novel surveillance/carceral capitalist logic of accumulation is firmly based upon women's reproductive bodies in the penal system (Rizzo, 2023: 15). The first is a national quandary that demonstrates Uyghur women as a product of China's terror capitalist enterprise, moulded into an object of the technological gaze, which allows for the expropriation of their wombs and reproductive labour as primitive accumulation (Wang, 2019). The incarcerated Uyghur woman is thus coercively tasked with reproducing new political and labouring subjects for the terror capitalist regime, as the modes of their reproduction form the basis of expanding the service economy, service sector, and the slotting of ethno-racialized workers into that sector through surveillance/carceral capitalism (Mozur, 2019). Secondly, the sale of imprisoned Uyghur women's reproductive dataveillance to America has instituted a transnational capitalist quagmire, whereby the annulment of *Roe v. Wade* has made worldwide reproductive privacy a concept of the past (Bhuiyan, 2022). The US purchasing reproductive data analytics from

China denotes that the globalized monetization of incarcerated women's reproductive behaviours and non-incarcerated women's private online reproductive information has caused the rescindment of the right to women's dignity and autonomy to make reproductive health-related decisions free from commercial or government interference (McDonald, 2022). Thus, the surveillance/carceral capitalist logic of accumulation through women's reproductive bodies and labour masks the production of differential control and the exploitation of the precarious, often racialized female labourers through a patina of smart convenience, whereby the rest of the world becomes aware of the atrocities taking place in Xinjiang, but inherently consents to it through aggressive consumerism (Wang, 2019).

However, this additionally demonstrates America's transnational power, in which its current geopolitical and economic realities such as banning the federal right to abortion due to a possible worldwide recession and national population decline engender not only in the capital extraction off of incarcerated American women but creates a new globalized capitalist economy for the surveillance of imprisoned women in developing states (Berghs et al., 2022: 3). Surveillance in tandem with carceral capitalism, therefore, relies upon the transnational prison-industrial complex to play the crucial role in sustaining the viability of utilizing repressed incarcerated women's wombs as the raw material that fuels its profitability and capitalist expansion (Rockandel, 2022). Hence, this novel capitalist regime of exploitation, monetary accumulation, and discipline is dependent on older systems of patriarchal sentiments tied with the complex matrix of gender, race, religion, and nationality (Maldonado, 2015: 26). This exhibits the intricate web of capitalist relations symbiotically and mutually constituted between state penal institutions and forced prison labour, the profit-driven agenda of corporations, tech firms, and nation-states, and the US-China market that has created the transnational trade in the monitoring and selling of the reproductive surveillance data of incarcerated minority women (Byler, 2022: 178). Thus, the US in purchasing this asset from China to observe citizen women who disobey the repealing of *Roe v. Wade* endeavours to bring criminal charges against such women with the possibility of incarcerating them (Martin, 2023: 77). Hence, not only does America aim to generate capitalist profit through increasing its fertility rate by banning the federal right to abortion, it attempts to slot citizen women recalcitrant of this enactment into the carceral system whereby their reproductive labour and bodies under intense observation emerge as tools for further capitalist extraction through surveillance/carceral logics of accumulation (Lai & Tanner, 2022).

Resultant of a digital apartheid system, this has therefore engendered a digitized and automated panopticon – a design of an institutional building with an inbuilt system of control – that is always watching over women's reproduction, searching for novel methods to extract capitalist extrication (Dong et al., 2023: 4). Moreover, it has generated in a transnational globalized banopticon – a situation where profiling technologies are utilized to decide who needs to be surveilled – in which ethnocized profiling surveillance of people becomes omnipotent, and the Xinjiang case in relation to America's repealing of *Roe v. Wade* demonstrates the limit of where these systems can reach in tandem with scale density, legality, and exploitation (Byler, 2022: 170). With late capitalist forms of surveillance and carceral capitalism, women around the world, whether incarcerated or not thus fall prey to an all-seeing technological reproductive capitalist digital gulag that profits off of their reproductive labour and bodies, and prohibiting them from having reproductive choice (Huq & Wexler, 2022: 75), in which the incarceration of their wombs ultimately becomes a digitized economy, giving non-imprisoned women the illusion of reproductive freedom (Advertone, 2022). Ultimately, this exhibits that the surveillance/carceral capitalist logic of accumulation in the current political moment of *Roe v. Wade* and enacting stringent pronatalist policies, within technologically advanced nations, is

inherently predicated upon incarcerated women's reproductive bodies and labour (Geoghegan & Khabbaz, 2022), whereby capital is accumulated through the older primary methods of utilizing the carceral system as a locus of profit acquisition in tandem with the novel forms of monetary extrication via the collection and sale of dataveillance of the procreative abuse and behaviours of imprisoned minority women (Grubestic, 2023).

Yet, the emergence of extracting capital from women's reproductive bodies and labour via surveillance and terror capitalist reasonings of amassment – both permitted to exist through these computer-vision AI systems, app trackers, data analytics, and the like – demonstrates the alarming quandary of how the uterus is increasingly materializing as a technologized object (Drucker, 2023). As older forms of accumulating capital such as controlling women's reproduction by banning abortion become exceedingly redundant and ineffective in a late capitalist economy, novel types of advanced technology have begun to pervade the womb, whereby the female reproductive body is exposed to new forms of control and exploitation through such developing technologies for greater monetary accrual (Martin, 2023:61-82). Thus, the requisite to enquire into how, which, and what these technologies shall entail for the future of the womb as a technologized subject for pecuniary extraction begins to imperatively arise (Drucker, 2023).

### **3. Women's Bodies as A Technologized Reproductive Object for Novel and Future Forms of Capitalist and Speculative Post-Capitalist Amassment on an Ever-developing Interlinked Transnational Scale**

#### **3.1 Introduction**

The female reproductive body materializing as an object of technologization for capital accumulation within the current late capitalist economy is due to capitalism and the uterus already being intimately bound to technology (Debata, Scott & Stiles, 2023: 1). Because female procreative labour forms the basis of capitalism in its ability to provide a workforce, and capitalism ebbs and flows according to novel innovations that will assist in the preservation of this workforce and therefore capital accrual, the womb as a capitalist asset is tied to technology as the introduction and uptake of new technologies is a key determinant for the future of capitalism itself (Don, 2015). However, as capitalism currently enters into crisis mode – as seen in the previous chapter with geopolitics and biocapitalism – due to various reasons including states and laws governing in an era of stagnation and stagflation, environmental breakdowns, and a surplus humanity, this all culminates in declining global fertility rates; developing technologies, specifically advancing reproductive technologies, promise capitalist elites novel forms of monetary stockpiling under the guise of offering women progenitive emancipation (Alami, Copley & Moraitis, 2023: 5).

As traditional forms of capitalist amassment and extraction from the uterus that once launched and enabled capitalism to thrive – such as Global North countries enacting pronatalist policies – become outdated and futile due to women in developed nations opting to have fewer or no children resultant of the push towards gender equality and the exorbitant cost of childcare – both sending capitalism into the drastic calamity of unsuccessful further development and profit accrual, the economy, through advancing technology, begins to seek new methods for the replacement of the female reproductive body (Kolhatkar, 2023). Developing technologies thus propel capitalism further into transnationalization and the multifaceted quandaries women face as reproductive vessels for capital accrual therefore further moves beyond the nation-state, exposing such complex issues which prevail on an ever-developing interlinked transnational scale (Debata, Scott & Stiles, 2023: 3). This present expeditious process of formulating the womb into a technologized object for pecuniary accumulation means that the female procreative body and its labour have become an experimental playground and laboratory for elites to not only attempt to appropriate the abilities of the uterus but to additionally navigate and still control the increasing possibility of either a utopian or dystopian post-capitalist nearby-future economic system (Horgan, 2020).

Hence, as advancing technology permits capital to become progressively globalized and therefore more independent from the structures of the state engendering in a further concentration of wealth into fewer hands, scientists, tech billionaires, and tech conglomerates as the new capitalist overlords have begun to turn the female progenitive body from a natural procreative subject into a technologized reproductive machine, first by assessing the potential replacement of women's progenitive bodies and labour through agricultural breeding, assisted reproductive technologies, and transnational surrogacy, all for prospective novel forms of capitalist amassment (Brockman, 2021: 15). Furthermore, as the experimentation of this transition from a natural procreative subject to a technologized reproductive machine occurs as the flames of the Fifth Industrial Revolution begin to ignite, these elites have started to fund and promote the complete alienation of reproductive labour from a woman's body via artificial intelligence in reproduction methods such as ectogenesis (Horn & Sorenti, 2023). Thus, as

these elites strive to manoeuvre and manipulate a looming post-capitalist economy in their favour, speculative reproductive technologies are touted as liberatory tools for women that could signal a post-capitalist gender-equal dawn (McCartney, 2023). This then begs the conjectural question of whether or not artificial intelligence in reproduction such as the artificial uterus will truly usher in a post-capitalist emancipatory society for women (Rankin *et al*, 2019: 12).

### **3.2 Agricultural Breeding, Assisted Reproductive Technologies, and Transnational Surrogacy – Testing the Possible Replacement of Women’s Reproductive Bodies for Capitalist Amassment and Prospective Novel Forms of Accrual**

In 1996, at the Roslin Institute in Scotland, Dolly, a Finn-Dorset sheep, was the first mammal to be successfully reproductively cloned from an adult somatic cell. Utilizing the procedure of somatic cell nuclear transfer (SCNT), Dolly was created via the extracted mammary gland cell of one sheep inserted into the enucleated oocyte of another sheep; this biological entity was thus implanted into the uterus of a third sheep, where it gestated until birth (Franklin, 2007: 3). Whilst the cloning of Dolly symbolized in making sci-fi a reality through its far-reaching developments within biological, medical, and stem cell research including the discovery of induced pluripotent stem cells, it showcased a pioneering juncture for a reproductive biotechnological movement that had for decades – through an ongoing history of capital accumulation via selective breeding and intensified national and geopolitical competitiveness through the control of procreative biocapitalism – been testing variegated methods on how to create human babies without the reproductive bodies and labour of women, for capitalist amassment (Emel & Urbanik, 2005: 448).

Dolly was thus the reproductive clone breakthrough for these variegated trial methods which most plausibly began when cloning African clawed frogs in 1958 by the usage of adult somatic cells in place of embryonic stem cells (Bucklin, 2017). Moreover, the creation of Dolly at the end of the 20<sup>th</sup> century denoted an era that since the 1980s, around the same time that global fertility rates began to decline, had commercially introduced new reproductive technologies such as in vitro fertilization and embryo transfer to women mainly in first-world nations like the United States, in which reproductive cloning provided fertile ground through the perpetual advancement of assisted reproductive technologies (ARTs) to investigate the capitalist viability and possibility of generating an everlasting workforce without the complications of relying upon the human female body (Basu, 2017). Medical procedures of assisted reproductive technologies most commonly include in vitro fertilization (IVF), preimplantation genetic diagnosis, cryopreservation of embryos and gametes, intracytoplasmic sperm injection (ICSI), and various fertility medications (Franklin, 2007: 10). This elucidates how Dolly paved the way for the cloning of transgenic mammals such as Polly and Molly in 1997, two Finn-Dorset sheep containing both ovine and human clotting genes (Weiss, 1997), Japan revising regulations in 2019 to permit the approval of animal-human embryonic chimera research with the potentiality of inserting these egg cells into an animal uterus for full gestation (Cyranski, 2019), and a team of international scientists from America, China, and Spain who created the first lab-grown chimeric human-monkey embryos via CRISPR gene editing in 2021 (McFarling, 2021). These cases exhibit the steady experimental advancement towards genetically modifying the next generation of humans unaccompanied by the natural processes of a woman gestating a baby to birth, premised on late capitalist conceptualizations of pecuniary accrual (Emel & Urbanik, 2005: 450).

Yet this convergence between woman and animal within capitalist logics of accumulation founded upon assisted reproductive technology and reproductive cloning discourses surrounding women's reproductive bodies and labour stems from the colonial postulation that women are analogous with nature (Tiwari, 2020). In *Women, nature, and the Social Construction of Economic Man* (1997), Mellor expresses it originating from the colonial social fabrication that civilized western society is the product of a gendered hierarchical dualism, where men were positioned as "economic, rational, and scientific", whilst women, the subsidiary half of this binary, were located as part of the natural world (Mellor, 1997: 130). This bifurcated knowledge system thus materially separated capitalist society not only through the gendered monetary division of body and mind, or science and culture from nature, but permitted the amalgamation of women as one with the natural world into an economy that commodified the female body as chattel by assigning it a price value the same way in which animals and natural resources were allotted market value (Salleh, 2009: 25). If men are posited as the autonomous, individualized, and main internal component of this capitalistic dualism, then the economic system depends upon the alignment of women with nature, animals, and natural resources as the inferior external in order to exist and persist in correlation with the biological/ecological underpinnings of patriarchal actuality, whereby the external is exploited to provide the internal with pecuniary accumulation (Clark & Foster, 2018). This capitalistic sexist dualism therefore relies on the invented differentiation between masculinized social time and feminized natural/biological time; as "economic" man lives within social time, women are supposedly liable for biological time, hence the perpetual shaming of childless women that their "biological clock" is ticking, a fearmongering tactic to coerce women into reproducing a continual labour force for the capitalist elites (Mellor, 1997: 131).

Thus, as ecofeminists promulgate that women have been naturalized and nature has been gendered and feminized, and radical feminists like De Beauvoir contend that one is not born a woman, but instead becomes one through the act of procreation, it is presupposed that because she possesses a uterus, she will instinctively have nurturing qualities, akin to nature (Oksala, 2018: 220). Phrases like "Mother Nature", "fertile land", "virgin earth", and "barren soil" depict that naturalizing women allows for the exploitation and oppression of the female reproductive body by hypothesizing that women are "emotional" and "irrational", therefore showcasing the diversified methods that the patriarchal capitalist enterprise employs to monopolize the subordination and oppression of female reproductive labour (Tiwari, 2020). This woman/nature and female/Anthropocene dualisms, by stating that both echo the selfsame attributes and virtues, not only allows for the justification of women's devaluation and degradation through the economy's implicit compliance with their mutual victimization which has only intensified with fiscal globalization but additionally, via the so-called logicity of socially labelled principles affiliated with femininity such as possessing a "motherly instinct", legitimizes and strengthens gender typecasts and norms (Castree, 2001: 190). Hence, concordant to how the capitalist regime has used nature and the environment to maximize its profits, so has it taken advantage of women's reproductive labour in order to produce "sons and heirs" as an eternal labour force, in which the coalescence of nature, women, and nurture, have for centuries provided the capitalist elites with effortlessly imposing the division of labour, sex-role conditioning, gender stereotypes, and the pressurization of women to have children (Salleh, 2009: 23).

The woman/nature binary in accordance with gender roles most plausibly originates from the Renaissance, Age of Enlightenment, and the Scientific Revolution eras, accompanied by its fixation on biologically classifying the human population, developed a malign preoccupation with the distinction between men and women, whereby the female reproductive body, like

animals and the environment, emerged as an exotic area and classification of difference (Sweet, 2006: 115). Thus, austere gender roles and the classification of women as an inferior class of human were promoted with intensity, escalating the prevailing volatile chasm between men and women, endeavouring to dismantle any relations of solidarity, unity, and power amongst the two sexes within the proletariat and prevent the same form of uprising against the dawning capitalist structure that occurred in retaliation to the feudal system (Muldoon, 2012). This meant that the manufactured gendered distinction of the arenas of production and the division of labour reinforced the fabrication that the reputation of women's knowledge and power was abhorrent, aiding in keeping women out of the public sphere and in the home, where their only focus was to bear children (Kaplan & VanderBurg, 2014: 6). As the heteropatriarchal family standard was the engine of the new capitalist economy, women were coerced due to their "natural maternal instinct" into supplying the emerging capitalist structure with free reproductive labour; having babies and the accompanied domestic labour within the home to raise those children, evaluated as nothing more than reproductive vessels for fiscal benefit (Muldoon, 2012). Contemporaneously, little to nothing has changed, as women around the world and especially in western nations have been sold the fallacy that they can "have it all" despite having to now maintain their own careers whilst having children and still doing the majority of domestic labour in the home as opposed to their male counterparts (Hewlett, 2002).

This promulgated "have it all" misconception was predominantly aggrandized by the first introduction of assisted reproductive technologies into society in the latter part of the 20<sup>th</sup> century as earlier aforementioned, a time when more women were entering the workforce whilst having fewer children, delaying childbirth and using contraceptives in an attempt to navigate a capitalist system struggling from the negative impacts of neoliberalism and the declining fertility rates in most first-world countries (Szalai, 2015). ARTs were thus the ultimate tool to compel women into birthing more children under the guise of them being granted "reproductive liberation" and "feminist emancipation" (Vere, 2007: 825). Furthermore, over the years, feminists have arranged two distinct arguments around ARTs (Widdows, 2010: 80). On one hand, white western feminists have proclaimed that reproductive technologies benefit women in that it enables them to make their own procreative choices on their own conditions free from patriarchal society's "anatomy is destiny" theme whereby in the modern-day, nature has always been matched against technology, in which they have accused those opposing ARTs as purporting motherhood as purely naturalistic, essentialist, biologicistic, ancient, and ontological in essence (Marway & Widdows, 2015: 175). Feminists disapproving of ARTs especially those emerging from Marxist, political, and Global South perspectives, have not only highlighted how the concepts of race, class, and culture manoeuvre around reproductive technologies as a capitalistic praxis but contend that ARTs exist as a concealed apparatus to dupe women into once again relinquishing control of their reproductive labour to men, the State, and to the always-advancing neoliberal bioeconomy hellbent on techno-capitalist accumulative logics (Cavaliere, 2018: 326). Yet, it is this very anti-reproductive technology assertion that foregrounds how these technologies exist as a transnational starting point and middle ground for testing the practicality of current and future progenitive technologies that might permit no longer having to rely upon the female reproductive body and its labour for a continual workforce, whereby through promoting the usage of ARTs worldwide becomes a market-driven objective in which capitalist accrual becomes predicated upon the possibility and trial run of this replacement (Roberts, 2017: 615).

