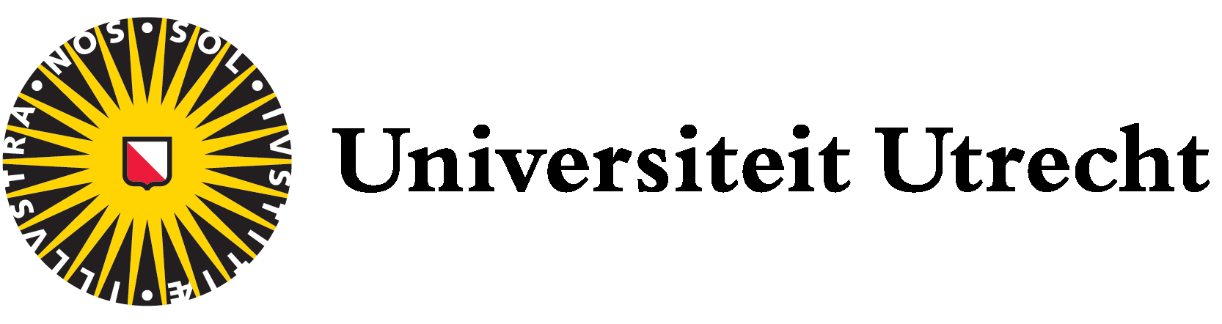
The Biopolitics of the Unborn:

A Dutch case of the prenatal testing

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### Abstract

This research aims to explore the role of biopolitics in the normalisation of prenatal screening in the Western world. By employing the Foucauldian biopolitical lens, I question the transformation of the prenatal screening/diagnosis from a tool to monitor high risk pregnancies to a modern eugenics technology used to separate foetuses into worth living - abled bodies, and not worth living - disabled bodies. Reading the prenatal apparatus as an instance of biopolitics, I show how the medical gaze apprehends both the pregnant body and the foetus as its objects of knowledge, and regulates them through public health practices and policies. In this view, I weave different streams of feminist and disabilities theories and their engagement with the Foucauldian “truth”. On one hand, I unpack the notion of risk employed by the modern governmentality to normalise disability screening, and on the other hand, I build on the critiques on sex selection abortion and selective abortion in case of disability. Through the analysis of a Dutch case study of the prenatal testing, I find the trend of home birth to be not only related to the safety and non-medicalisation of the birth, but also influenced by the cost-effectiveness of home-birth option compared to hospital and birth-centre options. The high perinatal mortality in The Netherlands forces the implementation of a nationwide prenatal testing praxis designed to manage the risk for foetal disabilities and to facilitate that all women can test for disabilities regardless the risk of their pregnancy. The easiness of the Non-Invasive Prenatal Test (NIPT) and the increase demand for carrier (genetic) screening raise ethical implication, such as the normalisation and trivialisation of selective abortion due to disabilities and the risk of extending the scope of the test for abnormalities, endangering our collective view on “normal” human embodiment.

### Introduction

Since the early twentieth century, pregnant women, or persons[[1]](#footnote-1) trying to conceive in the Western world have been finding themselves on a shifting landscape between reproductive autonomy and public health. This landscape is a murky field between a rationale arguing that prenatal testing supports women to make informed, empowering choices which will allow them to be the owners of their reproduction outcomes and another rationale arguing that prenatal testing is a tool that should be used to reduce the incidence of certain diseases, hence women’s individual choices with regards to the testing will impact the overall health population (Ravitsky 2017).