The elucidation of this predication commences at the transnational juncture of women's access to ARTs, the Global North/South divide, and the economic geographies of the global fertility trade (Prachad, 2016). Middle to upper-class white women in the Global North have

advantageously possessed access to a variety of ARTs for many decades now, in which uterine geographies of reproductive marketization and cross-border procreative commodity chains have not only permitted the continuation of colonial and postcolonial disparities between women of the Global North and South but has allowed western women to view the Global South as a reproductive hub comprised of willing progenerative labourers – most notably through the global fertility industry’s trade of transnational gestational surrogates (Nahman, Pavone & Vertommen, 2021: 125). Transnational commercial surrogacy, since the early 2000s, has materialized as a novel capitalist frontier based upon the escalated commodification and exploitation of women’s reproductive bodies and labour, reinforcing the notion that the heteropatriarchal family standard remains the driving engine of dispossession, exclusion, and enclosure in the global capitalist economy, by which the binaries of exchange and use, and paid and unpaid reproductive labour have firmly endured as the foundation of capitalism itself (Suzelis, 2019: 18). Characterized as an “intimate industry” involving the bureaucratized movement of a multitude of individuals who intersect the world in a quest for human eggs, sperm, and fertility assistance in the shape of a willing womb, transnational commercial surrogacy describes the type of medical or fertility tourism embarked upon by hopeful parents – usually single white women or a white heterosexual couple, and in more recent years, mainly white male same-sex couples from first-world nations – who search to rent penurious Global South women as surrogates (Militz & Schuur, 2018: 1630). This is eerily reminiscent of Margaret Atwood’s *The Handmaid’s Tale* (1985), a dystopian feminist novel where lower classes of women are heavily surveilled and turned into surrogate birthing machines for the ruling elites (Douthat, 2018). Taking place via an embryo being implanted into the surrogate through IVF, the child is unrelated to the gestational surrogate, as the embryo is either created utilizing the intended mother’s eggs and father’s sperm, a donor egg and the father’s sperm, or donor sperm and the mother’s eggs, with the most popular Global South destinations for intended parents to seek out a gestational surrogate being Ukraine, Georgia, Russia, India, Nepal, Thailand, and Mexico (Schuur, 2018: 24). Besides the possible medical complications and risks posed by inadequate reproductive healthcare or being abandoned or underpaid by the intended parents who breach contracts, many poor gestational surrogates in Global South countries are forced to navigate intimate, embodied, and emotional labour, in which her reproductive body and emotions become sites of commodification in contribution to global capital accumulation processes (Nahman, Pavone & Vertommen, 2021: 128). Manoeuvring through these exploitative global capital accumulation processes, in accordance with Marx’s theory of labour, the surrogate sells her labour power, her ability to gestate a child, to the intended parents as purchasers. The utility of the labour-power for those who purchase it is the very labour itself, yearned for by the intended parents, who, for whatever reason, require a woman to gestate their child (Suzelis, 2019: 19). Meanwhile, the value is the time of her labour needed for its production, and the financial remuneration of the surrogate is the price of her labour power (Douthat, 2018). In this way, her labour power is not only a useful and desirable commodity, but it also thus has exponential value, that in most cases, she does not adequately benefit from (Schuur, 2018: 12).

Take India for instance, a favourite destination for intended parents from industrialized states due to cheap costs and easy access to India’s booming informal surrogacy industry – even though commercial gestational surrogacy was banned in India in January 2020, the enterprise has continued to flourish illicitly, even with the travel restrictions during, and fiscal setbacks after, the COVID-19 pandemic (Hammer & Jana, 2022: 948). Since its legalization in 2002, India’s surrogacy industry, “industry of reproductive outsourcing” or clinical reproductive capitalist enterprise, with around 3000 mainly unregulated surrogacy clinics around the country, is estimated to be worth about \$2-3 billion, undeniably benefitting the Indian elites

and the nation's overall capitalist economy predicated on the exploited Indian surrogate woman's reproductive body, labour, and the medical/fertility tourism and ARTs industry that she is thus able to bolster for her country (Marwah, 2011: 8). India's capitalist "industry of reproductive outsourcing" or clinical reproductive capitalist venture is therefore built upon the surrogates' clinical reproductive labour, in which clinical reproductive capitalism is explicated as an economically productive procedure of material extraction (Pande, 2010: 980), whereby the extracted, temporal essentials of capitalist accumulation are assigned to work at the level of the female procreative body, by which surrogacy as an increasing precarization and informalization of reproductive employment views progenitive labour as becoming progressively contractualized and transnationalized in a global capitalist economy (Shetty, 2012). Furthermore, the majority of Indian surrogates are working-class, usually married Dalit women in their 20s and 30s, bearing children for white overseas intended parents, forced to be under the control and confinement of surrogacy hostels, where they "live and work" until the baby is born (Nadimpally, 2015: 106). These hostels are subject to a highly controlled environment through curtailing and monitoring the movement of the surrogates through 24-hour CCTV camera surveillance – in many ways akin to the carceral and surveillance capitalist logics of accumulation founded on incarcerated women's reproductive bodies and labour as discussed in the previous chapter (Hammer & Jana, 2022: 947). It is these surrogacy hostels, which represent the transnational economic institution of clinical reproductive labour and capitalism, as they serve as a workplace halfway house where fertility specialists, surgeons, and embryologists manoeuvre to produce the end product, the baby, who then gets moved across state lines to its intended parents, pervading into the global capitalist commodification of children and the proletarianization of motherhood, constructed from the body, uterus, physical, and psychological toil of the surrogate woman (Pande, 2010: 990). Both surrogacy hostels and agencies alike thus extract an enormous amount of surplus value, in their knowledge that the process of gestating a baby has a greater value than that which is being paid to the surrogate (Pande, 2010: 970). The distinction in value is the surplus value and the profit, which the hostels and agencies reinvest into their own pockets, organizing the flow of constant capital and expanding the activity and availability of the product – babies – to the intended parents who are the customers of this utilized value (Nadimpally, 2015: 108). The hostels and agencies therefore preside over the variable capital required and the amount invested into the labour in order to produce the good and being able to largely benefit from the adjustment of the price of progenitive toil supplied by the surrogate (Nadimpally, 2015: 108).

However, the commercialization of transnational gestational surrogacy harbours a further dark secret, one that transcends just the Indian surrogate women case and unveils the true essence and utilization of the reproductive body and embodied labour of Global South women of colour for the global capitalist economy – through capital accumulation processes which reflect the colonial histories of the racialized stratification of female reproduction in relation to population dynamics and white population proliferation (Schuur, 2017: 245). The international burgeoning of the usage of ARTs for transnational surrogacy not only exhibits the expansion of capitalist correspondence that reinforces the reproductive social hierarchies and gendered colonial framework of the global economy, but moreover demonstrates that Global South women of colour gestating a white child for Global North intended white parents depicts the surrogate as a mere "carrier", devoid of being a woman or a human with psychological needs, and nothing more than a womb to be used and exploited (Majumdar, 2020). The bodies and especially the uteri of the Global South surrogate women of colour thus become a kind of reproductive technology laboratory, dehumanized as a reproductive commodity and not a person, and experimented upon as trial subjects as mere wombs for when future reproductive technologies one day permit the gestation of children in an artificial uterus – through the testing of surrogacy

as the predecessor of the potentiality to replace women's reproductive bodies and labour and achieve desired national and global labour force populations (Messer, 2019: 15). Assessing the viability of replacing women's procreative capabilities through transnational gestational surrogacy originates from capitalism's current crisis mode, whereby the rapidly declining fertility rates in western majority-white nations have proven that Global North white women cannot be relied on to ensure that Global South nations do not usurp first-world nations in populace size and propel white national populations into global surplus workforce territory (Suzelis, 2019: 17). Global North countries encouraging their citizens to partake in seeking out Global South surrogate women of colour regulates this potential quandary, as gestating a white child for nine months not only prevents the surrogate from birthing her own genetic child during that same timeframe and adding to the "overflowing" third world population, but additionally turns the surrogate into a reproductive "machine" serving as an antecedent – in case capitalism falls into further despair and birth rates of the Global North continue to deteriorate – for replacing women's wombs with the possible future development of a human child in artificial conditions outside of the uterus (Chia-Ting, 2019: 38).

The perception of the Global South woman of colour as a mere non-human womb entity for profit stems from the colonial legal doctrines of *partus sequitur ventrem* as discussed in the previous chapter, justified by dehumanizing, and portraying her as less than a woman (Gupta & Richters, 2008: 240). Today, this colonial conception remains firmly rooted within the global capitalist society in that not only are the reproductive abilities and materials of white women valorized at a higher price, but white women are considered as "woman" (gender), whilst women of colour as merely the female reproductive body (sex) (Schoor, 2017: 245). This woman/female racialized reproductive body dichotomy, closely connected to the woman/nature and female/Anthropocene dualisms, was strategically created by the patriarchal capitalist elites or colonial white men in power, most plausibly to prevent a unified proletariat of women around the world that would uprising against an economic regime that was predicated on the exploitation of their reproductive bodies and labour, inevitably paving the way for white women to view themselves as superior to the same Global South female reproductive body of colour they exploit as a gestational surrogate for their white children (Van Wichelen, 2022: 20). Yet, this notion has not only deceived white women from the Global North into believing that their easier access to ARTs and their ability to pick and choose surrogates from poor nations has "empowered" them through reproductive "choice", but it has also blindsided them to the escalating fact that they too are fast becoming procreative labs for testing the viability of replacing women's progenitive bodies and labour through future technologies which shall assist in a plethora of old and new forms of transnational capitalist accumulative logics (Prachad, 2016). However, this is not the first time that white women's reproductive bodies have been manipulated in a desperate attempt to produce children for capitalist survival, in fact the first people that early modern Europe prior to conquering foreign lands essentially colonized and enslaved, were European women themselves, evaluated as nothing more than reproductive vessels for fiscal benefit to keep afloat a struggling fledgling primitive capitalist economy (Mies, 1998: 18).

Thus, with the current emergence of late capitalism, the possibility of a post-capitalist society through technological advancements, the gradual shift away from occidental geopolitical ascendancy, and dwindling white fertility rates, tightening the control on women's reproduction in western states through pronatalist policies such as the overturning of *Roe vs. Wade* in the US is unlikely to consummate the desired results of proliferating a white national population (McCartney, 2023). Therefore, since its inceptive introduction to the Global North public in the latter part of the 20<sup>th</sup> century, ARTs have endeavoured to dubiously turn white

women into reproductive technology laboratories and nothing more than mere “wombs” alongside Global South women of colour, under the guise of giving middle and upper-class white women progenitive “liberation” in an attempt to coerce them into breeding more white babies (Douthat, 2018). Between the years of 1974 and 1987, Dr Donald Cline, an American reproductive endocrinologist and infertility specialist proved this laboratorization of white women through ARTs when he sired over 94 children by inseminating his own sperm into his unbeknownst female patients (Zhang, 2019). As of 2022, Cline who was exposed to the public in the Netflix documentary *Our Father* (2022) was convicted of fertility fraud, had his medical license permanently revoked, and received a \$500 fine, but has not been imprisoned due to his sentence being suspended in lieu of a one-year probation period for being a first-time offending felon and an “upstanding member of his community” (Schager, 2022). All of the covertly inseminated women were white with blonde hair and blue eyes, as Cline, a white man himself, was rumoured to belong to Quiverfull, a conservative Christian white nationalist cult that shuns birth control and sterilization and is said to be linked to Big Tech capitalist elites; Cline’s victims were thus nothing more than laboratories and baby factories for white population expansion essential for capital amassment (Zhang, 2019). Analogously, in a scientific paper published in November 2022, Norwegian philosopher Dr Anna Smajdor claimed that Whole Body Gestational Donation (WBGD) – in which women in a persistent vegetative state or post-coma unresponsiveness can gestate a child until its birth – is a nearby possibility (Savin, 2023). These brain-dead surrogates as Dr Smajdor has suggested, could provide an alternative for transnational surrogacy, whereby Norwegian women – who are majority white – in a comatose position will be the first trial experiments for WBGD, in which these women serve as the forerunner to a future conjectural artificial uterus (Canavan, 2023). This exhibits that all women, whether white or of colour, from the Global North or South, through the usage of ARTs for surrogacy, either transnational or through the potentiality of WBGD, are mere vessels and incubators for testing the prospective methods to replace the human womb with future procreative technologies that will be able to gestate children free from the hindrances and reliance on women’s reproductive bodies and labour to solve the dropping fertility rates, a dwindling workforce, and a capitalist economy in disrepair (Badcock, 2023).

All women thus exist as the female reproductive body, with Global North white women only being promulgated as “woman” by society to manipulate them into reproducing an everlasting white population in avoidance of becoming the surplus labour force, replaced by an enlarging Global South population of colour, making it arduous for western states to seize and exploit their resources (Stuvøy, 2018: 35). However, the allocation of all women as the female reproductive body has most plausibly been deepened by late capitalism’s moderate global shift to no longer requiring the burgeoning of a white population for capitalist accrual with each nation, especially in the case of countries in the Far East, now attempting to propel their own race of people to the summit of the hierarchy for global domination (Nahman, Parry & Vertommen, 2022: 10). Hence, women across the globe are now sites of the advanced technological testing of replacing and appropriating human female reproduction to attain these late capitalist logics of amassment without the female reproductive body (Barbagallo & Vertommen, 2021: 1948). Capitalist accrual through the usage of ARTs worldwide in relation to transnational surrogacy is predicated upon the possibility and trial run of replacing the human uterus via these nearby-future advanced technologies because the appropriation of women’s procreative capacities through reproductive technologies as a medical paradigm has not been developed because women require them, but because capital and science desperately need women, to the point where their ability to produce children will even be artificialized, for the continuance of the capitalist prototype of economic progress and growth (Horn & Sorenti, 2023). This reliance – which further proves that ARTs are not empowering or liberating

because it is not controlled by the same women who utilize them – elucidates capitalism’s obsession to coercively curb women’s reproduction, whether via welfare incentives or disincentives or through population control policies, as with birth rates plummeting, the dearth in human female reproduction has caused a decrease of human labour – workers, soldiers, and consumers – constituting a calamity in the very possibility of capitalist continuity (Mason, 2015). But as commercial gestational surrogacy moves into the realm of becoming the antecedent for conjectural synthetic female reproduction external of a human womb, because the history of capitalism was founded on women around the world being asymmetrically compelled to the discipline of usually unpaid reproductive work, women’s bodies are transferred from the space of reproductive vessels to that of technological breeding machines (Don, 2015).

Thus, it is at this juncture that the female reproductive body emerges as a cyborg. Whilst depictions of Mary Shelley’s *Frankenstein’s Monster* or Masamune Shirow’s *Ghost in the Shell* might come to mind when comprehending the elucidation of a cyborg, as a dualism as opposed to a dichotomy, it is defined as a cybernetic hybrid creature of both machine and organism and in this case, a procreative being in which capitalist elites want to replace the maternal with the machine for profit, based upon a masculinist appropriation of the alterations of women’s reproductive bodies and labour pushing women and the uterus further into the zone of technologized subject (Ahmad, 2019). Although humans becoming cyborgs seems like a possibility in the near future, in *A Cyborg Manifesto* (1985), Haraway posits that women and specifically the female reproductive body, have always existed as cyborgs – from the patriarchy adopting the essentialist interpretation of the woman/nature dualisms during European colonization, to the blurring of boundaries between woman and machine arising in the 20<sup>th</sup> century with ARTs (Haraway, 1985: 20). These blurred boundaries included how evolution transcended the lines between animal and human, how microelectronics and the political concealment of women as cyborgs transcended the boundaries of physicality, and how 20<sup>th</sup>-century machines and technologies merged the lines of natural and artificial for the augmentation of human cognitive and physical abilities (Kunzru, 1997) – the same period when ARTs were beginning to appear in public discourse under the guise of reproductive emancipation for mainly Global North women, not only for the augmentation of, but the whole possible replacement of the female reproductive body, for capitalist accrual (Gane, 2006). Yet, whilst women emanate as progenitive cyborgian entities for capitalist accumulation, proving the transcending of boundaries between woman and machine and also that of human and animal (Ahmad, 2019), this displays how this probable replacement relies upon bringing animal reproduction into the human female reproductive world and out of it simultaneously (Lewis, 2016: 150).

Thus, this demonstrates the fallacy of ARTs to emancipate women as equals to “economic, rational, and scientific” men, as in actuality, as reproductive technologies increasingly advance, women are being propelled further towards the colonial woman/nature and female/Anthropocene dualisms, elucidating as to why the incorporation of agricultural breeding, like the somatic cell nuclear transfer cloning of Dolly, the cloning of transgenic mammals like Polly and Molly (Tsitats, 2013: 10), and the lab-grown chimeric human-monkey embryos, have become a breeding model for transcending the need for the human gestational surrogate and into the space for artificial reproduction in humans without the reliance of the human female reproductive body (Sheldon, 2021: 15). This monstrous feminine technonatural subject of a woman-agricultural breeding model for future synthetic human procreation external of women is not new, in which scientists today have been influenced by science fiction works, such as H.G Wells’ *The Island of Doctor Moreau* (1896), a tale about a mad scientist

who creates human-like hybrid beings from animals through vivisection (Desbiens-Brassard, 2019: 200). Dr Moreau's discovery of the intertwining of female humans and nonhuman animals and the ability to convert living nonhuman creatures into the human species has become a metaphor for the experimentation of non-natural forms of reproduction in animals as paving the way for potential non-human, post-human forms of reproduction outside of a woman's uterus (Rosenfield, 2018: 40). The somatic and transgenic cloning and the chimeric embryonic creation of animals have thus led society to the trials of replacing the human female surrogate with recent breakthroughs that gestate animals in artificial prenatal environments (Mangel, 2018), such as CA/JV4, a premature lamb placed in synthetic amniotic fluid within an artificial biobag at the Children's Hospital of Philadelphia in 2017, incubated for 28 days; this symbolized the possibilities of what was to come for the replacement of human surrogates via potential artificial reproduction (Becker, 2017).

Evidently, the emergence of "emancipatory" ARTs in the late 20<sup>th</sup> century has been a guise for the testing of variegated methods on how to create human babies without the reproductive bodies and labour of women for capitalist amassment and prospective novel forms of accrual (Fannin, 2018: 325). Imbued with concepts of race, gender, and Global North/South economic disparities and exploitations, commercial gestational transnational surrogacy, in tandem with the experimentation of non-normative reproduction of animals, has arisen as the most plausible way to appropriate and replace the human uterus by the machine of nearby-future advanced technologies to aggrandize late capitalist conceptualizations of pecuniary accrual (Holmstrom-Smith, 2021: 480). The transnational surrogate in essence is a cyborgian hybrid figure, in her fusion of the erasure of boundaries between productive and reproductive, control and autonomy, work and non-work, Global North and South, and the making and unmaking of places, borders, and kin, motherhood and gestation, the hostile worlds of market and intimacy, and the complex corporeal, transcorporeal and chimeric characterizations of nature and artificiality (Graziuso, 2022: 9) – all culminating in the possibility of more-than-human, more-than-woman forms of reproduction that do not involve the usage of anatomical uteri (Lewis, 2018: 25). Thus, in her navigation of the dualist structures and embodiments of body and machine, and economics and intimate maternal relations, the alienation of the product of the surrogate-cyborg worker's labour as a mere "incubator" is not only emblematic of the one-day possible artificial appropriation, separation, and replacement of a gestating child from a woman's uterus, but what the speculative future of a societal economy beyond being predicated upon the reproductive bodies and labour of women, and beyond capitalism itself, might hold (Graziuso, 2022: 10).

### **3.3 Ectogenesis and The Post-Capitalist Question: Will Artificial Intelligence in Reproduction such as the Artificial Uterus Usher in a Post-Capitalist Emancipatory Society for Women?**

In 2025, a working prototype of the world's first possible artificial womb for human reproduction via ectogenesis is set to be unveiled at the Eindhoven University of Technology, in the Netherlands (De Vries, 2023: 237). Granted a €2.9 million award from the EU program Horizon 2020 to develop an operational model for use in clinics, a team of all-male researchers and scientists from the Máxima Medical Centre in Eindhoven and Eindhoven University of Technology have postulated that unlike the extra-uterine system that gestated the lamb CA/JV4 back in 2017, the prototype to incubate human babies will not just simply be a plastic biobag, but will include the presence of sensors such as the sound of the mother's heartbeat to recreate the experience of being inside the uterus, as a Perinatal Life Support System (PLS) (Davis, 2019). Whilst this potential innovation will prove to be ground-breaking as humanity's next

small step for the future of human reproduction, it raises the transnational question of how the possibility of ectogenesis will not only impact societal perspectives on issues like family planning, gender equality, or changing sexual norms but what the changing tied on the appropriation and altered requisite for women's reproductive bodies and labour – the most essential form of capital accumulation – through artificial intelligence will constitute for the future of capitalism (Elliot & Franklin, 2018: 175). Thus, as the exo-womb dangles the possibility of progenitive liberation for women, will artificial intelligence in reproduction such as ectogenesis emerge as the novel device which shall usher in a post-capitalist world that could emancipate women from being reproductive labouring subjects (Gregoratti & Horn, 2021: 68)?

Human ectogenesis, from the Greek *ecto*, “outside”, and *genesis*, “birth”, the exo-womb, or the artificial womb, refers to the development of a human embryo or foetus outside of the mother's body within an artificial environment, with nutrients and oxygen from a source supplied to nurture the foetus and discard waste material, and a buffer or interface to fulfil the function of the placenta (Horn, 2021). Coined in 1923 by JBS Haldane, a British scientist who during his exploratory fiction lecture series forecasted that only 30% of births would come from a human womb by 2074, ectogenesis has been an age-old aspiration in medical science history traced back to the early ages of automata and the evocation of the alchemical homunculus (Horn, 2021). Historically denoting the creation of a miniature yet fully formed human, the homunculus, believed to be a morally and spiritually superior version of a human with greater abilities, was first attempted by medieval alchemists gathered around glass containers endeavouring to produce tiny men in small bottles (Chardronnet, 2022). In his 1572 *De Natura Rerum*, Swiss alchemist Paracelsus developed a guide on how to create a miniature infant or “little man”; by putting human sperm and horse manure into a glass container and “feeding” it women's menstrual blood, whereby a small translucent human would appear after 40 days (Newman, 2020: 35). This concept, that humans existed as small people within sperm, propagated in the 1600s at the height of preformationist thinking – the idea that organisms develop from miniature versions of themselves – revealed that this first imagination of ectogenesis was an early attempt of men to seize control of the means of reproduction, in which the female body and its uterus, viewed as nothing more than a receptacle, “nest”, and incubator for the continuation of the father's genes, was touted as an elusive, dark object that was entirely replaceable by either another mammalian womb or even a glass bottle (Bolton, 2023). This paved the way for how agricultural breeding, ARTs, and transnational surrogacy became 20<sup>th</sup>-century methods to test the possibility of the full replacement of women's reproductive bodies for capitalist amassment and prospective novel forms of accrual (Brockman, 2021: 15). Hence, conjectural futuristic visions of the artificial uterus recall these primitive fantasy inventions of the homunculus as the primordial representation of the patriarchal aim to eliminate women from sexual reproduction via technology; men creating human beings unaccompanied by female involvement by which the human produced without a woman by male scientists is postulated as supreme in comparison to the human that was naturally birthed from a woman's body, much like the all-male Máxima Medical Centre in Eindhoven and Eindhoven University of Technology team (De Vries, 2023: 238). Haldane was therefore incentivized by the social engineering prospects of ectogenesis that could utilize eugenics to highlight the bigger Darwinist capitalist narrative; survival of the most productive and best-esteemed labour force, inspiring Emanuel Greenberg to patent the first designed artificial womb to apparently assist premature babies to gestate post-birth, in 1955 (Perry, 2020).

Yet, dystopian, biopunk, bioutopian, and cyberpunk science fiction in the 20<sup>th</sup> century has long been fraught with the obsessive projections of speculative post-21<sup>st</sup> century human reproduction via ectogenesis, from the industrial incubators at the fictional Central London

Hatchery and Conditioning Centre in Aldous Huxley's *Brave New World* (1932) where sex is recreational and reproduction is a state function, the film *Gattaca* (1997) which showed children in a futuristic society being genetically optimized in birthing pods, to humans being harvested from luminesce bulbs suspended from stems powered by AI in *The Matrix* (1999) (Buchleitner, 2022). Whilst it might appear as outlandish putative fiction, much of the current predecessor assisted reproductive technologies have led us to the point where the artificial womb may soon be a reality, with ectogenesis re-entering the public discourse in January 2022 in a Twitter exchange between Elon Musk, Sahil Lavingia, the founder of Gumroad, and Vitalik Buterin, co-founder of Ethereum, all asserting that they were investing in technology that would make the exo-uterus possible (Wion Web Team, 2022). The fervour of these neo-reactionary, techno-utopian, and cybermonarchist Bay Area "tech bros" to fund potential ectogenesis is closely aligned with the agenda of the ultra-rich Silicon Valley pronatalist "tech elites against extinction" panic breeders, who, through "effective altruism", want to take control of human evolution, not only to produce a deluge of white babies but, via hi-tech genetic screening and artificial reproduction, aim to create an abundance of genetically superior children who will emerge as the new presiding principal classes in society (Donald, 2023) – a narrative acknowledged as "hipster eugenics" (Black, 2022). Claiming that synthetic wombs will make having children easier, cheaper, faster, and more accessible, Musk, Lavingia, and Buterin are typical of tech titans who introduce technological innovations and solutions to an infatuated and impressed general populace, without, in the case of ectogenesis, divulging the surrounding consequences on socioeconomic inequalities and the potential ramifications for what lies ahead for a capitalist society still premised on women's reproductive bodies and labour (Buchleitner, 2022). The prospect of an artificial uterus would undeniably aid capitalism, particularly regarding its chief crisis over the possible global population collapse and rapidly declining birth rates, freeing states from enacting stringent reproductive laws like the overturning of *Roe v. Wade* as elites and nations alike would have the ability accumulate capital through genetically engineering a desirable labour force on demand, free from the reliance on women to produce children which since the latter path of the 20<sup>th</sup> century, has been failing dismally (Mahdawi, 2023). Yet, much like when ARTs were first introduced to the public, tech elites have declared that ectogenesis would remove the "burden" of pregnancy from women whilst lessening gender inequality and the long fight against the patriarchy (Harper, 2021). This begs the question of whether the exo-womb and artificial intelligence in reproduction will release women and their bodies worldwide from the historical materialist tyranny of the procreative divisions of gendered labour for capitalist accumulation, and in turn herald a post-capitalist, post-gender, and possibly post-human emancipatory civilization (McKay, 2020: 350).

As society is currently experiencing the artificial intelligence renaissance, crossing the threshold into deep learning, above-human level machine intelligence, seemingly sentient chatbots and various other rapid cognitive-technological robotic advancements within a transnational economy, speculations mixed with excitement and fear have predicted that AI could either lead to civil unrest, rising unemployment, the eradication of humanity as machines become "conscious" and a cruel master race, or the increasement of human creativity and leisure as robots handle daily routine, toil, and capitalist labour – does AI thus spell doomsday for humanity or for capitalism (Morley, 2023)? Post-capitalism refers to the conjectural state in which the predominant economic systems of the world can no longer be considered as forms of capitalism, in which numerous political scientists and economists have hypothesized what such a world would entail; from socialism, nationalism, communism, anarchism, degrowth, a heritage check system, an economic democracy, a participatory economy, or a permaculture, in which whatever speculative post-capitalist system arises, it has been prophesized to be

caused by information technologies, and most likely automation (Mason, 2015: 25). The threat and promise of automation have plausibly been around since the Industrial Revolution and the arrival of mechanized production, with humanity both fantasizing about the freedom of backbreaking drudgery and anxiously anticipating being replaced and overruled by the machines (Marr, 2021). Despite the obvious probability of AI to endanger and diminish the value of an extensive number of industries and professions, proponents of AI postulate that this technology will “fully automate” the overthrow of capitalist subjugation as it denotes a means of production that is too advanced for capitalism to correctly use (Mason, 2015: 23). This possible transcendence of a capitalist economy will not be borne from AI alone, but by capitalism’s deeply rooted alienation entrenched within society, whereby a humanity subordinate to capitalism will not control its own technology due to the anarchy of the market (Apostolakoudis, 2022: 25). As Marx stated, any specific social system supplies a structure for the evolution of the productive forces, but at a distinct juncture, the productive forces will outgrow and surpass the relations of production through which they must function, therefore becoming a hindrance to further development and profit accrual (Lianos, 2022: 16). Hence, whilst the capitalist mode of production has for hundreds of years contributed an enormous development of the productive forces, much greater than that of feudal society, it has for many years emerged as a constraint to pecuniary amassment in contemporary late capitalist civilization, elucidating why expenditure and productive capacity obtainment have remained persistently low despite the manufacturing of incredible novel technologies, proving the necessitation of a post-capitalist economy to increase monetary gains (Morley, 2023). But whether it is to escort in a post-capitalist world or not, much of current AI advancements are a manifestation and perpetuation of patriarchal typecasts. From the booming sexbot industry, granting citizenship to robots who desire to have a child like Saudi Arabia’s Sophia (White, 2021), to the increasing popularity of mainly female-voiced virtual carers and assistants, whilst the future of AI might be female, it certainly is not feminist, owing to the fact that much of machine algorithms are male-dominated, the dearth of female scientists, and the deficiency of intersectional rationality behind the making of these algorithms (Zimmermann, 2018). Additionally, in regard to the usage of AI technology in relation to women’s procreation, as per the previous chapter, the female reproductive body has increasingly become a guinea pig as a dystopian technologized subject for heavy surveillance via the oppressive transnational economy of progenitive data analytics, as experienced by Uyghur women in the re-education internment camps (Holdstock, 2022: 5).

AI in reproduction thus calls into question women’s place in a potential post-capitalist economy that could be predicated on the appropriation of the female reproductive body via speculative reproductive technologies like ectogenesis, possibly deepening the centuries-old notion that the uterus is the primary object for capitalist accumulation and thus also for future post-capitalist methods of monetary amassment (Elliot & Franklin, 2018: 176). For the past few decades, ectogenesis has emerged as a major topic within speculative feminism and feminist science fiction, giving rise to revived debates about the strategies and imaginaries of post-capitalism and gendered and reproductive liberation (Gregoratti & Horn, 2021: 70). Proclaiming the emancipatory potentiality of technology, xenofeminism, a novel feminist movement that has praised the possibility of the artificial womb, originating from Helen Hester’s *The Xenofeminist Manifesto: A Politics for Alienation* (2018), is a gender abolitionist, anti-naturalism, and tech non-materialist type of feminism which expands the conceptualities of the Marxist and reactionary ideas of accelerationism, as well as material feminism, neo-rationalism, cyberfeminism, and post-humanism (Hester, 2018: 18). Rejecting the colonial woman/nature and female/Anthropocene dualisms, xenofeminism purports that ectogenesis will assist women in embracing the notion that biology is not destiny, in which technologies such as the exo-

womb will not only challenge our comprehension and encourage our resistance of nature, but will transform biology for the goal of reproductive justice and the progressive evolution of gender through a technologized space of conflict, signalling a speculative post-capitalist world no longer relying on the exploitation of women's reproductive bodies and labour (Kay, 2019: 307). Hester's xenofeminism builds upon the seminal feminist works of Shulamith Firestone, whose ideas were a precursor to the cyberfeminist movement and Donna Haraway, whose cyber and techno-feminist thought was a principal catalyst for the development of feminist post-humanist theory, to explicate how prospective artificial technologies like ectogenesis could transcend into a civilization beyond gender, gender oppression, and the capitalistic world order continuing to function on women's reproduction (Gregoratti & Horn, 2021: 70).

In *The Dialectic of Sex: The Case for Feminist Revolution* (1970), Firestone purports that the complete separation of reproduction from the female body through future forms of artificial reproduction external of the uterus which she calls the "bottled baby" was the only method to enfranchise women (Firestone, 1970: 200). Broadening Marx's outlook on class by incorporating the reality of a sex-class structure created during coloniality by the capitalist elites due to biological differences affiliated with procreation, Firestone, like the Marxian association of class distinctions to labour division, states that the disparities in the classes of sex have been caused by the sexual divisions of labour both outside and within reproduction, whereby to liberate women would mean the necessity of surpassing the prejudiced sex class system in its origins of nature and biology (Sandoiu, 2016). By allowing technologies to artificially reproduce children outside of the female body, she believes that a socialist cybernetic women-led proletariat would be able to seize the means of reproduction (Margree, 2019). Analogously, Haraway's *A Cyborg Manifesto* (1985), articulates that the power of technology could instigate the emancipation of women without maintaining the essentialist beliefs of womanhood, through which embracing the technological separation of reproduction from the female body would engender in a transhuman, post-capitalist equal society (Haraway, 1985: 40). Thus, xenofeminism advocates that the emergence of the artificial womb will bring about a post-capitalist world in its ability to transcend nature's gendered biology, and in doing so, will induce a post-gender world that no longer exploits women's reproductive bodies and labour, through the abolition of the heterosexist family structure (Cuboniks, 2022). As the nuclear family has for centuries been a requisite to keep capitalism afloat, due to its coercion of women's imperative to gestate and therefore perform unpaid reproductive labour to supply the patriarchal capitalist elites with an everlasting workforce, xenofeminist thought adduces that ectogenesis, through the establishment of a xenos (alien) future, embodies liberation for women from the family and the child, the household, oppressive social norms, and a "*social reproduction against the production of the social as it stands*", through the alienation of the uterus from women, in which this post-gender alienation brings together the possibility of a post-human and post-capitalist unbridled civilization (Tucker, 2023). This is in alignment with what Haraway expresses, that "*the cyborg does not dream of community on the model of the organic family; the cyborg would not recognize the Garden of Eden*", and that we should "*make kin and not babies or population*" (Haraway, 2016: 42). Hence, xenofeminism professes that the exo-womb, via a post-gender, transhumanist natality, means that babies will be born to both sexes equally or independently, and with women no longer being burdened by gestating children, this will culminate in the transcendence of a capitalist system, making the aspirations of robot economies, decarbonizing the economy, and especially advanced space travel, a reality (Srnicsek & Williams, 2015: 150).

Yet, although there is importance in maintaining and participating in the techno-optimistic futuristic and radical imaginaries of how the possibility of artificial intelligence in reproduction

like ectogenesis could signal a post-capitalist world for women, that would liberate them from the obligatory reproductive labour that has disempowered them for so long, the emancipation from capitalist patriarchal control over the uterus does not lie in the amplification and intensification of the alienation of gestation from the female reproductive body (Cavaliere, 2020: 84). Rather it exists through tackling and galvanizing the political powers so that achieving the requisite enfranchised social change and reproductive justice from the capitalist system can be made possible (Fakier *et al*, 2020: 75). Perhaps the artificial womb will usher in a post-capitalist economy, as just like capitalism was founded upon the uterus through the reproductive bodies and labour of women, maybe the post-capitalist fiscal structure, whatever that future might pecuniarily entail, will be predicated upon the exo-womb (Hester, 2017). However, what xenofeminists and the like fail to concede is that due to the constraint of procreative processes in post-capitalism depending on generative agency and power that rebel against a universal, sole pathway, ectogenesis may culminate in a post-capitalist, post-gender, and possibly post-human civilization, but it will unlikely be an emancipatory one (Goh, 2019). Because the last few hundred years have seen the advent of a capitalist system enact unprecedented reproductive abuse and coercion unto women, especially women of colour, many feminists have daydreamed of an idyllic post-capitalist paradise unencumbered by this tyranny, but the cynical truth is that a speculative post-capitalist world, inclusive of artificial intelligence in reproduction, will likely not bring balance, abundance or equity to the economy or women, and will most plausibly augment the hostilities and disparities of society (Hoofd, 2022: 212). Capitalism thus currently rests upon a precipice where revolutionary technologies like potential ectogenesis and other AI innovations could escort in a post-capitalist civilization that would rationalize production, harmonize, and enhance the creative strengths of humanity, eradicate the short-sightedness, excesses, irrationality, and greed of the capitalist structure, remove the arms of ignorance and poverty and the implements which threaten more indigence, and free society from the menacing scarcity and class distinctions that has plagued humankind under capitalism for far too long (Nosta, 2023). Yet, lamentably, the post-capitalist future imbued with the technopotentialities of the artificial womb, post-genderism, and post-humanism will most likely further discipline the female reproductive worker whilst simultaneously attempting to wholly replace them, and possibly further monopolize the economy, aggravating the anarchy of the market, driving down wages even more, and centralizing more wealth and power in the hands of big corporations and tech titans (Heft, 2021: 125).

Unlike Firestone's postulation that alienating procreation from the female body will permit women to seize the means of reproduction, it is highly improbable that women will own the exo-womb in a post-capitalist future, as through the institutional and financial emergence and development of the artificial uterus, the amalgamated powers of the fiscal structures of pharmaceutical companies, states, tech entrepreneurs and other private funders, will fight to claim and capitalize on the patents, trademarks, and the profit-driven logics associated with the monetary proprietorship of ectogenesis (Glabau, 2022). Furthermore, because of the ever-intensifying contradictions of reproductive technological change, such as how ARTs were purported as emancipatory for women, because artificial intelligence in reproduction will most possibly secure rather than modify the existing capitalist power relations within a post-capitalist world, the artificial uterus will be masqueraded as a device for feminist liberation by the elites. Yet, through the enquiries of how it could reassemble relations of social reproduction and production, it could serve as a contrivance of unparalleled oppression (Vallverdu & Bolx, 2019: 106). Ectogenesis will most probably keep women trapped within the serpentine matrix of relations of reproductive subjugation and exploitation, acting as a reinforcement rather than an equalizer of gender, racial, and class divisions in biological procreation within speculative

post-capitalism, imbued and heightened by the residual of the capitalistic intersections of racism, imperialism, colonialism, and patriarchy (Woolfrey, 2006: 131). Hence, like ARTs, there will be even less equal access to the artificial womb in a post-capitalist society, as once again, ectogenesis is set to offer procreative choices and promises for career developments to wealthy cis-gendered straight white women from the Global North or just rich women in general, whilst leaving unattended the fiscal vulnerabilities and types of coercion that will be further employed unto the bodies of black, brown, migrant, queer, penurious, disabled, and other women who are adjudged as unsuitable for procreation (Kimberly, 2020: 340). Privileged white and/or rich women, like with assisted reproductive technologies and their ability to hire transnational gestational surrogates, will be sold the lie that they are categorized as the liberated *woman* as opposed to the mere *female reproductive body*, but they too will fall part of the post-capitalist technocratic elites' agenda to prevent a unified proletariat of women uprising against the further appropriation and replacement of human female procreation via the machine (Gelfand, 2018: 248).