On the other side of the consultation table, the obstetricians have been increasingly convinced in the past decades that medical supervision of pregnant women would reduce the incidence of birth defects. Hence, this medical supervision of pregnant bodies, named antenatal or prenatal care, has massively intensified after the Second World War. At that moment, the interest in the unborn child was just marginal and the focus was placed on the pregnant woman (Löwy 2017). However, the development of prenatal diagnosis and screenings for birth defects has shifted the focus onto the live foetus. These screenings for birth defects using ultrasounds are a constitutive part of the obstetric care since the 1950s, slowly being aided by real-time grey-scale images in the 1970s, offering more and more accurate prenatal diagnoses at early stages of the pregnancy. Ever since, ultrasonography is used to determine the gestational age, the sex, and the number of foetuses, to detect any malformations, and to test the developmental path and well-being of a baby (Carlson and Vora 2017). Thus, the notion of choice when embarking in a pregnancy journey comes attached to a heavy ambivalence in which mothers are suspended, with their pregnant bodies dangling as a question mark, as a battlefield of moral judgment: if one does not accept to get subjected to the prenatal screening, they might be accused of being irresponsible, of voluntarily endangering their unborn child by not accepting to look inside her viscera and measure the limbs, or the thickness of fluid behind the neck[[2]](#footnote-2) of the foetus. But if one accepts to have all the prenatal tests, they might be accused of wanting to know about any anomalies in order to get rid of an unwanted disabled child. The women and their bodies become the antagonized subjects, the scapegoats of this entire prenatal apparatus, born and enacted at the moment of the conception.

My intervention in this thesis is to emphasize, that by looking inside the apparatus, we can understand that women do not really have a choice, and if they do, this choice (prenatal policies-compliant or not) is masked under the liberal flavours of modern governmentality. Therefore, the question I am asking throughout this research is *what is the role of biopolitics in the normalization of prenatal screening and its transformation from a tool to monitor high risk pregnancies, to a sort of modern eugenics technology disguised under a routinary technique used to analyse, monitor and actively decide which life matters and which doesn’t?* Hence, by looking inside the biopolitics of the unborn, I signal, question and trace the birth of the biopolitics, this permanent-gestational[[3]](#footnote-3) state of prenatal surveillance, which is programmed to deliver healthy humans, securing in this way, the future of humanity.

In the first chapter, I will discuss the shift of pregnancy from a private experience to an issue for public health care, by reading the prenatal apparatus as an instance of biopolitics. By employing the Foucauldian lens of biopolitics (Foucault 2008), I will investigate how the political apparatus gets involved in the life of its constituents[[4]](#footnote-4), under the pretext of creating order and providing a healthy life for future populations. By touching upon the notion of “truth”, I will demonstrate that the medical gaze permeated into the biopolitical apparatus is a twofold complex process which apprehends both the pregnant body and the foetus as its objects of knowledge, and it regulates them through public health practices and policies.

In the second chapter, I will combine biopolitics with the ethics of prenatal testing, by gradually introducing feminist and disability theories and their engagement with Foucault and the “truth”. I will start by unpacking the notion of personhood and the onto-technological transfiguration of foetuses into babies using in-utero visualisation tools (Warren 1989, Franklin 1991, Duden 1993, Featherstone 2008). Continuing the foetal politics debate, I will show the role of biopolitics and the intercession of science/technology in pregnancy, and how they normalise disability screening into a standard of care. This normalisation, produced through the conceptual tool of “government of risk” (Tremain 2006), as a measure of control for the wellbeing of the population has as a desired outcome the reduction of disabilities occurrences. Moving forward, I will analyse the somatechnics of pregnancies and the “technological quickening” (Mitchell and Georges 1997, 375), by pinpointing the turn of foetuses into foetal subjects. Furthermore, I will touch upon the topic of abortion based on sex selection, and the tension between its advocates that consider it part of the procreative autonomy (basic human right) and the feminist critique that accuses this procedure of gender essentialism (Hendl 2015), and “gendercide” (Birdsall 2010). I will end this chapter with the critique of disability activists on prenatal testing and selective abortion. Drawing upon the expressivist argument of disability (Parens, Asch 1995), I will engage in the debate of proper human embodiment, and the empirically grounded implications of biomedical science (Tremain, 2006).

In the last chapter, I will present the case study of the biopolitics of the Dutch prenatal care - motivated by my own positionality (pregnant women/mother/actor within the Dutch prenatal apparatus). In this sense, I will analyse the trend of giving birth at home in the Netherlands and its implications, the transformation of perinatal policies catalysed by the high rate of perinatal mortality and the need for managing the risk through the standardisation of prenatal procedures. Furthermore, I will look into the implementation of a non-invasive prenatal testing system for all women (regardless the risk of the pregnancy) and into the carrier testing, as a new (yet possibly more used in the future) method for monitoring and diagnosing foetal disabilities.

### UNBORN | SCANNED: Biopolitics and the benevolent medical gaze

#### Is one’s pregnancy entirely one’s own?

“The moment I found out I was pregnant was probably one of the scariest and simultaneously happiest of my life. I was basking in the joy of potentiality, the anticipation of having a child was pumping in my veins, almost perceiving the bodily and affective transition that my wish of getting pregnant was producing, whilst entering the reality realm of actually being pregnant. I remember dwelling upon these thoughts, concerning myself more with the new identity that I would get myself placed in, rather than the practicalities of this new identity. One split of the second after that, while forcefully staring at the pregnancy test in my hand, I started worrying, and mentally planning a doctor appointment in my head, to start monitoring my pregnancy. Little did I know that from that moment onwards, that solitaire blissful moment before sharing the news with anybody else (my partner included), my pregnancy was not mine anymore. My pregnancy, my very personal journey into motherhood, my bodily and affective process of carrying, sustaining, nurturing and potentially birthing life was entering the public health domain. The evolution, growth, wellbeing of my baby, was becoming of communal interest, subject of scrutiny, measuring and testing. My baby, who actually was not even a human being yet for the upcoming 19 weeks or so?, was already not entirely mine anymore”. (Auto-ethnographic fragment, Laura Dragulin on pregnancy)

The rise of the obstetric ultrasounds used as technique to detect birth defects in the 1950s, continued with the expansion of the real-time grey-scale images in the 1970s, has provoked a junction in the prenatal care trajectory. With prenatal diagnosis at early stages of the pregnancy the focus on the live foetus and its well-being has inextricably gotten woven in the pursuit of parenthood. In this sense, having a healthy baby has become an administrative project, coordinated by different health care institutions that monitor the pregnancy, and prevent “prenatal abuse, the unjustified mistreatment of the embryo/fetus”(Overall 2012, 42). Specialists channel their efforts into this prenatal care project by trying to prevent or cure maternal pathologies that could affect the health of the foetus or the length of its gestation. The ultimate goal is to decrease perinatal mortality. In accomplishing this, medical specialists supervising the pregnancy offer information on the behavioural changes needed regarding smoking, alcohol and drugs consumption, being overweight/underweight, but also folic acid use, medication, nutrition, working conditions, travel plans, vaccinations and general hygiene (De Jong-Potjer et al. 2011). In addition, this logistical prenatal project deals with different layers of measurements[[5]](#footnote-5) of the maternal body’s predispositions, generally seen as part of the public health.

The prenatal tests are designed to inquire how able the mother is to accommodate the uterine existence of her baby, by offering it a proper nurturing foetal shelter. However, given their focus on diagnosis rather than cure, all these prenatal care measurements aggregated within the timeline of the pregnancy are designed to determine any potential impairment at early gestational stages. They cannot preserve nor facilitate the well-being[[6]](#footnote-6) of the foetuses, hence they cannot optimise in any ways the foetal development. Therefore, the question is what is really the rationale behind these tests and screening systems, if they cannot be accountable for the well-being of the foetus?

In answering this we can argue that one’s pregnancy is never entirely one’s own, but it is from the conception (even preconception) deeply rooted in the administrative, technological and scientific apparatus, through a nitty-gritty project of maintaining and enhancing the collective, public health. In the next section, I begin to develop this argument by reading the prenatal apparatus as an instance of biopolitics.

#### Biopolitics: an understanding of the prenatal apparatus

In her book *Imperfect Pregnancies: A History of Birth Defects and Prenatal Diagnosis*, Ilana Löwy assembles all the different medical technologies involved in prenatal care, such as amniocentesis, foetal cells culture, the study of human chromosomes and cytogenetics, and the obstetrics ultrasounds, into what she calls the “prenatal diagnosis dispositif” (Löwy 2017, 2). Borrowing the term *dispositif[[7]](#footnote-7)* from Michel Foucault, Löwy defines it to be an entity which combines a specific “regime of truth” with practices and public health policies, becoming a territory of knowledge/power. As she puts it, the “prenatal diagnosis dispositif” encompasses perfectly the “heterogeneous assemblage of instruments and techniques, professional practices, and institutional and legal arrangements that, taken together, made it possible to diagnose fetal anomalies” (Löwy 2017, 2).