Moreover, ectogenesis could unethically serve as a trojan horse for post-capitalist eugenics, whether that would be the remnants of capitalism and colonialism to reproduce a larger white labour force, or, as with the gradual advent of post-whiteness in late capitalism, the attempt of non-occidental countries, conglomerates, and private individuals to propel their own race of people to the summit of the hierarchy for global domination (Khulbe *et al*, 2023: 619). The conceptual EctoLife Artificial Womb Facility, the brainchild idea of Hashem Al-Ghaili, a Berlin-based Yemeni science communicator, biotechnologist, and filmmaker, has heightened the fears of speculative ectogenesis being utilized to serve post-capitalist eugenics (Macauley, 2022). Released in a short concept video in December 2022, the proposed facility, powered entirely by renewable energy, will be able to fully incubate up to 30,000 lab-grown babies per year (Badgamaia, 2022). Not only has Al-Ghaili stated that EctoLife will assist countries suffering from low populational growth as well as infertile couples and singles to conceive, the facility will offer different packages, with the Elite Package allowing clients to select the most viable and genetically superior embryo before implanting it into the artificial uterus, in which using the controversial CRISPR gene editing tool, babies will be genetically engineered and customizable regarding hair colour, eye colour, skin tone, height, physical strength, level of intelligence, and the removal of any inherited genetic diseases and biological obstacles (ET Spotlight Special, 2022). Similarly, in June 2023, scientists from the University of Cambridge and California Institute of Technology announced making the first human “synthetic embryos” from stem cells that could in the near future be grown in an artificial womb to alleviate genetic disorders and the biological causes of recurrent miscarriages – this has sparked ethical concerns regarding the future of eugenics (Devlin, 2023). Yet, if ectogenesis is to usher in a post-capitalist economy with the potentialities of post-gender and post-human sentiments, then just like the new stratified classifications of mainly gender, race, and religion allotted to people during the transition from the feudal system to capitalism (Aristarkhova, 2005: 45), then early post-capitalism will engender in the assignment of novel techno-categorizations and cyborgian divisions (Cruz, 2013: 920). Those entitled as “naturally conceived” children could be regarded as a lower social class to genetically optimized “superior” babies – much like what the medieval alchemists attempted with the homunculus – who are lab-grown in the exo-womb, driving a potential future culture, social, and economic war between the naturally conceived human working class and the artificially conceived post-human bourgeoisie and elites (Saunders-Staudt, 2006: 15). Additionally, with the current rise in pronatalist policies such as the repealing of Roe v. Wade, what would this mean for the ability to abort a foetus gestating in an external uterus (Räsänen, 2022: 5); will women be forced to watch a baby develop that they now wish

to terminate, and if the foetus gestates against parental wishes, then who will foot the artificial womb laboratory and neonatal intensive care unit costs (Benjamin, 2021: 790)?

Furthermore, xenofeminists assert that ectogenesis, in its allowance for women to be freed from the “burden” of childbirth, will engender in the post-capitalist possibilities of robot economies, decarbonizing the economy, and especially advanced space travel, yet in actuality, these objectives, specifically advanced space travel, will be far from emancipatory (Srnicek & Williams, 2015: 151). With the current obsession to colonize Mars by 2026, spearheaded by Elon Musk’s SpaceX, space colonization has been the answer of numerous tech billionaires to the quandaries of global population collapse (Scotti, 2018). As researchers predict the world’s populace to steadily decrease from 2064, prematurely causing about 20-30% in fiscal damage or about a \$60 trillion in economic loss from now until 2050, coupled with global warming and climate change possibly precipitating in future global catastrophes or a mass extinction event, tech titans are convinced that embryonic survival strategies for outer space via ectogenetic reproduction are necessary (Wang, 2023). Thus, Musk believes that a less populated earth would hinder his plans to colonize Mars – an insight into why Musk remains vehemently pronatalist – and that speculative technologies like the artificial womb, in agreement with bioethicist Evie Kendal’s *Ectogenesis for Space Exploration* (2021), should be utilized to populate an off-world multiplanetary human species colony on Mars (Pardo, 2022). In the occurrence of no or a limited amount of people – the estimated required population to set up a civilization on the planet is around 5800 people – able to settle on Mars, cryopreserved human ovum and sperm will be sent to the planet in orbiting embryo spacecrafts as opposed to sending adult crew members, whereby the embryos will then be gestated to neonates in ectogenetic systems with the help of androids; this interstellar embryonic approach perspective could possibly assist in colonizing distant places within the home galaxy and potentially the broader universe (Edwards, 2021: 151). Both Musk and Kendal have lauded the advantages of this approach, from the fact that it would be a lot cheaper than transporting fully-grown humans, to its ability to reduce the gestational risks to female settlers and prevent the loss of members of the early colonizer labour force to maternal morbidity and mortality (Kendal, 2021: 6). If this ectogenetic plan is successful, then according to SpaceX, an all-female team will be sent to Mars to further set up the colony, primarily because women are on average smaller than males, use less oxygen, consume less resources, produce less carbon dioxide, have a lower body mass, take up less volume, and require considerably less support and a smaller spacecraft, therefore generating a substantial savings in cost (Griffin, 2023). Space industry venture capitalists have thus touted a potential all-female mission as heralding a supposedly gender-equal Martian civilization where women, free from the procreative burdens of childbirth due to space ectogenesis and assistant androids will allow for these female multiplanetary settlers – due to the supposition that all-woman groups are far more likely to choose non-confrontational approaches to solve interpersonal problems, are more cooperative, and less given to hierarchical social structures – will create novel forms of bartering and trading beyond oppressive earthly economic systems (Pomeroy, 2023).

However, even within a conjectural post-capitalist, post-scarcity society on another planet, ectogenesis and an all-female crew will simply be another method of assessing its profit-making potential for those funding the mission above maintaining the continued level of investment until the colony becomes self-sustaining, whereby the remainders of the capitalistic restraints of colonization, hyper-heteronormativity, masculinist rocket-measuring contests, racism, surveillance, and patriarchy that have persecuted women as mere vessels of reproductive labour for pecuniary gains on earth, will be perpetuated equally or worse on Mars (Szocik, 2020: 8). Furthermore, just like capitalism has been predicated upon women’s

reproductive bodies and labour, so will a speculative post-capitalist society upon another planet follow suit, as the appropriation of women's progenitive capacities via artificial uteruses and child-rearing androids are not to liberate the all-female team, but to provide them with enough time to take on the hard, dangerous work as a cheap, budgetary labour force; how or if these women will be adequately compensated is an additional issue (Holen & Shammas, 2019: 7). The question around the ethics of the children born from the orbiting embryo spacecrafts and ectogenetic systems also arise; these artificially birthed humans will more than likely become what Marx called the *lumpenproletariat* – an insentient underclass devoid of class consciousness – faceless masses deemed as mere raw materials for post-capitalist exploitation expected to have no objection or possibly not even permitted to possess an objection, bred to do work that the patriarchal tech overlords on earth assigned them in a novel turn of futuristic human slavery based upon the selfsame enslavement of black, brown and indigenous people during colonization and their free slave labour that allowed the white patriarchal capitalist elites to flourish in the first place (Edwards, 2023: 168). Moreover, the potential of classifying humans according to novel techno-categorizations emerges again; will the artificially birthed humans be classed as transhuman, and if so, will the interactions between the human crew and the post-human neonates be hierarchical or equal, and how will the parenting androids as possible conscious robots fit into this multiplanetary post-capitalist society and threaten the very essence of the interpersonal relationship between child and mother (Oman-Reagan, 2019: 5)?

Back on earth, childrearing robots have become a new craze amongst robot manufacturers, who are currently racing to fulfil this invention with affordable robot "nannies", AI babysitters on-call round the clock to supervise and entertain the children, whilst taking the burden of childcare off of working mothers (Herold, 2019). Manufacturers in South Korea and Japan have predicted that by 2050, smart robots could replace parents completely, making childcare optional, in which kids will either be tended to at home by the nanny robots or in "Upbringing Centres" housed with state-of-the-art technologies to monitor children (Moran, 2020). Additionally, researchers at China's Suzhou Institute of Biomedical Engineering and Technology are designing a mother robot to constantly care for and monitor human embryos in artificial wombs, such as adjusting the carbon dioxide and nutrition, claiming that the robot-assisted exo-womb is a more efficient and safer method compared to naturally growing embryos in the human uterus (Young, 2022). The emergence of these "nanny robots" have been peddled by feminists and innovators alike as liberatory to women, whereby not only will women be able to advance their careers without the hassle of childcare and gestation, but that, in accordance to Marx's *The Fragment of Machines* (1858), that the automation of human capitalist labour – and in this case women's reproductive bodies and labour – will bring about the end of capitalism (Conde, 2021: 26), and permit the development of new forms of cooperation and social thought external of the wage relation that frames the majority of human interactions under capitalism, eliciting a post-capitalist gender-equal economy (Bakošová & Odorčák, 2021: 15). Yet what Marx and these contemporary robotic utopianists have perilously failed to comprehend is that an enfranchised post-capitalist civilization imbued with artificial intelligence in reproduction, domestic work, and all human labour is entirely speculative (Pearson, 2014). The dark reality is that humanity will be faced with the pessimistic possibilities of either a new but more oppressive form of communism or an unchecked fiscal chaos that will maximize human misery and poverty (Tarnoff, 2016).

The artificial uterus could very well be the catalytic object to usher in a society beyond the traditional realms of capitalistic accumulation predicated upon women's reproductive bodies and labour as we know it, but it will be unsuccessful in being emancipatory, as artificial

intelligence in reproduction will not exist to liberate women, but to rather wholly replace them for the profit-making agendas of tech billionaires and corporations (Isaac, 2020). If women as the maternal, birth life and humankind, then their replacement will transcend into the substitution of the paternal, whereby the physical and social roles of men as fathers will too become inessential (Steiger, 2010: 145). Xeno and cyberfeminists laud this as a post-revolutionary, post-capitalist, post-gender world where class and sex distinctions are eradicated, procreation is superseded by optional artificial reproduction, the nuclear heterosexual family has been disbanded in return for collective forms of child-rearing in a “gestational commune”, difference in physical strengths between the sexes no longer count, the capitalistic division of labour has been abolished completely through cybernation, and the patriarchal social figures and configurations of masculine power formations controlling women’s reproduction are eliminated (Gregoratti & Horn, 2021: 75). However, this post-capitalist, post-gender paradise is a mere dangerous utopia saturated with disguised misogyny as it has led women to believe that they will have to sacrifice and allow the replacement of their reproductive power in order for there to be a future just and equal economic and social society (McKay, 2020: 349). If there is one concept that has been browbeaten into the minds of women by the patriarchal capitalist system, it is that they need to be emancipated from the “burden” of reproduction through “liberatory” options once again provided by profit-seeking men (Elliot & Franklin, 2018: 176). Yet, the only reason why women have been encumbered by their own reproductive bodies and labour is because capitalism has valorized, exploited, and abused their embodied progenitive capacities in order for the system to survive (Cavaliere, 2020: 80). As ectogenesis and other future artificial intelligence in reproduction will further remove women’s reproductive power from their hands, the answer that has always been clear but vehemently disregarded will continue to present itself; freeing women from reproductive exploitation for the upkeep of a centuries-old tyrannical economic structure will not be precipitated by the technological alienation of the woman from her uterus, but by the mobilizing and harnessing of political power for social change that alters the patriarchy and the elites who control most of the wealth, as opposed to modifying and appropriating the procreative bodies of women (Braidotti, 2017: 25).

Hence, there is no technological panacea for the freedom of women from particular reproductive, social, and biological imperatives and the monetary apparatus which operates and formulates them (Krstić, 2015: 48). Instead, equality exists in the reconciliation and political negotiation of acknowledging women as self-governing social beings, and how oppressive economic capitalist and post-capitalist systems, with its contesting and contrary subjectivities, desires, and objectives encompassed within living labour, have elicited the need for artificial intelligence in reproduction, the patriarchal technological alienation of reproduction from a woman’s body, and the tyrannical fiscal frameworks from which they emerge (Murphy, 2021: 70).

#### 4. Conclusion

This dissertation has extensively explored the ways in which, via a transnational feminist perspective, the capitalist system contemporaneously remains premised on the procreative bodies and labour of women. In particular, through the concepts of gender, race, geopolitics, religion, and technology, this study has navigated the capitalist logics of accumulation regarding the transnationally connected reliance of nation-states on women's progenerative abilities, further investigating how this has propelled the development of comprehending women's bodies as mere technologized reproductive entities for new and prospective forms of capitalist and possible post-capitalist accrual within the always-evolving intertwined transnational realm.

Beginning with the overturning of *Roe v. Wade* in America, the research has argued that the rescindment of abortion rights in a Global North nation was a capitalist manoeuvre which demonstrated the intrinsic dependence of the capitalist system on white women being able to reproduce. It contended that the US overruling a pregnant woman's federal right to choose to have an abortion incited the cascading geopolitical effects to the Global South and beyond, exposing that foreign-aided family planning and biocapitalism via the international domain, and surveillance and terror capitalism via the carceral system, are present transnational interlinked strategies employed by nation-states to extract capitalist profit from women's reproductive bodies and labour. Additionally, this study has proclaimed that as surveillance and terror capitalism have emerged as two logics of capitalistic accumulation imbued with advancing technology, the predicament of the womb transpiring as a technologized reproductive machine has arisen, with capitalist elites endeavouring to test and eventually achieve the total replacement of women's procreative abilities via present, novel, and future reproductive technologies. As tech elites, scientists and feminists alike have touted these technologies as an emancipatory tool to herald in a post-capitalist gender-equal utopian dawn, the research has asserted, and showcased, that reproductive technologies premised on the whole replacement of women's bodies will further drive the concentration of wealth into fewer hands, will not liberate all women from reproductive capitalist exploitation, and could potentially precipitate a post-capitalist society with intensified inequalities. Overall, this study ends with the main argument – that women's progenerative emancipation from a capitalist system that relies upon female reproductive bodies and labour to accrue financial gain does not lie in the expropriation and replacement of their reproductive bodies and abilities, instead, it exists in changing patriarchal power through awakening and deploying social and political alterations that will eventually destabilize the misogynistic capitalist structure and the elites who monopolize the system.

Furthermore, this dissertation has filled a gap within the aligned literature by inquiring into how the global interconnectedness of the quandary of capitalism being predicated upon women's reproductive bodies and labour still contemporaneously prevails through tracing the linkages and trajectories of how the ever-developing new methods surrounding gender, race, geopolitics, religion, and technology, are being used to control women's reproductive bodies and labour on a transnational scale, not only for the durability of the capitalist system but also for its potentiality to evolve. This research has proven necessary, not only because of its relevance to the present-day quandaries of reneging on abortion rights, the intricacies of the Global North/South reproductive bioeconomy, the current persecution and incarceration of religious and ethnic minorities, and the pervading of artificial intelligence into our everyday lives – but how it has powerfully offered a fresh new perspective of how the capitalist exploitative economic framework remains transnationally predicated upon women's

reproductive bodies and labour in the most contemporary sense. The paramountcy and uniqueness of this research are further provided in its foresight for what a nearby post-capitalist future might look like for women's reproduction through technological alienation. It has therefore not only dared to confront the patriarchal capitalist system by arguing that capitalism's survival is dependent upon women but has also challenged techno-feminist irrationalities by suggesting that with the looming potentiality of artificial intelligence in reproduction, women will not be emancipated nor shall a gender-equal society ensue. Hence, it has opened the discussion and paved the way for the future generations of feminist scholars to come, holding a candle in the dark for the day that this post-capitalist dystopian future truly arrives, so that they can be well equipped on deliberating methods to liberate all women on oppressive fiscal and political systems that rely on the exploitation of their reproduction to survive.

Thus, we must never forget that the capitalist commodification of women's procreative bodies and labour dismisses the biological significance of gestating mothers, the mother-child relationship and the symbiotic disposition of pregnancy and life, in which not only economic systems, but the very essence of humanity, rests upon women's reproductive corporeality and physiology (Aliaga-Lavrijsen, 2021: 68). As society nears a potential post-capitalist world, whatever that civilization might entail, all women, regardless of race, class, sexual orientation, religion, or nationality, should not strive to wait for a post-gender society to achieve gender emancipation, instead they should stand firm in the quest for reproductive justice, not allowing men, society, or past, present and future economic systems to steal from them the last remainders of their ancient reproductive powers, those sealed in milk and blood, for there is beauty in womanhood, whatever that individually means to them (Piercy, 2016).

## Bibliography

- AbuGhosh, F. & Joyner, T. 2022. *The underground sperm smuggling ring that helps Palestinian women have their prisoner husbands' babies*. Available at: <https://www.abc.net.au/news/2022-01-02/palestinian-women-smuggle-sperm-from-imprisoned-husbands/100718618>. [Accessed 2 April. 2023].
- Adams, C. 2022. *The end of Roe is "horrific" for incarcerated people seeking abortion care*. nbcNews. Available: <https://www.nbcnews.com/news/nbcblk/end-roe-horrific-incarcerated-people-seeking-abortion-care-rcna35898>. [Accessed 7 April. 2023].
- Addington-Hall, J., Long-Sutehall, T. & Sque, M. 2010. Secondary analysis of qualitative data: a valuable method for exploring sensitive issues with an elusive population? *Journal of Research in Nursing*. 16 (4). Pp. 335-344.
- Advertone, 2022. *How abortion in the age of surveillance capitalism turns internet into a dystopia*. Habr. Available at: <https://habr.com/en/articles/680094/>. [Accessed 20 April. 2023].
- Ahmad, N. 2019. *We are all cyborgs: How machines can be a feminist tool*. IMS. Available at: <https://www.mediasupport.org/navigating-a-changing-world/we-are-all-cyborgs-how-machines-can-be-a-feminist-tool/>. [Accessed 23 May. 2023].
- Ainsworth, S. L. & Roth, R. 2015. "If They Hand You a Paper, You Sign It": A Call to End the Sterilization of Women in Prison. *Hastings Women's Law Journal*. 26 (1). Pp. 7-50.
- Alami, I., Copley, J. & Moraitis, A. 2023. The 'wicked trinity' of late capitalism: Governing in an era of stagnation, surplus humanity, and environment breakdown. *Geoforum*. Pp. 1-13.
- Alesina, A. 2013. Women, fertility, and the rise of modern capitalism. *Science*. 342 (6165). Pp. 427-428.
- Alfonseca, K. 2022. *With Roe overturned, experts fear for incarcerated people and reproductive care*. abcNews. Available at: <https://abcnews.go.com/US/roe-overturned-experts-fear-incarcerated-people-reproductive-care/story?id=84544235>. [Accessed 6 April. 2023].
- Aliaga-Lavrijsen, J. 2021. Ectogenesis and Representations of Future Motherings in Helen Sedgwick's *The Growing Season*. *Journal of the Spanish Association of Anglo-American Studies*. 43 (1). Pp. 55-71.
- Alimahomed, S. A. 2011. *The Global War on Terror: Race, Gender, and Empire After 9/11*. University of California Riverside. Pp. 1-180.
- Allan, E. 2021. *Capitalism And Patriarchy Are Inseparable*. The Gazelle. Available at: <https://www.thegazelle.org/issue/199/capitalism-patriarchy-inseparable>. [Accessed 29 June. 2023].
- Ananthaswamy, A. & Douglas, K. 2018. *The origins of sexism: how men came to rule 12,000 years ago*. NewScientist. Available at: <https://www.newscientist.com/article/mg23831740-400-the-origins-of-sexism-how-men-came-to-rule-12000-years-ago/>. [Accessed 27 June. 2023].