By pushing further Löwy’s Foucauldian understanding of prenatal care, I propose to analyse this administrative apparatus that deals with the monitoring of pregnancy through the lens of “biopolitics”. In doing so, we can understand that the surveillance of pregnancy falls under the benevolent, regulative and corrective mechanisms that have as target the well-being of society and which are fuelled by scientific knowledge into achieving it. This type of surveillance is, according to Foucault, the framework of biopolitics, which was designed simultaneously with the rapid development of public health in the second half of the eighteenth century. The “medizinische Polizei, public hygiene and social medicine” (Foucault 1978) was created as a institutional tool responsible for the management of the bodies and capable of “reducing the infant mortality rate, (…) intervening to modify and impose norms on living conditions (…) and adequate medical facilities” (Foucault 1978, 512).

According to Foucault, biopolitics is a political rationale which takes as its aim the “administration of bodies and the calculated management of life” (Foucault 1978, 138). Therefore, this intersection of human biology with the political domain has the goal to “ensure, sustain, and multiply life, to put this life in order” (Foucault 1978, 138). In this way, this power exercised over life is understood by Foucault as “an explosion of numerous and diverse techniques for achieving the subjugations of bodies and the control of populations” (Foucault 1978, 140). The level of subjugation and control is measured by Foucault using two scales, the body and the population, showing that discipline is exercised at the scale of the body, while extensive measurements and statistics are used to control the population as a whole and its encompassing “propagation, births and mortality, the level of death, life expectancy and longevity, with all the conditions that can cause these to vary” (Foucault 1978, 139).

In his works *Discipline and Punish* (1975) and volume I of *The History of Sexuality* (1976), Foucault has developed his analysis of the conceptual transition from an ancient, absolute governing body to a modern, rational body, which guides, shapes and leads its constituents. In the modern epoch, the state is concerned with life itself, which becomes the axis-mundi of power exertion – not a forceful, coercive exertion, but a gentle, subtle one. According to Foucault, while sovereignty is the “power to take life or let live” and the “privilege to seize hold of life in order to supress it” (Foucault 1978, 136), biopolitics is a pristine form of authority “that exerts a *positive* influence on life, that endeavors to administer, optimize, and multiply it, subjecting it to precise controls and comprehensive regulations” (Foucault 1978, 137, my italics). This new form of biopolitics is animated by slightly different mechanisms of power, to the extent that it opposes the “juridico-discursive character” of power, conceptualised by Foucault as repressive and *negative*, and whose “effects take the form of limit and lack” (Foucault 1978, 83).

Under biopolitics, the state does not decide whether a child gets to live or die, as the modern apparatus does not operate under the totem of sword any longer, but prenatal screening procedures, encompassed in public health policies and overseen by specialised authorities, such as bioethicists, gain the “power to foster life or disallow it to the point of death” (Foucault 1978, 138). This “point of death” can be exemplified by the cases of abortions based on sex selection or by prenatal diagnoses of disability followed – as it is often the case – by routinary “so-called therapeutic abortions, (…) recommended by professionals and sometimes performed until shortly before birth” (Samerski 2016, 700).

As screening techniques advance, the sex of the offspring is decided and potential malformations or genetical abnormalities are identified in increasingly earlier stages of pregnancy. But prenatal diagnosis not only catches genetical malformations, it also predicts and marks the existence of the foetus, sentencing it to either a healthy, normal path of existence or a dysfunctional, undesirable one. This sentencing to an *other than normal existence* (ab-normal) is, in this case, the calculation of the likelihood of being born with different congenital conditions. By sentencing different bodies to remain outside the borders of normality and functionality – hence humanity – the practice of prenatal diagnosis undeniably contributes to the cleaning up of the population, of the species, at stake being the “biological existence of a population” (Foucault 1978, 137). Henceforth, the plane of human life systematically emerges as the result of numerous attentive and purposive tweaks at the level of humanhood, given that biopolitics brings life into “the realm of explicit calculations”, while knowledge/power becomes an “agent of transformation of human life” (Foucault 1978, 143).