Anderson, A. R. 2019. The Salem Witch Trials and the Political Chaos that Caused Them: How the Glorious Revolution Kindled the Fire of Colonial Unrest. *College of Arts & Science: Student Speaker Series*. Pp. 1-23.

Anderson, M. 2017. Genealogical Analysis of Discourse on Ethnic Minority Protests and Its Manifestation and Reinforcement in News Media and State-Sponsored Art.” *Dissertation, University of Washington*. Pp. 9-19. (Anderson, 2017: 9-19)

Andrews, M. 1999. *The Political Economy of Hope and Fear: Capitalism and the Black Condition in America*. New York University Press, New York NY. Pp. 5-50.

Apostolakoudis, T. 2022. Artificial Intelligence and Post-Capitalism: The Prospect and Challenges of AI-Automated Labour. *The Global Politics of Artificial Intelligence*. Pp. 1-38.

Appel, D. & Pittman, A. 2021. *Feminist Data Collection: Building a Vision of an Inclusive System*. Feminist AI. Available at: <https://feministai.pubpub.org/pub/feminist-data-collection/release/1>. [Accessed 14 April. 2022].

Apurva. 2022. *Women And The Capitalist Production Economy*. Feminism In India. Available at: <https://feminisminindia.com/2022/07/05/women-and-the-capitalist-production-economy/>. [Accessed 30 June. 2023].

Aristarkhova, I. 2005. Ectogenesis and Mother as Machine. *Body & Society*. 11 (3). Pp. 43-59.

Arun, N. 2022. *From Buck v. Bell to Roe v. Wade: A Legacy of Control*. Women’s Media Centre. Available at: <https://womensmediacenter.com/fbomb/from-buck-v-bell-to-roe-v-wade-a-legacy-of-control>. [Accessed 6 April. 2023].

Athmann, D., Kunz, A. S & Turner, P. R. 2022. The All-American Witch Hunt: Examining the Constitutionality of Venereal Disease Control From 1918 to the 1970’s. *Minds at University of Wisconsin*. Pp. 1-3.

Badcock, J. 2023. *Keep brain-dead women alive and use them as surrogate mothers, suggest doctors*. The Telegraph. Available at: <https://www.telegraph.co.uk/world-news/2023/02/03/medics-apologise-suggesting-brain-dead-women-could-used-surrogate/>. [Accessed 23 May. 2023].

Badgama, N. 2022. ‘Artificial womb’ which can grow up to 30,000 babies a year? Scientist’s film shock the internet. Wion. Available at: <https://www.wionews.com/trending/artificial-womb-which-can-grow-up-to-30000-babies-a-year-scientists-film-shocks-the-internet-543119>. [Accessed 11 June. 2023].

Bakošová, P. & Odorčák, J. 2021. Robots, Extinction, and Salvation: On Altruism in Human-Posthuman Interactions. *Religions*. 12 (275). Pp. 2-17.

Balabanova, E. & Simonstein, F. 2010. Assisted reproduction: a comparative review of IVF policies in two pronatalist countries. *Health Care Annal*. 18 (1). Pp. 188-202.

Balakrishnan, S. 2023. Prison of the Womb: Gender, Incarceration, and Capitalism on the Gold Coast of West Africa, c. 1500-1957. *Comparative Studies in Society and History*. Pp. 1-25.

Ballestín, L. 2018. *Gender as Colonial Object: The spread of Western gender categories through European colonization*. Public Seminar. Available at: <https://publicseminar.org/2018/07/gender-as-colonial-object/>. [Accessed 5 February. 2023].

Barbagallo, C. & Vertommen, S. 2021. The in/visible wombs of the market: the dialectics of waged and unwaged reproductive labour in the global surrogacy industry. *Special Issue on Feminist Political Economies of Work & Social Reproduction*. 29 (6). Pp. 1945-1966.

Barbagallo, C. & Vertommen, V. 2021. The in/visible wombs of the market: the dialectics of waged and unwaged reproductive labour in the global surrogacy industry. 29 (1). Pp 1-41.

Bashford, A. & Klausen, S. 2010. Fertility Control: Eugenics, neo-Malthusianism, and feminism. *The Oxford Handbook of the history of Eugenics*. Pp. 9-25.

Basu, I. 2017. *Dolly the Sheep: The Mammal that Made Sci-Fi a Reality in 1996*. The Quint. Available at: <https://www.thequint.com/news/world/dolly-the-sheep-animal-cloning-roslin-institute#read-more>. [Accessed 12 May. 2023].

Basu, L. 2022. *Whenever capitalism goes into crisis, it's women's bodies on the line*. openDemocracy. Available at: <https://www.opendemocracy.net/en/oureconomy/witch-hunts-federici-capitalism-reproduction/>. [Accessed 4 February. 2023].

Beau, E. 2018. *The History of Patriarchy*. Medium. Available at: <https://medium.com/inside-of-elle-beau/the-history-of-patriarchy-5ed57240a2bb>. [Accessed 28 June. 2023].

Becker, R. 2017. *An artificial womb successfully grew baby sheep – and humans could be next*. The Verge. Available at: <https://www.theverge.com/2017/4/25/15421734/artificial-womb-fetus-biobag-uterus-lamb-sheep-birth-premie-preterm-infant>. [Accessed 25 May. 2023].

Beech-Jiuquan, H. 2013. *Why China Needs More Children*. Time Magazine. Available at: <https://time.com/4092497/why-china-needs-more-children/>. [Accessed 10 February. 2023].

Bell, C. 2019. *Race Against Time: How White Fear of Genetic Annihilation Fuels Abortion Bans*. Yes! Solutions Journalism. Available at: <https://www.yesmagazine.org/social-justice/2019/07/04/abortion-ban-fear-white-extinction-babies>. [Accessed 5 November. 2021].

Bendix, D. & Schultz, S. 2017. The Political Economy of Family Planning: Population Dynamics and Contraceptive Markets. *Development and Change: International Institute of Social Studies*. 49 (2). Pp. 259-285.

Benjamin, B. J. 2021. Equal Protection and Ectogenesis. *Vanderbilt Journal of Entertainment & Technology Law*. 23 (4). Pp. 780-818.

Berer, M. 2023. Challenging the US Supreme Court's Majority Ruling on *Roe v. Wade* at the International Human Rights Level. *Health and Human Rights Journal: Perspective, General Papers*. 25 (1). Pp. 195-206.

Berger, D. 2019. *Black Feminist Alchemy, Reproductive Justice, and the Carceral State*. Black Perspectives. Available at: <https://www.aaihs.org/black-feminist-alchemy-reproductive-justice-and-the-carceral-state/>. [Accessed 8 April. 2023].

Berghs, M. *et al.* 2022. Repercussions of overturning *Roe v. Wade* for women across systems and beyond borders. *Reproductive Health*. 19 (184). Pp. 1-5.

Beydoun, K. A. 2022. The New State of Surveillance: Societies of Subjugation. *Washington and Lee Law Review*. 79 (2). Pp. 769-784.

Bhuiyan, J. 2022. *Spyware targets Uyghurs by “masquerading” as Android apps – report*. The Guardian. Available at: <https://www.theguardian.com/world/2022/nov/10/spyware-targeting-uyghurs-android-apps-report>. [Accessed 22 April. 2023].

Bieler, A. & Morton, A. D. 2021. Is capitalism structurally different to gender?: Routes to a value theory of reproductive labour. *Environment and Planning A: Economy and Space*. 53 (7). Pp. 8-15.

Bieler, A. & Morton, A. D. 2021. Is capitalism structurally different to gender?: Routes to a value theory of reproductive labour. *Environment and Planning A: Economy and Space*. 53 (7). Pp. 8-15.

Birche, K. & Tyfield, D. 2012. “Theorizing the Bioeconomy, Biovalue, Biocapital, Bioeconomics or...What?” *Science, Technology and Human Values*. 38(3). Pp. 299-327.

Birenbaum-Carmeli, D. 2016. Thirty-five years of assisted reproductive technologies in Israel. *Symposium: IVF – Global Histories*. 2 (1). Pp. 16-23.

Black, J. 2022. *Billionaires like Elon Musk want to save civilization by having tons of genetically superior kids. Inside the movement to take ‘control of human evolution’*. Insider. Available at: <https://www.businessinsider.com/pronatalism-elon-musk-simone-malcolm-collins-underpopulation-breeding-tech-2022-11>. [Accessed 31 May. 2023].

Bloomfield, E. 2009. Conceiving Motherhood: The Jewish Female Body in Israeli Reproductive Practices. *Intersections*. 10 (2). Pp. 227-269.

Bokek-Cohen, Y. & Gonen, L. D. 2014. Sperm and simulacra: emotional capitalism and sperm donation industry. *New Genetics and Society: Critical Studies of Contemporary Biosciences*. 34 (3). Pp. 243-273.

Bolton, Z. 2023. *Ectogenesis: A Retrospective*. Future of Human Reproduction. Available at: <https://wp.lancs.ac.uk/futureofhumanreproduction/ectogenesis-a-retrospective/>. [Accessed 29 May. 2023].

Bongaarts, J. 2009. Human population growth and the demographic transition. *Philosophical Transactions*. 364 (1532). Pp. 2985-2990.

Boone, M. 2022. *Guest Writer: Professor Meghan Boone on the Supreme Court decision to overturn Roe v. Wade*. Wake Forest Law. Available at: <http://news.law.wfu.edu/2022/07/guest-writer-professor-meghan-boone-on-the-supreme-court-decision-to-overturn-roe-v-wade/>. [Accessed 7 July. 2023].

Braidotti, R. 2017. Four Theses on Posthuman Feminism. *Anthropocene Feminism*. Pp., 21–48.

Brockman, H. 2021. A class for itself? On the worldviews of the new tech elite. *National Centre for Biotechnology Information*. 16 (1). Pp. 1-20.

Brodin, K. B. 1998. How Did Jews Become White Folks? *Race and Ethnicity*. Pp. 274-283.

Brown, J. 2022. *Why Capitalists Care About Our Record-Low Birth Rate*. Jacobin. Available at: <https://jacobin.com/2022/08/capitalism-low-birth-rate-labor-abortion-contraceptives-childcare>. [Accessed 5 April. 2023].

Buchleitner, J. 2022. *Ectogenesis: Could this be humanity's next small step?* L'Atelier BNP Paribas. Available at: <https://atelier.net/insights/ectogenesis-the-inductive-leap-posing-as-humanity>. [Accessed 28 May. 2023].

Bucklin, S. 2017. *Two Decades After Dolly the Sheep, Here's What We're Learned About Cloning*. NBC News. Available at: <https://www.nbcnews.com/mach/science/two-decades-after-dolly-sheep-here-s-what-we-ve-n724096>. [Accessed 11 May. 2023].

Byler, D. & Boe, C. S. 2020. *Tech-enabled "terror capitalism" is spreading worldwide. The surveillance regimes must be stopped*. The Guardian. Available at: <https://www.theguardian.com/world/2020/jul/24/surveillance-tech-facial-recognition-terror-capitalism>. [Accessed 14 April. 2023]. (Byler & Boe, 2020)

Byler, D. & Moseman, E. 2017. *Love and Fear among Rural Uyghur Youth during the People's War*. Youth Circulations. Pp. 5-15. (Byler & Moseman, 2017: 1-15)

Byler, D. 2021. *Terror Capitalism: Uyghur Dispossession and Masculinity in a Chinese City*. Durham: Duke University Press. Pp. 1-295. (Byler, 2021: 1-295)

Byler, D. 2022. The Social Life of Terror Capitalism Technologies in Northwest China. *Public Culture*. 34 (2(97)). Pp. 167-193.

Callaci, E. 2018. *Seizing the Means of Reproduction*. Dissent. Available at: <https://www.dissentmagazine.org/article/seizing-means-reproduction-laura-briggs-reproductive-politics-review/#:~:text=Simply%20put%2C%20reproductive%20labor%20is,work%20that%20reproduces%20labor%20power>. [Accessed 7 July. 2023].

Canavan, C. 2023. *Suggestion to use brain stem dead women's bodies for surrogate pregnancies sparks huge backlash*. Women's Health. Available at: <https://www.womenshealthmag.com/uk/health/a42773281/brain-stem-dead-women-surrogates-backlash/>. [Accessed 23 May. 2023].

Canning, C. & Lewis, N. 2023. *Reproductive Healthcare Behind Bars Was Dismal Even Before Roe Ended. The Marshall Project*. Available at: <https://www.themarshallproject.org/2023/06/30/post-roe-abortion-prison-jail-reproductive-justice>. [Accessed 8 April. 2023].

Carlisle, M. 2022. *Fetal Personhood Laws Are a New Frontier in the Battle Over Reproductive Rights*. Time Magazine. Available at: <https://time.com/6191886/fetal-personhood-laws-roe>

[abortion/#:~:text=In%20the%20early%201970s,a%20right%20to%20%E2%80%9Clife.%E2%80%9D](#). [Accessed 3 April. 2023].

Cassin, R. 2021. *What Uyghur Women face and what you can do to help stop it*. RenéCassin.org. Available at: <https://www.renecassin.org/what-uyghur-women-face-and-what-you-can-do-to-help-stop-it/>. [Accessed 15 April. 2023].

Castle, M. 2022. *Chamberlain Kahn Act: Imprisonment of American Women*. ArcGIS Story Maps. Available at: <https://storymaps.arcgis.com/stories/6acb3fbb374f448c801e01503b916756>. [Accessed 11 April. 2023].

Castree, N. 2001. Marxism, capitalism, and the production of nature. *Social Nature: Theory, Practice, and Politics*. Pp. 189-207.

Cavaliere, G. 2018. Looking into the shadow: the eugenics argument in debates on reproductive technologies and practices. *Monash Bioethics Review*. Pp. 322-361.

Cavaliere, G. 2020. Gestation, Equality and Freedom: Ectogenesis as a Political Perspective. *Journal of Medical Ethics*. 46 (1). Pp. 76–82.

Chaim-Rispler, V. 2020. Ethical aspects concerning sperm smuggled by Muslim Palestinian “security prisoners” out of Israeli prisons. *Ethics, Medicine and Public Health*. 14 (1). Pp. 1-7.

Chan, S. 2023. *What China’s baby woes mean for its economic ambitions*. BBC News. Available at: <https://www.bbc.com/news/business-64897827>. [Accessed 16 April. 2023].

Chandrasekhar, C. P. 2003. *The Imperialist was on “terror” and the world economy*. The Marxist. Available at: [https://www.cpim.org/marxist/200303\\_marxist\\_terror\\_war\\_eco.htm](https://www.cpim.org/marxist/200303_marxist_terror_war_eco.htm). [Accessed 14 April. 2023].

Chardonnet, E. 2022. *UNBORN0X9: from homunculus to partial ectogenesis*. MU. Available at: <https://www.mu.nl/en/txt/unborn0x9-from-homunculus-to-partial-ectogenesis>. [Accessed 27 May. 2023].

Chatfield, S. L. 2020. Recommendation for Secondary Analysis. *The Qualitative Report*. 25 (3). Pp. 833-842.

Chengdan, Q. 2010. Transformation of European States: From Feudal to Modern. *Procedia Social and Behavioural Sciences*. 41 (1). Pp. 6683-6691.

Chia-Ting, S. 2019. Reconsider contemporary capitalism through reproductive tourism. *Graduate Institute for Social Research and Cultural Studies*. 12 (1). Pp. 36-50.

Choudhary, S. 2020. *The Patriarchal Surveillance of Women’s Bodies*. Feminism In India. Available at: <https://feminisminindia.com/2020/09/02/surveillance-patriarchy-internet-cyberbullying/>. [Accessed 23 June. 2023].

Chude, A. 2018. *Capitalism, Population Control and the Culture of Death*. This Day. Available at: <https://www.thisdaylive.com/index.php/2017/10/07/capitalism-population-control-and-the-culture-of-death>. [Accessed 2 April. 2023].

Cichon, B. 2022. *On burning witches, women and wombs*. The Gazette. Available at: <https://www.thegazette.com/staff-columnists/on-burning-witches-women-and-wombs/>. [Accessed 5 April. 2023]

Clark, B. & Foster, B. J. 2018. *Women, Nature, and Capital in the Industrial Revolution*. Monthly Review: An Independent Socialist Magazine. Available at: <https://monthlyreview.org/2018/01/01/women-nature-and-capital-in-the-industrial-revolution/>. [Accessed 14 May. 2023].

Cockerell, I. 2019. *Inside China's Massive Surveillance Operation*. Wired. Available at: <https://www.wired.com/story/inside-chinas-massive-surveillance-operation/>. [Accessed 19 April. 2023].

Comanne, D. 2020. *How Patriarchy and Capitalism Combine to Aggravate the Oppression of Women*. CADTM. Available at: <https://www.cadtm.org/How-Patriarchy-and-Capitalism-Combine-to-Aggravate-the-Oppression-of-Women>. [Accessed 26 June. 2023].

Conde, S. J. A. 2021. A Marxist Transhumanism? *New Proposals: Journal of Marxism and Interdisciplinary Inquiry*. 12 (1). Pp. 22-40.

Cooper, M. & Waldby, C. 2013. From Reproductive Work to Regenerative Labour: The Female Body and the Stem Cell Industries. *Women, Science, and Technology*. 3 (1). Pp. 1-15.

Cooper, M. 2008. *Life as Surplus: Biotechnology and Capitalism in the Neoliberal Era*. Washington University Press. Pp. 3-35.

Craven, C. & Davis, D. 2016. *Feminist Ethnography: Thinking Through Methodologies, Challenges, and Possibilities*. Lanham: Rowman and Littlefield. Pp. 1-219.

Cruz, E. 2013. Transhumanism and the Fate of Natality: An Introduction. *Zygon*. 48 (4). Pp. 916-935.

Cuboniks, L. 2022. *New Vectors from Xenofeminism*. CCCBLab. Available at: <https://lab.cccb.org/en/new-vectors-from-xenofeminism/>. [Accessed 5 June. 2023].

Cyranoski, D. 2019. *Japan approves first human-animal embryo experiments*. Nature. Available at: <https://www.nature.com/articles/d41586-019-02275-3>. [Accessed 13 May. 2023].

D'Atri, A. & Murillo, C. 2018. *Producing and Reproducing: Capitalism's Dual Oppression of Women*. Left Voice. Available at: <https://www.leftvoice.org/on-reproductive-labor-wage-slavery-and-the-new-working-class/>. [Accessed 4 July. 2023].

Damavandi, S. & Grabowski, A. 2022. United States' Foreign Policy Implications of Overturning Roe. Wade. *International Centre for Research on Women*. Pp. 1-9.

Darity, W. A. & Price, G. N. 2020. The Economic Breeding-Out of Surplus Blacks? The Political Economy of Eugenic Sterilization and Genocide in North Carolina. *American Review of Political Economy*. Pp. 1-28.

Davis, N. 2019. *Artificial womb: Dutch researchers given €2.9m to develop prototype*. Available at: <https://www.theguardian.com/society/2019/oct/08/artificial-womb-dutch-researchers-given-29m-to-develop-prototype>. [Accessed 26 May. 2023].

De Vries, P. 2023. The Artificial Womb: A Speculative Design Meets the Sociotechnical History of Reproductive Labour. *Interdisciplinarity in the Scholarly Life Cycle*. Pp. 237-251.

Dean, J. 2020. *Silvia Federici: The exploitation of women and the development of capitalism*. Liberation School. Available at: <https://www.liberationschool.org/silvia-federici-women-and-capitalism/>. [Accessed 5 July. 2023].

Debata, P., Scott, E. T. & Stiles, P. 2023. Technology, capitalism, and the social contract. *Business Ethics, the Environment & Responsibility*. Pp. 1-11.

Denes, N. 2011. *The Science Of Existence: Zionism And The Making Of Jewish Nationhood*. Doctoral thesis. London: Goldsmiths. Pp. 1-300.

Desbiens-Brassard, A. 2019. Moloch's Children: Monstrous Techno-Capitalism in North American Popular Fiction. *Electronic Thesis and Dissertation Repository: The University of Western Ontario*. Pp. 1-314.

Devlin, H. 2023. *Synthetic human embryos created in groundbreaking advance*. The Guardian. Available at: <https://www.theguardian.com/science/2023/jun/14/synthetic-human-embryos-created-in-groundbreaking-advance>. [Accessed 12 June. 2023].

DiBranco, A. 2020. *The Long History of the Anti-Abortion Movement's Links to White Supremacists*. The Nation. Available at: <https://www.thenation.com/article/politics/anti-abortion-white-supremacy/>. [Accessed 9 May. 2022].

Dickenson, D. 2001. Property and women's alienation from their own reproductive labour. *Bioethics*. 15(3). Pp. 205-217.

Dickenson, D. 2007. *Property in the body: Feminist perspectives*. Cambridge: Cambridge University Press. Pp. 1-30. (Dickenson, 2007: 1-30)

Don, K. 2015. *The High-Tech Future of the Uterus*. The Atlantic. Available at: <https://www.theatlantic.com/health/archive/2015/01/the-high-tech-future-of-the-uterus/383232/>. [Accessed 5 May. 2023].

Donald, R. 2023. *The Elite Are Panic-Breeding White Babies*. Planet: Critical. Available at: <https://www.planetcritical.com/p/the-elite-are-panic-breeding>. [Accessed 30 May. 2023].

Dong, Z. *et al.* 2023. Privacy Analysis of Period Tracking Mobile Apps in the Post-Roe v. Wade Era. *ACM Digital Library*. Pp. 1-6.

Dooley, B. 2018. *Eradicate the tumors': Chinese civilians drive Xinjiang crackdown on separatism.* Agence France-Presse. Available at: <https://www.bangkokpost.com/news/world/1453014/eradicate-the-tumours-chinese-civilians-drive-xinjiang-crackdown>. [Accessed 15 April. 2023].

Douthat, R. 2018. *The Handmaid's of Capitalism.* The New York Times. Available at: <https://www.nytimes.com/2018/06/20/opinion/feminism-capitalism.html>. [Accessed 18 May. 2023].

Doyle, J. E. S. 2019. *How Capitalism Turned Women Into Witches.* In *These Times.* Available at: <https://inthesetimes.com/article/capitalism-witches-women-witch-hunting-sylvia-federici-caliban>. [Accessed 5 February. 2023].

Drucker, D. J. 2023. *The Future of Fertility Technology, From Technosemen to Uterine Transplants.* The MIT Reader Press. Available at: <https://thereader.mitpress.mit.edu/the-future-of-fertility-technology-from-technosemen-to-uterine-transplants/>. [Accessed 25 April. 2023].

Duster, C., Schneider, J. & Sneed, T. 2022. *How the U.S. Supreme Court decision on Roe v. Wade could affect the fertility industry.* CTV News. Available at: <https://www.ctvnews.ca/health/how-the-u-s-supreme-court-decision-on-roe-v-wade-could-affect-the-fertility-industry-1.5969402>. [Accessed 6 April. 2023].

Edwards, M. R. 2021. Android Noahs and embryo Arks: ectogenesis in global catastrophe survival and space colonization. *International Journal of Astrobiology.* 20 (1). Pp. 150-158.

Edwards, M. R. 2023. Blueprint for forever: Securing human far futures with ectogenesis. *Futures.* Pp. 160-169.

Ehrenreich, B. & Hochschild. A. (eds.). 2002. *Global woman: nannies, maids and sex workers in the new economy.* London: Granta Books. Pp. 1-336.

Elliot, J. & Franklin, S. 2018. 'The Synthesis is in the Machine': An Interview with Silvia Federici. *Australian Feminist Studies.* 33 (96). Pp. 172-177.

Emel, J. & Urbanik, J. 2005. The New Species of Capitalism: An Ecofeminist Comment on Animal Biotechnology. *A Companion to Feminist Geography.* 30 (1). Pp. 445-457.

Enns, C. Z. *et al.* 2020. Transnational Feminist theory and Practice: An Introduction. *Transnational Feminist Theory and Practice.* 44 (2). Pp. 11-26.

ET Spotlight Special. 2022. *World's first artificial womb facility is a creepy glimpse of pregnancy in future, see what it is.* The Economic Times. Available at: <https://economictimes.indiatimes.com/news/international/us/worlds-first-artificial-womb-facility-is-a-creepy-glimpse-of-pregnancy-in-future/articleshow/96203552.cms?from=mdr>. [Accessed 12 June. 2023].

Ethelberg, S. N. & Komu, E. A. 2015. Family planning and population control in developing countries: Ethical and sociocultural dilemmas. *Online Journal of Health Ethics.* 11 (1). Pp. 1-6.

Fakier, K., Mulinari, D. & Räthzel, N. 2020. *Marxist-Feminist Theories and Struggles Today*. London: Zed. Pp. 1-385.

Fallows, J. 2009. *On Uighurs, Han, and general racial attitudes in China*. The Atlantic. Available at: <https://www.theatlantic.com/technology/archive/2009/07/on-uighurs-han-and-general-racial-attitudes-in-china/21137/>. [Accessed 17 April. 2023].

Fannin, M. 2018. Thinking with the uterine: Commenting on ‘Cyborg uterine geography: complicating care and social reproduction’ by Sophie Lewis for Dialogues in Human Geography. *Dialogues in Human Geography*. 8 (3). Pp. 324-327.

Featherstone, M. 2010. Discourses of the War on Terror: Constructions of the Islamic other after 7/7. *International Journal of Media & Cultural Politics*. 6 (2). Pp. 169-186.

Federici, S. 2010. *Silvia Federici, “The reproduction of labour-power in the global economy, Marxist theory and the unfinished feminist revolution”*. Caring Labour: An Archive. Available at: <https://caringlabor.wordpress.com/2010/10/25/silvia-federici-the-reproduction-of-labour-power-in-the-global-economy-marxist-theory-and-the-unfinished-feminist-revolution/>. [Accessed 6 July. 2023].

Federici, Silvia. 2004. *Caliban and the Witch: Women, the body and primitive accumulation*. Brooklyn: Autonomedia. Pp. 4-40.

Firestone, S. 1970. *The Dialectic of Sex: The Case for Feminist Revolution*. New York: Bantam Books. Pp. 1-269.

Fitzgerald, T. 2020. *New Documentary ‘Belly of The Beast’ Explores A Sadly Timely Issue*. Forbes. Available at: <https://www.forbes.com/sites/tonifitzgerald/2020/10/26/new-documentary-belly-of-the-beast-explores-a-sadly-timely-issue/?sh=6233f79f5424>. [Accessed 5 November. 2021].

Foley, E. E. 2022. In pursuit of the demographic dividend: the return of economic justifications for family planning in Africa. *Sexual and Reproductive Health Matter*. 30 (1). Pp. 1-20.

Fors, G. 2021. *How Capitalism Oppresses Women*. Socialist Alternative. Available at: <https://www.socialistalternative.org/2021/11/01/how-capitalism-oppresses-women/>. [Accessed 30 June. 2023].

Franklin, S. 2006. Embryonic economies: the double reproductive value of stem cells. *BioSocieties*. 5 (1). Pp. 71-90.

Franklin, S. 2007. *Dolly Mixtures: The Remaking of Genealogy*. Duke University Press. Pp. 1-254.

Froio, N. 2021. *The Fall of Roe v. Wade is About Coercive Reproductive Labour*. Zora. Medium. Available at: <https://zora.medium.com/the-fall-of-roe-v-wade-is-about-coercive-reproductive-labor-93af7d78f962>. [Accessed 2 April. 2023].

Gane, N. 2006. When We Have Never Been Human, What Is to Be Done? *Theory, Culture & Society*. 23 (7). Pp. 135-158.

- Garcia, K. 2022. *The root causes of the attacks on reproductive rights: A Marxist analysis*. Liberation School. Available at: <https://www.liberationschool.org/marxist-analysis-attacks-reproductive-rights/>. [Accessed 3 July. 2023].
- Garrett, P. M. 2021. “Surveillance Capitalism, COVID-19 and Social Work”: A Note on Uncertain Future (s). *British Journal of Social Work*. Pp. 1-19.
- Gelfand, S. D. 2018. Egalitarianism and Public Funding for the Development of Ectogenesis. *Public Affairs Quarterly*. 32 (3). Pp. 247-268. (Gelfand, 2018: 247-268)
- Geoghegan, S. & Khabbaz, D. 2022. *Reproductive Privacy in the Age of Surveillance Capitalism*. Epic.org. Available at: <https://epic.org/reproductive-privacy-in-the-age-of-surveillance-capitalism/>. [Accessed 21 April. 2023].
- Gharib, M. 2022. *Global Reproductive and women’s rights groups react to overturn of Roe v. Wade*. Npr. Available at: <https://www.npr.org/sections/goatsandsoda/2022/06/24/1107370547/global-reproductive-and-womens-rights-groups-react-to-overturn-of-roe-v-wade>. [Accessed 5 April. 2023].
- Gilman, M. E. 2014. The Return of the Welfare Queen. *Journal of Gender, Social Policy & the Law*. 22 (2). Pp. 247 – 279.
- Glabau, D. 2022. *Who Will Control the Exowomb?* Grow. Available at: <https://www.growbyginkgo.com/2022/10/18/who-will-control-the-exowomb/>. [Accessed 9 June. 2023].
- Goh, A. 2019. *Appropriating the Alien: A Critique of Xenofeminism*. Mute. Available at: <https://www.metamute.org/editorial/articles/appropriating-alien-critique-xenofeminism>. [Accessed 7 June, 2023].
- Goodwin, M. 2019. The Thirteenth Amendment: Modern Slavery, Capitalism, and Mass Incarceration. *Cornell Law Review*. 104 (4). Pp. 900-975.
- Göransson, M. 2022. “Smart economics” within Family Planning: An Analysis of the framings of Family Planning initiatives and their relation to “smart economics”. *Uppsala University: Department of Government*. Pp. 1-35.
- Grabowska, B. 2022. *The Female Body as Sites of Power*. IntechOpen: Feminism – Corporeality, Materialism, and Beyond. Available at: <https://www.intechopen.com/online-first/85662>. [Accessed 26 June. 2023].
- Graziuso, B. K. 2022. Neither Sacred nor Unholy, Just Workers: the Cyborg Work of Surrogates. *Cadernos Pagu*. 64 (1). Pp. 1-13.
- Gregoratti, C. & Horn, L. 2021. A New Wheel to Keep Capitalism Moving? The Artificial Womb in Feminist Futures and the Capitalist Present. *Postcapitalist Futures: Political economy beyond crisis and hope*. Pp. 67-85.

Grewal, I. & Kaplan, C., 1994. Introduction: transnational feminist practices and questions of postmodernity. *Scattered Hegemonies: Postmodernity and Transnational Feminist Practices*. Minneapolis: University of Minnesota Press. Pp. 1–36.

Griffin, A. 2023. *Future space missions could use all-female crews because they are more 'efficient'*. The Independent. Available at: <https://www.independent.co.uk/tech/space-missions-mars-moon-study-b2335734.html>. [Accessed 16 June. 2023].

Grubestic, J. 2023. *Nowhere to Hide: A World Without Privacy*. Theflaw.org. Available at: <https://theflaw.org/articles/nowhere-to-hide-a-world-without-privacy/>. [Accessed 25 April. 2023].

Gupta, J. A. & Richters, A. 2008. Embodied Subjects and Fragmented Objects: Women's Bodies, Assisted Reproduction Technologies, and the Right to Self-Determination. *Bioethical Inquiry*. 5 (1). Pp. 239-249.

Haddad, C. 2015. Services in the self: embodied labour and the global bioeconomy. *Life Sciences, Society and Policy*. 11 (9). Pp. 2-8.

Hamdan, M. 2019. "Every Sperm is Sacred": Palestinian Prisoners, Smuggled Semen, and Derrida's Prophecy. *International Journal of Middle East Studies*. 51 (4). Pp. 525 – 545.

Hammer, A. & Jana, M. 2022. Reproductive Work in the Global South: Lived Experiences and Social Relations of Commercial Surrogacy in India. *Work, Employment and Society*. 36 (5). Pp. 945-966.

Happ, M. B. & Tate, J. A. 2017. Qualitative Secondary Analysis: A Case Exemplar. *Centre of Excellence in Critical and Complex Care*. Pp. 1-15.

Haraway, D. 1985. A Cyborg Manifesto. *Socialist Review*. Pp. 1-88. (Haraway, 1985: 1-88)

Haraway, D. 2016. *Staying with the Trouble: Making Kin in the Chthulucene*. Durham, NC: Duke University Press. Pp. 1-313.

Harper, T. A. 2021. *Elites Against Extinction: The Dark History of a Cultural Paranoia*. LARB. Available at: <https://lareviewofbooks.org/article/elites-against-extinction-the-dark-history-of-a-cultural-paranoia/>. [Accessed 31 May. 2023].

Hartman, B, 1997. Population Control I: Birth of an Ideology. *International Journal of Social Determinants of Health and Health Services*. 27 (3). Pp. 1-25.

Hashiloni-Dolev, Y. 2006. Between mothers, fetuses and society: reproductive genetics in the Israeli-Jewish context. *Nashim*. Pp. 129-150.

Hayes, J. 2022. *Hayes: National Abortion Ban is About Controlling Women's Bodies*. Hayes House. Available at: <https://hayes.house.gov/2022/9/hayes-national-abortion-ban-is-about-controlling-women-s-bodies>. [Accessed 26 June. 2023].

Heaton, J. 2008. Secondary Analysis of Qualitative Data: An Overview. *Historical Social Research*. 3 (3). Pp. 33-45.

Heft, P. 2021. Xenofeminism: A Framework to Hack the Human. *Marxist Transhumanism and/or Transhumanist Marxism?*. 12 (1). Pp. 121-139.

Herold, E. 2019. *Meet Your New Nanny: A Robot*. Medium. Available at: <https://medium.com/goingyellow/meet-your-new-nanny-a-robot-adb0d0dafa4c>. [Accessed 21 June. 2023].

Hester, H. 2017. *Promethean Labours and Domestic Realism*. E-Flux: Architecture. Available at: <https://www.e-flux.com/architecture/artificial-labor/140680/promethean-labors-and-domestic-realism/>. [Accessed 6 June. 2023].

Hester, H. 2018. *The Xenofeminist Manifesto: A Politics for Alienation*. Cambridge: Polity Press. Pp. 1-78.

Hewlett, S. A. 2002. *Executive Women and the Myth of Having It All*. Harvard Business Review. Available at: <https://hbr.org/2002/04/executive-women-and-the-myth-of-having-it-all>. [Accessed 16 May. 2023].

Hochschild, A. R. 2014. Global Care Chains and Emotional Surplus Value. *Justice, Politics, and the Family*. Pp. 1-13. (

Hoja, G. 2023. *The Latest @ USIP: The Fight for Uyghur Women's Human Rights in China*. The Olive Branch. Available at: <https://www.usip.org/blog/2023/03/latest-usip-fight-uyghur-womens-human-rights-china>. [Accessed 18 April. 2023].

Holdstock, N. 2022. Guinea pigs for dystopia: Detention, surveillance and profit-making in Xinjiang. *Times Literary Supplement*. Pp. 1-5.

Holen, T. B. & Shammas, V. L. 2019. One giant leap for capitalistkind: private enterprise in outer space. *Palgrave Communications*. 5 (10). Pp. 1-9.

Homlstrom-Smith, A. 2021. Free Market Feminism: Re-Reconsidering Surrogacy. *Journal of Law and Social Change*. 24 (3). Pp. 443-484.

Hoofd, I. 2022. Xenofeminist Hope and Dread, or How to Move Beyond Patriarchal Technocapitalism. *Hypatia*. 37 (1). Pp. 210-215.

Hopkins, A. G. 1999. Back to the Future: From National History to Imperial History. *Past & Present*. 164 (1). Pp. 198-243.

Horgan, J. 2020. *Big Tech, Out-of-Control Capitalism and the End of Civilization*. Scientific American. Available at: <https://www.scientificamerican.com/article/big-tech-out-of-control-capitalism-and-the-end-of-civilization/>. [Accessed 9 May. 2023].

Horn, C. & Sorenti, M. 2023. *The radical future of humanity without childbirth*. Iai News. Available at: <https://iai.tv/articles/the-radical-future-of-humanity-without-childbirth-aid-2492>. [Accessed 6 May. 2023].

Horn, C. 2021. *A history of gestation outside the body*. Wellcome Collection. Available at: <https://wellcomecollection.org/articles/YZJzrhEAACUARhC3>. [Accessed 27 May 2023].

Horn, D. M. 2013. Locating Security in the Womb: US Foreign Policy, Population Control and International Family Planning Programs. *International Feminist Journal of Politics*. 15 (2). Pp. 195-212.

Horne, W. 2022. *The Predatory Class is Hungry for a Post-Roe World*. The Activist History Review. Available at: <https://activisthistory.com/2022/05/05/the-predator-class-is-hungry-for-a-post-roe-world/>. [Accessed 3 April. 2023].

Hoshur, S. 2018. *Chinese Authorities Jail Four Wealthiest Uyghurs in Xinjiang's Kashgar in New Purge*. Radio Free Asia. Available at: <https://www.rfa.org/english/news/uyghur/wealthiest-01052018144327.html>. [Accessed 15 April. 2023].

Huang, C. Y. L. 2012. Muslim Women at a Crossroads: Gender and Development in the Xinjiang Uyghur Autonomous Region, China. *Berkeley, University of California*. Pp. 1-50.

Hundle, A. *et al.* 2019. What is the *transnational* in transnational feminist research? *Feminist Review*. 121 (1). Pp. 3-8.

Huq, A. & Wexler, R. 2022. Digital Privacy for Reproductive Choice in the Post-Roe Era. *New York University Law Review, University of Chicago, Public Law Working Paper*. 97 (812). Pp 1-92.

Isaac, S. 2020. *Is artificial-womb technology a tool for women's liberation?* Aeon. Available at: <https://aeon.co/ideas/is-artificial-womb-technology-a-tool-for-womens-liberation>. [Accessed 21 June. 2023].

James, J. 2021. *"New Bones" Abolitionism, Communism, and Captive Maternals*. Verso. Available at: <https://www.versobooks.com/en-gb/blogs/news/5095-new-bones-abolitionism-communism-and-captive-maternals>. [Accessed 10 April. 2023].

Johnson. J. G. 2022. *Texas's restrictive new abortion law eerily echoes the witch hunts of the centuries ago*. The Washington Post. Available at: <https://www.washingtonpost.com/outlook/2021/08/19/texas-restrictive-new-abortion-law-eerily-echoes-witch-hunts-centuries-ago/>. [Accessed 5 February. 2023].

Johnston, M. P. 2014. Secondary Data Analysis: A Method of which the Time Has Come. *A Qualitative and Quantitative Methods in Libraries (QQML)*. 3(1). Pp. 619-626.

Jolly, J. 2016. On Forbidden Wombs and Transnational Reproductive Justice. *Meridians*. 15 (1). Pp. 166-188.

Jones, B. 2009. *Human egg-trafficking scam uncovered in Romania*. Progressive Educational Trust. Available at: <https://www.progress.org.uk/human-egg-trafficking-scam-uncovered-in-romania/>. [Accessed 3 April. 2023].

Kanaaneh R. 2002. *Birthing the Nation: Strategies of Palestinian women in Israel*. Berkeley: University of California Press. Pp. 1-303.

- Kaplan, S. & VanderBrug, J. 2014. The rise of gender capitalism. *Stanford Social Innovation Review*. Pp. 1-9.
- Kay, J. B. 2019. Xenofeminism. *Feminist Media Studies*. 19 (2). Pp. 306-308.
- Kelly, K. 2018. *A Forgotten War on Women*. The New Republic. Available at: <https://newrepublic.com/article/148493/forgotten-war-women>. [Accessed 11 April. 2023]. (Kelly, 2018)
- Kendal, E. 2021. Ectogenesis for Space Exploration. *Encyclopedia of Life Sciences*. Pp. 1-5.
- Khanal, R. C., Nyamoto, E. & Skuster, P. 2020. Relics of imperialism: US foreign policy on abortion in the COVID era. *Sexual and Reproductive Health Matters*. 28 (3). Pp. 75-78.
- Khulbe, Y. *et al.* 2023. Artificial womb: opportunities and challenges for public health. *International Journal of Surgery*. 109 (3). Pp. 618-619.
- Kimberly, L. L. *et al.* 2020. Equitable access to ectogenesis for sexual and gender minorities. *Bioethics: Ethics of Ectogenesis*. 34 (4). Pp. 338-345.
- Kolhatkar, S. 2023. *The Devastating Economic Impacts of An Abortion Ban*. The New Yorker. Available at: <https://www.newyorker.com/business/currency/the-devastating-economic-impacts-of-an-abortion-ban>. [Accessed 8 May. 2023].
- Kristić, I. 2015. Extracorporeal Pregnancy as a Feminist Issue. *Faculty of Political Sciences, University of Belgrade*. Pp. 45-50.
- Kunzru, H. 1997. *You Are Cyborg*. Wired. Available at: <https://www.wired.com/1997/02/ffharaway/>. [Accessed 24 May. 2023].
- Lai, S. & Tanner, B. 2022. *Examining the intersection of data privacy and civil rights*. Brookings. Available at: <https://www.brookings.edu/articles/examining-the-intersection-of-data-privacy-and-civil-rights/>. [Accessed 25 April. 2023].
- Leibold, J. & Ruser, N. 2021. Family de-planning: The coercive campaign to drive down indigenous birth-rates in Xinjiang. *Australian Strategic Policy Institute & International Cyber Policy Centre*. 44 (1). Pp. 1-32.
- Lerner, G. 1986. *The Creation of Patriarchy*. Oxford University Press: New York & Oxford. Pp. 1-362.
- Lewis, S. 2016. Cyborg Labour: Exploring surrogacy as gestational work. *School of Environment, Education and Development: University of Manchester*. Pp. 9-206.
- Lewis, S. 2018. Cyborg uterine geography: Complicating ‘care’ and social reproduction. *Dialogues in Human Geography*. 8 (3). Pp. 5-50.
- Lianos, V. 2022. Automation and Artificial Intelligence in the possible transition to a postcapitalist society. *Centre for Postcapitalist Civilization*. Pp. 1-17.

Lunenfeld, B. 2013. Management of Infertility: past, present and future from a personal perspective. *Journal of Reproductive Medicine and Endocrinology*: 10 (1). Special issue on 50 years of Gonadotropin Therapy. Pp.1-25.

Lunenfeld, B., Sulimovici, S. & Rabau, E. 1962. “Les effets des gonadotrophins urinaires des femmes menopausees sur l'ovaire humain”. *C.R. Soc. Franc. Gynecol.* 32(5): pp. 1-29.

Lyons, S. 2019. *Silvia Federici on Witch Hunts, Body Politics, and Rituals of Resistance*. Slutist. Available at: <https://blog.pmpress.org/2019/09/15/silvia-federici-on-witch-hunts-body-politics-rituals-of-resistance/>. [Accessed 5 February. 2023].

Macauley, T. 2022. *Scientist has world's worst solution to Europe's declining population*. TNW. Available at: <https://thenextweb.com/news/berlin-scientist-solution-population-decline-artificial-wombs>. [Accessed 10 June. 2023].

Mahdawi, A. 2023. ‘Hipster eugenics’: why is the media cosyng up to people who want to build a super race? The Guardian. Available at: <https://www.theguardian.com/lifeandstyle/2023/apr/20/pro-natalism-babies-global-population-genetics>. [Accessed 31 May. 2023].

Majumdar, N. 2020. *Labour and Love Under Capital*. Jacobin. Available at: <https://jacobin.com/2020/01/full-surrogacy-now-sophie-lewis-review>. [Accessed 19 May. 2023].

Maldonado, V. A. 2015. The Informal Economy of Incarcerated Women. *Comparative Culture Studies: University of Houston*. Pp. 5-116.

Mangel, A. 2018. “*The Cry of the Puma*”: *The Intersection of Feminism and Animal Advocacy in The Island of Doctor Moreau*. Academia.edu. Available at: [https://www.academia.edu/41328950/\\_The\\_Cry\\_of\\_the\\_Puma\\_The\\_Intersection\\_of\\_Feminism\\_and\\_Animal\\_Advocacy\\_in\\_The\\_Island\\_of\\_Doctor\\_Moreau](https://www.academia.edu/41328950/_The_Cry_of_the_Puma_The_Intersection_of_Feminism_and_Animal_Advocacy_in_The_Island_of_Doctor_Moreau) . [Accessed 25 May. 2023].

Manzoor, S. 2017. Feminist Research Methodologies: An Analysis of Graduate Level Dissertations at CEWS. *Pakistan Journal of Gender Studies*. 14 (1). Pp. 65-80.

Margree, V. 2019. *Shulamith Firestone: Xenofeminist Before Her Time?*. The Mantle. Available at: <https://www.themantle.com/philosophy/shulamith-firestone-xenofeminist-her-time>. [Accessed 4 June. 2023].

Marr, B. 2021. *How Artificial Intelligence Could Kill Capitalism*. Bernard Marr & Co. Available at: <https://bernardmarr.com/how-artificial-intelligence-could-kill-capitalism/>. [Accessed 1 June, 2023].

Martin, S. 2023. “#RoeVsWadeOverturned: Any Idea How Fast You #PeriodtrackingApp Can Lead To Jail?”: Digital Disengagement and the Repeal of *Roe vs Wade*. *Digital Disengagement: COVID-19, Digital Justice and the Politics of Refusal*. Pp. 61-82.

Marwah, V. *et al.* 2011. Globalisation of birth markets: a case study of assisted reproductive technologies in India. *Globalization and Health*. 7 (27). Pp. 1-9.

Marway, H. & Widdows, H. 2015. Past, Present, and Future. *Philosophical Feminist Bioethics*. 24 (1). Pp. 165-174.

Mason, P. 2015. *PostCapitalism: A Guide to Our Future*. London: Allen Lane. Pp. 1-346.  
Mason, P. 2015. *The end of capitalism has begun*. The Guardian. Available at: <https://www.theguardian.com/books/2015/jul/17/postcapitalism-end-of-capitalism-begun>. [Accessed 7 May. 2023].

McCammon, S. & Totenberg, N. 2022. *Supreme Court overturns Roe v. Wade, ending right to abortion upheld for decades*. NPR. Available at: <https://www.npr.org/2022/06/24/1102305878/supreme-court-abortion-roe-v-wade-decision-overturn>. [Accessed 25 June. 2022].

McCartney, J. 2023. *The war over the womb*. The Spectator. Available at: <https://www.spectator.co.uk/article/the-war-over-the-womb/>. [Accessed 6 May. 2023].

McDonald, N. 2022. *Surveillance Capitalism: Lack of Online Data Privacy Could Be Used Against Women Seeking Abortions*. Milwaukee Independent. Available at: <http://www.milwaukeeindependent.com/syndicated/surveillance-capitalism-lack-online-data-privacy-used-women-seeking-abortions/>. [Accessed 22 April. 2023].

McFarling, U. L. 2021. *International team creates first chimeric human-monkey embryos*. STAT. Available at: <https://www.statnews.com/2021/04/15/international-team-creates-first-chimeric-human-monkey-embryos/>. [Accessed 13 May. 2023].

McKay, K. 2020. The ‘tyranny of reproduction’: Could ectogenesis further women’s liberation?. *Bioethics: The Ethics of Ectogenesis*. 34 (4). Pp. 346-353.

Mellor, M. 1997. Women, nature and the social construction of ‘economic man’. *Ecological Economics*. 20 (2). Pp. 129-140.

Melton, G. & Mdivo, J. 2021. *U.S Promotion of Abortion Abroad Is Ideological Colonialism, Not Gender Equality*. The Heritage Foundation. Available at: <https://www.heritage.org/life/commentary/us-promotion-abortion-abroad-ideological-colonialism-not-gender-equality>. [Accessed 3 April. 2023].

Melton, G. 2022. *Under Biden, U.S. Promotes Abortion Abroad*. The Heritage Foundation. Available at: <https://www.heritage.org/life/commentary/under-biden-us-promotes-abortion-abroad>. [Accessed 4 April. 2023].

Mendoza, B. 2015. Coloniality of Gender and Power: From Postcoloniality to Decoloniality. *The Oxford Handbook of Feminist Theory*. Pp. 100 – 121.

Messer, J. 2019. Even Womb Surrogates Think: Rethinking Labour and Maternal Work. *Studies in the Maternal*. 11 (1) Pp. 1-17.

Mies, Maria. 1998. *Patriarchy and Accumulation on a World Scale: Women in the International Division of Labour*. London: Zed Books. Pp. 12-30.

- Militz, E. & Schuur, C. 2018. The affective economy of transnational surrogacy. *Environment and Planning A: Economy and Space*. 50 (8). Pp. 1626-1645.
- Mitchell, N. 2021. *Women and mass incarceration: A critique of capitalism*. Breaking The Chains. Available at: <https://www.breakingthechainsmag.org/women-and-mass-incarceration-a-critique-of-capitalism/>. [Accessed 9 April. 2023].
- Mohanty, C., T. Russo, A. & Torres, L. 1991. *Third World Women and the Politics of Feminism*. Bloomington and Indianapolis: Indiana University Press. Pp. 1-356.
- Moran, M. 2020. *AI 'nanny robots' will bring up kids making parents 'obsolete', claims AI expert*. Daily Star. Available at: <https://www.dailystar.co.uk/news/latest-news/ai-nanny-robots-bring-up-21946854>. [Accessed 17 June. 2023].
- Moreau, J. 2017. "Overwhelming" Number of Lesbians, Bisexual Women Incarcerated. nbcNews. Available at: <https://www.nbcnews.com/feature/nbc-out/overwhelming-number-lesbians-bisexual-women-incarcerated-n728666>.
- Morley, D. 2023. *Artificial Intelligence: doomsday for humanity, or for capitalism?* In Defence of Marxism. Available at: <https://www.marxist.com/artificial-intelligence-doomsday-for-humanity-or-for-capitalism.htm#:~:text=This%20is%20why%20predictions%20of,humanity%20from%20capitalism%20for%20us>. [Accessed 1 June. 2023].
- Mozur, P. 2019. *One Month, 500, 000 Face Scans: How China Is Using A.I. to Profile a Minority*. The New York Times. Available at: <https://www.nytimes.com/2019/04/14/technology/china-surveillance-artificial-intelligence-racial-profiling.html>. [Accessed 24 April. 2023].
- Muldoon, J. 2012. *Capitalist reproduction and women's oppression*. International Socialist Review. Available at: <https://isreview.org/issue/93/capitalist-reproduction-and-womens-oppression/index.html>. [Accessed 4 February. 2023].
- Murphy, M. 2021. Voicing the clone: Laurie Anderson and technologies of reproduction. *Feminist Review*. Pp. 56-72.
- Nadasen, P. 2017. Rethinking Care: Arlie Hochschild and the Global Care Chain. *Women's Studies Quarterly*. 45 (3). Pp. 124-128.
- Nadimpally, S. 2015. For Motherhood and for Market: Commercial Surrogacy in India. *New Cannibal Markets*. Pp. 105-122.
- Nagar, R. & Lock Swarr, A. 2010. *Critical Transnational Feminist Praxis*. Albany: State University of New York Press. Pp. 1–20.
- Nahman, M. 2009. Nodes of desire: Romanian egg sellers, dignity and feminist alliances in transnational ova exchanges. *European Journal of Women's Studies* 15(2): pp. 65-82.

- Nahman, M., Parry, B. & Vertommen, S. 2022. Global Fertility Chains and the Colonial Present of Assisted Reproductive Technology. *Catalyst: Feminism, Theory, Technoscience*. 8 (1). Pp. 1-17.
- Nahman, M., Pavone, V. & Vertommen, S. 2021. Global Fertility Chains: An Integrative Political Economy Approach to Understanding the Reproductive Bioeconomy. *Science, Technology, & Human Values*. 47 (1). Pp. 112-145.
- Nahman, M., Pavone, V. & Vertommen, S. 2021. Global Fertility Chains: An Integrative Political Economy Approach to Understanding the Reproductive Bioeconomy. *Science, Technology, & Human Values*. 47 (1). Pp. 112-145.
- Newman, W. R. 2020. Bad Chemistry: Basilisks and Women in Paracelsus and pseudo-Paracelsus. *Ambix*. 67 (1). Pp. 30-46.
- Nguyen, M. T. N., Tronto, J. & Zavoretti, R. 2017. Beyond the Global Care Chain: Boundaries, Institutions and Ethics of Care. *Ethics and Social Welfare*. 11 (3). Pp. 199-22.
- Nosta, J. 2023. *Crossing The Threshold Into The Ai Renaissance*. Medium. Available at: <https://johnnosta.medium.com/crossing-the-threshold-into-the-ai-renaissance-6840e7f45fc4>. [Accessed 8 June. 2023].
- Nurmuhammad, R. et al. 2023. *Global Challenge Uyghur Women's Rights Defenders & Intrusive Surveillance Technologies*. Justice For All. Available at: <https://www.justiceforall.org/save-uyghur/global-challenge-uyghur-womens-rights-defenders-intrusive-surveillance-technologies/>. [Accessed 20 April. 2023].
- Oakley, A. 1998. Gender, Methodology and People's Ways of Knowing: Some Problems with Feminism and The Paradigm Debate in Social Science. *SOCIOLOGY*. 32 (4). Pp. 707-731.
- Oksala, J. 2018. Feminism, Capitalism, and Ecology. *Hypatia*. 33 (2). Pp. 216-234.
- Oksala, J. 2019. Feminism against Biocapitalism: Gestational Surrogacy and the Limits of the Labour Paradigm. *Signs*. 44 (4). Pp. 1-30.
- Oman-Reagan, M. P. 2019. Politics of Planetary Reproduction and the Children of Other Worlds. *Futures*. Pp. 1-9.
- Omvedt, G. 1987. The Origin of Patriarchy. *Economic and Political Weekly*. 22 (44). Pp. 1-3.
- Orozco, A. P. 2009. Global Care Chains. *Gender, Migration and Development*. Pp. 1-9.
- Pande, A. 2010. Commercial Surrogacy in India: Manufacturing a Perfect Mother-Worker. *Signs*. 35 (4). Pp. 969-992.
- Pardo, E. 2022. *World population to decrease from 2064, researchers say*. Available at: <https://www.dw.com/en/elon-musks-dreams-of-mars-colonization-could-be-hindered-by-depopulation/a-60624894>. [Accessed 15 June. 2023].
- Patel, P. 2017. Forced sterilization of women as discrimination. *Public Health Reviews*. 38 (15). Pp. 1-12.

- Paun, C. & Payne, D. 2022. *The global chill of Roe's reversal*. Politico. Available at: <https://www.politico.com/newsletters/global-pulse/2022/06/30/roes-global-chill-00043215>. [Accessed 5 April. 2023].
- Pearson, J. 2014. *The Future of Robot Labour Is the Future of Capitalism*. Vice. Available at: <https://www.vice.com/en/article/vvbz7y/the-future-of-robot-labour-has-everything-to-do-with-capitalism>. [Accessed 19 June. 2023].
- Penovic, T. 2022. Roe Vs Wade: The Extraterritorial Dimension of Abortion Politics. *The Interpreter*. Pp. 1-8.
- Perry, L. 2020. *The disturbing history of 'artificial mothers'*. UnHerd. Available at: <https://unherd.com/2020/07/the-disturbing-history-of-artificial-mothers/>. [Accessed 28 May. 2023].
- Perry, T. E. & Ruggiano, N. 2019. Conducting secondary analysis of qualitative data: Should we, can we, and how? *Qualitative Social Work*. 18 (1). Pp. 81-97.
- Peters, M. A. & Venkatesan, P. 2010. Biocapitalism and The Politics of Life. *Geopolitics, History, and International Relations*. 2 (2). Pp. 100-122.
- Piercy, M. 2016. *Woman on the Edge of Time, 40 years on: 'Hope is the engine for imagining utopia'*. The Guardian. Available at: <https://www.theguardian.com/books/2016/nov/29/woman-on-the-edge-of-time-40-years-on-hope-imagining-utopia-marge-piercy>. [Accessed 22 June. 2023].
- Poltera, J. & Sorial, S. 2015. Rape, Violence, and Women's Autonomy. *Faculty Scholarship at Penn Cary Law*. Pp. 359-388.
- Pomeroy, R. 2023. *The first crewed mission to Mars should be all female. Here's why*. Big Think. Available at: <https://bigthink.com/hard-science/female-space-missions/>. [Accessed 17 June. 2023].
- Prachad, A. 2016. *Trans-National Surrogacy and Capitalism*. People's Democracy. Available at: [https://peoplesdemocracy.in/2016/1030\\_pd/trans-national-surrogacy-and-capitalism](https://peoplesdemocracy.in/2016/1030_pd/trans-national-surrogacy-and-capitalism). [Accessed 17 May. 2023].
- Prata, N. et al. 2017. Women's Empowerment and Family Planning: A Review of the Literature. *Journal of Biosocial Science*. 49 (6). Pp. 713-743.
- Puaschunder, J.M. 2019. Population Control via Capitalism. *Proceedings of the Sixth Annual International Conference on Sustainable Development (ICSD)*. Pp. 1-16.
- Purdie, M. S. et al. 2021. Living Islam in Prison: How Gender Affects the Religious Experiences of Female and Male Offenders. *Religions*. 12 (5). Pp. 1-30.
- Rajan, S. 2006. *Biocapital: The Constitution of Postgenomic Life*. Durham: Duke University Press. Pp. 9-18.

- Ramsden, E. 2008. Eugenics from the New Deal to the Great Society: Genetics, Demography and Population Quality. *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences*. 39 (1). Pp. 391 – 406.
- Rankin, L. *et al.* 2019. The Future Is Ours: Women, Automation, and Equality in The Digital Age. *The Centre for Economic Justice*. Pp. 1-47.
- Räsänen, J. 2022. Regulating abortion after ectogenesis. *Journal of Medical Ethics*. Pp. 1-10.
- Reichmann, K. 2022. *Modern views on women absent in draft that would overturn Roe*. Courthouse News Service. Available at: <https://www.courthousenews.com/modern-views-on-women-absent-in-draft-that-would-overturn-roe/>. [Accessed 3 April. 2023].
- Renault, E. 2021. Reproductive labour and exploitation: From Marx to feminist theories of social reproduction. *Actuel Marx: Reproduction Sociale*. 70 (20). Pp. 45-61.
- Rexer, G. 2022. Borderlands of reproduction: bodies, borders, and assisted reproductive technologies in Israel/Palestine. *The Sexual Politics of Border Control*. Pp. 1-20.
- Richards, C. 2023. *We All Deserve the Freedom to Control Our Bodies*. MsMagazine. Available at: <https://msmagazine.com/2023/03/01/abortion-pregnant-health-women-birth-control-trans/>. [Accessed 25 June. 2023].
- Rizzo, J. 2023. Asking for It: Gendered Dimensions of Surveillance Capitalism. *Emancipations: A Journal of Critical Social Analysis*. 2 (2). Pp. 1-30.
- Roberts, D. E. 1993. Rape, Violence, and Women’s Autonomy. *Faculty Scholarship at Penn Cary Law*. Pp. 359-388.
- Roberts, D. E. 2017. Why Baby Markets Aren’t Free. *U.C Irvine Law Review*. 7 (3). Pp. 611-621.
- Robinson, J. 2018. *Witches, Witch Hunting and Women by Silvia Federici – Book Review*. Women’s Budget Group. Available at: <https://wbg.org.uk/blog/witches-witch-hunting-and-women-by-silvia-federici-book-review/>. [Accessed 5 February. 2023].
- Rockandel, H. 2022. *Technology for Liberty: Reproductive Surveillance in an Era Post Roe V. Wade*. GRCInsights. Available at: <https://insights.grcglobalgroup.com/technology-for-liberty/>. [Accessed 13 April. 2023].
- Rosenfield, C. 2018. The Great Divide: What Dr. Moreau Tells Us About Posthumanism and the Anthropocene. *Kaleidoscope: A Graduate Journal of Qualitative Communication Research*. 17 (5). Pp. 37-52.
- Rust, D. L. 2010. The Ethics of Controlling Population Growth in the Developing World. *Intersect*. 3 (1). Pp. 71-78.
- Saini, A. 2023. *How did patriarchy actually begin?* BBC Future. Available at: <https://www.bbc.com/future/article/20230525-how-did-patriarchy-actually-begin>. [Accessed 27 June. 2023].

Saldinger, A. 2023. *A year on, the global impact of overturning Roe v. Wade abortion ruling*. Devex: Inside Development. Available at: <https://www.devex.com/news/a-year-on-the-global-impact-of-overturning-roe-v-wade-abortion-ruling-105792>. [Accessed 3 April. 2023].

Salleh, A. 2009. Nature, woman, labor, capital: Living the deepest contradiction. *Capitalism Nature Socialism*. 6 (1). Pp. 21-39.

Sandoiu, A. 2016. *On Childhood, Motherhood, and Being Ahead of Your Time: Shulamith Firestone and The Dialectic of Sex*. The Partially Examined Life. Available at: <https://partiallyexaminedlife.com/2016/10/18/on-childhood-motherhood-and-being-ahead-of-your-time-shulamith-firestone-and-the-dialectic-of-sex/>. [Accessed 3 June. 2023].

Saunders-Staudt, M. 2006. Of Machine born? A Feminist Assessment of Ectogenesis and Artificial Wombs. *Ectogenesis*. 184 (1). Pp. 9-128.

Savin, J. 2023. *Professor sparks backlash after suggesting 'brain dead' women could have their bodies used to carry babies*. Cosmopolitan. Available at: <https://www.cosmopolitan.com/uk/body/health/a42771871/brain-dead-women-surrogate/>. [Accessed 22 May. 2023].

Sayre, N. F. 2008. The Genesis, History, and Limits of Carrying Capacity. *Annals of the Association of American Geographers*. 98 (10). Pp. 120 - 134.

Schager, N. 2022. *The Evil Christian-Cult Doctor Who Secretly Fathered 94 Children*. DAILY BEAST. Available at: <https://www.thedailybeast.com/netflixs-our-father-exposes-donald-cline-a-christian-cultist-doctor-who-secretly-fathered-94-children>. [Accessed 21 May. 2023].

Schoen, J. 2005. Choice and Coercion: Birth Control, Sterilization, and Abortion in Public Health and Welfare. *University of North Carolina Press, Chapel Hill NC*. Pp. 5-50.

Schuur, C. 2017. From biopolitics to bioeconomies: The ART of (re-)producing white futures in Mexico's surrogacy market. *Environment and Planning D: Society and Space*. 35 (2). Pp. 241-262.

Schuur, C. 2018. The baby business booms: Economic geographies of assisted reproduction. *Geography Compass*. 12 (8). Pp. 1-25.

Scotti, M. 2018. *Making babies on Mars won't be easy, or ethically straightforward*. Global News. Available at: <https://globalnews.ca/news/4241934/mars-babies-reproduction-colony-ethics/>. [Accessed 13 June. 2023].

Scribner, B. 1987. Understand Early Modern Europe. *The Historical Journal*. 30 (3). Pp. 1-16.

Serumaga, M. 2017. *The fertility wars: Birth control as US foreign policy*. Pambazuka News. Available at: <https://www.pambazuka.org/human-security/fertility-wars-birth-control-us-foreign-policy>. [Accessed 1 April. 2023].

Shaley, C. & Werner-Felmayer, G. 2012. Patterns of globalized reproduction: egg cells regulation in Israel and Austria. *Israel Journal of Health Policy Research*. 1(15). Pp. 1-35.

Shaley, C. 2010. From Woe to Woe: Egg Donation in Israel. *Ethics – Gender – Medicine. Body Narrative in Political Reflection*. Pp. 71-90.

Shaley, C. 2023. Politics of reproduction: a view from Israel on the Dobbs decision. *Israel Journal of Health Policy Research*. 12 (3). Pp. 2-7.

Shalhoub-Kevorkian, N. 2015. The Politics of Birth and The Intimacies of Violence Against Palestinian Women in Occupied East Jerusalem. *The British Journal of Criminology*. 55 (6). Pp. 1187-1206.

Sharpless, J. 1995. World population growth, family planning, and American foreign policy. *Journal of Public History: The Politics of Abortion and Birth Control in Historical Perspective*. 7 (1). Pp. 30-50.

Shelden, R. G. & Brown. W. B. 2000. “The Crime Control Industry And The Management of the Surplus Population”, *Critical Criminology*, 9: pp. 39 - 62.

Sheldon, R. 2021. Reproductive futurism in the neoliberal present. *Somatic Capitalism: Reproduction, Futurity, and Feminist Science Fiction*. 3 (1). Pp. 1-25.

Sheridan, Y. 2016. Jews, Feudalism, and the Magna Carta: Medieval Myth Management and Modern Mismanagement. *The Institute For The Study of Global Antisemitism & Policy*. Pp. 1-17.

Sherif, V. 2018. Evaluating Preexisting Qualitative Research Data for Secondary Analysis. *FQS: Forum Qualitative Social Research*. 19 (2). Pp. 1-17.

Sherwood, H. 2013. *Israel's Jewish population passes 6 million mark*. The Guardian. Available at: <https://www.theguardian.com/world/2013/jan/01/israel-jewish-population-six-million>. [Accessed 1 April. 2023].

Shetty, P. 2012. *India's unregulated surrogacy industry*. The Lancet. Available at: [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(12\)61933-3/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(12)61933-3/fulltext). [Accessed 20 May. 2023].

Shukla, A. 2021. *Feminism And Capitalism: The Ideological Dilemma of Coexistence*. Feminism in India. Available at: <https://feminisminindia.com/2021/06/24/feminism-and-capitalism-the-ideological-dilemma-of-coexistence/>. [Accessed 1 July. 2023].

Smith, G. P. 2022. The Contemporary Influence of Genetics and Eugenics in Family Planning. *The New Biology*. Pp. 67-91.

Sobhana. 2023. *Property, propriety: Consecrating women's bodies*. Maktoob. Available at: <https://maktoobmedia.com/features/property-propriety-conscreating-womens-bodies/>. [Accessed 24 June, 2023].

Solomon, S. 2018. *Biotech firm in Israel makes fertility waves with genetically modified hormone*. The Times of Israel. Available at: <https://www.timesofisrael.com/biotech-firm-in-israel-makes-fertility-waves-with-genetically-modified->

[hormone/#:~:text=An%20Israeli%20biotechnology%20firm%20based,who%20seek%20to%20get%20pregnant.](#) [Accessed 31 March. 2023].

Song, A. 2014. *Feminism Is Incompatible With Capitalism*. New Internationalist. Available at: <https://newint.org/blog/2014/10/15/feminism-capitalism-equal-pay>. [Accessed 2 July. 2023].

Srnicek, N. & Williams, A. 2015. *Inventing the Future: Postcapitalism and a World without Work*. London: Verso. Pp. 1-245.

Steiger, E. 2010. Not of Woman Born: How Ectogenesis Will Change the Way We View Viability, Birth, and the Status of the Unborn. *Journal of Law and Health*. 43 (2). Pp. 143-169.

Stern, S. W. 2019. *America's Forgotten Mass Imprisonment of Women Believed to Be Sexually Immoral*. History. Available at: <https://www.history.com/news/chamberlain-kahn-act-std-venereal-disease-imprisonment-women>. [Accessed 10 April. 2023]. (Stern, 2019)

Stuvøy, I. 2018. Troublesome reproduction: surrogacy under scrutiny. *Reproductive Biomedicine & Society Online*. Pp. 33-43.

Suzelis, N. 2019. Surrogacy, Value, and Social Reproduction: A Review of *Full Surrogacy Now*. *Meditations: Journal of the Marxist Literary Group: Realism and the Dialectic*. 34 (2). Pp. 1-20.

Sweet, R. 2006. The Ordering of Family and Gender in the Age of the Enlightenment. *Studies in Modern Histories*. Pp. 112-140.

Sweet, R. 2006. The Ordering of Family and Gender in the Age of the Enlightenment. *Studies in Modern Histories*. Pp. 112-140.

Szalai, J. 2015. *The Complicated Origins of 'Having It All'*. The New York Times Magazine. Available at: <https://www.nytimes.com/2015/01/04/magazine/the-complicated-origins-of-having-it-all.html>. [Accessed 16 May. 2023].

Szocik, K. *et al.* 2020. Visions of a Martian Future. *Futures*. Pp. 1-11.

Tarnoff, B. 2016. *Four Futures: Life After Capitalism* review – will robots bring utopia or terror? The Guardian. Available at: <https://www.theguardian.com/books/2016/nov/24/four-futures-life-after-capitalism-peter-frase-review-robots>. [Accessed 20 June. 2023].

Terry, M. 2018. *From Menopausal Nuns to Israeli Biotech: Israel's BTG Developed First Genetically Modified Hormone to Treat Fertility*. BioSpace. Available at: <https://www.biospace.com/article/from-menopausal-nuns-to-israeli-biotech-israel-s-btg-developed-first-genetically-modified-hormone-to-treat-infertility/>. [Accessed 3 April. 2023].

Thompson, C. 2005. *Making Parents: The Ontological Choreography of Reproductive Technologies*. Cambridge: MIT Press. Pp. 5-20. (Thompson, 2005: 5-20)

Tiwari, A. 2020. *'Mother Earth' – Is Nature Gendered To Make Men Feel Superior? Feminism in India*. Available at: <https://feminisminindia.com/2020/06/24/mother-earth-nature-gendered-men-feel-superior/>. [Accessed 15 May. 2023].

Tsitras, E. 2013. Monsters manufactured: the human animal hybrid in science fiction and Donna Haraway's "A Cyborg Manifesto". *School of Creative Media: RMIT University*. Pp. 5-96.

Tucker, S. 2023. *In a post-capitalist utopia, the family has been abolished*. Mercator. Available at: <https://www.mercatornet.com/in-a-post-capitalist-utopia-the-family-has-been-abolished>. [Accessed 6 June. 2023].

Vallverdu, J. & Bolx, S. 2019. Ectogenesis as the Dilution of Sex or the End of Females? *Feminist Philosophy of Technology*. Pp. 105-122.

Van Wichelen, S. 2022. Law as Atkinship: The Colonial Present in Global Surrogacy. *Catalyst: Feminism, Theory, Technoscience*. 8 (1). Pp. 1-21.

Vere, J. P. 2007. "Having it all" no longer: Fertility, Female Labour supply, and the new life choices of Generation X. *Demography*. 44 (4). Pp. 821-828.

Vertommen, S. 2016. Towards a Political economy of egg donations: doing it the Israeli way. *Critical Kinship Studies: Kinship (Trans)formed*. Pp. 169-184.

Vertommen, S. 2017. From the Pergonal project to Kadimastem: A genealogy of Israel's reproductive-industrial complex. *Biosocieties*, 12(2). Pp. 282-306.

Vora, K. 2015. *Life Support: Biocapital and the New History of Outsourced Labour*. Minneapolis: University of Minnesota Press. Pp. 5-15.

Wang, B. 2023. *The Fertile Will Inherit the Earth/* NextBigFuture. Available at: <https://www.nextbigfuture.com/2023/06/the-fertile-will-inherit-the-earth.html/> [Accessed 14 June. 2023].

Wang, M. 2019. *China's Algorithms of Repression*. Human Rights Watch. Available at: <https://www.hrw.org/report/2019/05/01/chinas-algorithms-repression/reverse-engineering-xinjiang-police-mass>. [Accessed 23 April. 2023].

Weill-Greenberg, E. 2022. *What Would the End of Roe s. Wade Mean For Pregnancy Behind Bars*. The Appeal. Available at: <https://theappeal.org/roe-v-wade-pregnancy-prison/>. [Accessed 7 April. 2023].

Weinbaum. A. E. 2019. Human Reproduction and the Slave Episteme. *The Afterlife of Reproductive Slavery: Biocapitalism and Black Feminism's Philosophy of History*. Pp. 1-28.

Weiss, M. 2002. *The chosen body: the politics of the body in Israeli society*. Stanford: Stanford University Press. Pp. 1-200.

Weiss, R. 1997. *2 New Clones Carry Human Clotting Gene*. The Washington Post. Available at: <https://www.washingtonpost.com/archive/politics/1997/12/19/2-new-clones-carry-human-clotting-gene/a846f4a3-32e9-47bc-9735-7ab528132be5/>. [Accessed 10 May. 2023].

Weydner, S. 2018. Reproductive Rights and Reproductive Control: Family Planning, Internationalism, and Population Control in the International Planned Parenthood Federation. *Geschichte und Gesselschaft*. 44 (1). Pp. 135-161.

White, L. 2021. *Sophia, an AI-powered robot, want to become a mother*. Stealth Optional. Available at: <https://stealthoptional.com/artificial-intelligence/sophia-robot-wants-to-be-mother/>. [Accessed 3 June. 2023].

Widdows, H. 2010. The Janus-Face of New Reproductive Technologies: Escaping the Polarized Debate. *International Journal of public Theology*. 4(1). Pp. 76-99.

Wilde, M. J. & Hopkins, K. 2017. From Eugenecists to Family Planners: America's Religious Promoters of Contraception. *Intech Open: Chapter Metrics Overview*. Pp. 1-20.

Wion Web Team, 2022. *Synthetic wombs? Elon Musk, other tech entrepreneurs discuss population collapse, solutions*. Wion. Available at: <https://www.wionews.com/science/synthetic-wombs-elon-musk-other-tech-entrepreneurs-discuss-population-collapse-solutions-446496>. [Accessed 29 May. 2023].

Woolfrey, J. 2006. Ectogenesis: Liberation, Technological Tyranny, or Just More of the Same? *Ectogenesis: Artificial Womb Technology and the Future of Human Reproduction*. 184 (1) Pp. 129-138.

Yachot, N. 2022. *Biden urged to clarify that abortion aid abroad unaffected by Roe v. Wade ruling*. The Guardian. Available at: <https://www.theguardian.com/us-news/2022/aug/12/foreign-abortion-funding-limit-ban-senators-joe-biden>. [Accessed 4 April. 2023].

Yeates, N. 2012. Global care chains: a state-of-the-art review and future directions in care transnationalization research. *Global Networks*. 12 (2). Pp. 135-154. (Yeates, 2012: 135-154)

Young, C. 2022. *An AI robot nanny will care for human embryos in artificial wombs*. Interesting Engineering. Available at: <https://interestingengineering.com/science/an-ai-robot-nanny-will-care-for-human-embryos-in-artificial-wombs>. [Accessed 18 June. 2023].

Yuval-Davis, N. 1989. National reproduction and the “demographic race” in Israel. *Woman-nation-state*. Pp. 92-109.

Yuval-Davis, N. 1996. Women and The Biological Reproduction of “The Nation”. *Women's Studies International Forum*. 19 (1). Pp. 17-24.

Zhang, S. 2019. *The Fertility Doctor's Secret*. The Atlantic. Available at: <https://www.theatlantic.com/magazine/archive/2019/04/fertility-doctor-donald-cline-secret-children/583249/>. [Accessed 21 May. 2023].

Zimmermann, K. 2018. *The future of AI may be female, but it isn't feminist*. VentureBeat. Available at: <https://venturebeat.com/ai/the-future-of-ai-may-be-female-but-it-isnt-feminist/>. [Accessed 2 June. 2023].

Zuboff, S. 2019. *The Age of Surveillance Capitalism by Shoshana Zuboff review – we are the pawns*. The Guardian. Available at: <https://www.theguardian.com/books/2019/feb/02/age-of-surveillance-capitalism-shoshana-zuboff-review>. [Accessed 12 April. 2023].

Zuboff, S. 2019. *The threat of surveillance capitalism, and the fight for a human future*. ABC News. Available at: <https://www.abc.net.au/religion/shoshana-zuboff-threat-of-surveillance-capitalism/11433716>. [Accessed 12 April. 2023].

Zubrin, R. 2012. The Population Control Holocaust. *The New Atlantis*. 35 (1). Pp. 33-54.