Acknowledging the forces in action in the modern state, and the power transition from sovereignty to biopolitics sketched by Foucault, the prenatal screening apparatus is deeply rooted within the mechanism of biopolitics, which concerns itself with the well-being of individuals, as constituents of a population. But in order to understand the internal mechanism of this prenatal apparatus, which is very much a contemporary challenge, Foucault is dislocating the establishment’s joints and reassembling them, providing an operating tool which helps us decode the benevolent medical gaze. This medical gaze, which screens, tests, measures, and surveys in order to protect its inscribed individuals, is introduced by the state in the public life as a necessary, useful technology of power. This power, transcribed into actionable medical policies, recommendations, medical research – the prenatal diagnosis apparatus – becomes the site of knowledge as power, as for Foucault, the existence (the being) of a population is achieved through “problematisations” and practices. Foucault defines problematisations as being “the development of a domain of acts, practices and thoughts that seem (…) to pose problems for politics” (Foucault 1997b, 114). This means that by problematising a certain aspect of pregnancy, that aspect can become the subject of a regulated practice, a policy which will help solve the initial problem.

Furthermore, knowledge/power is useful in addressing the cultural shift that prenatal testing took from being a special intervention towards becoming a standard process during pregnancy[[8]](#footnote-8), contributing to the process of medicalisation and technologisation of pregnancy in the Western world. This process demands an inquiry into the standardisation of prenatal screening through what Foucault calls the “the deployment of force and the establishment of truth” (Foucault 1995, 184). In this sense, I propose analysing the truth, on one side, in its potency to produce new technologies of the self, new forms of subjectification, such as “the objective fetus together with its main manager, the pregnant woman” (Samerski 2016, 704) and, on the other side, in its potency to negate or to demote the truth of pregnant women, replaced with objective, scientific knowledge.

#### The truth in the prenatal apparatus

The truth as a technology of subjectification is intimately connected with the notion of “government by the truth”, developed by Foucault in his *On the Government of the Living* (2014), where he shows that the governed human beings are not subjected to pure obedience. In his view, humans are invited to get woven in the fabrics of truth, as the power relations are constantly negotiated to create their new subjectification. In this sense, the governed individuals help the truth manifest through themselves, their actions, or their testimonials, as the truth in its truthiness will not need reinforcement, nor a call for submission. The truth will, however, become an obligation, and the individuals will become its gatekeepers, simultaneously saving it and being saved by it. But Foucault questions this new alternative of truth, in his project of tracing the genealogy of truth, asking “what does the addition of this notion of obligation means in relation to the notion of manifestation of truth? How does the truth oblige, in addition to the fact that is manifested?” (Foucault 2014, 94). The manifestation of truth, in this perspective, breaks the walls of the “regime”, as these two terms are conceptually opposed: when truth prevails, there is no need for a regime. Truth is the law maker, therefore there is no need for a coercive regime of government: “truth itself determines its regime, makes the law and obliges me. It is true and I submit to it ” (Foucault 2014, 239).

In his attempt to dislocate the truth, Foucault reaches the musty, sticky, fermenting core of the contemporary governing apparatus, where the human beings are finding themselves obliged to repeat and internalise this mantric oath: “it is true, therefore I submit” (Foucault 2014, 97). Although the underlining conditioning, the annexed submission is invisibly sketched within this “game of truth”, Foucault considers it a serious “historical-cultural problem” (Foucault 2014, 97). As he points out, “the ‘you have to’ internal to the truth immanent to the manifestation of the truth, is a problem that science in itself cannot justify and account for” (Foucault 2014, 97), therefore we could break free from this “game of truth”, because the relation between truth and submission is a constructed one, and it has to be escaped. In the case of the prenatal apparatus, this ultimate “historical-cultural problem” reinforces the position that pregnant women are obliged to take in submitting fully to the medical “truth”.

On one side, Foucault shows that through this game of (scientific) truth, some actors (in this case, pregnant women) are forced to undergo through the process of subjectification, truth changing the meaning of some internal relations inside the apparatus (in this case, the pregnant women become the administrators of the pregnancy, advised into calculating the risks in order to facilitate positive outcomes). On the other side, he demonstrates the irrefutable supremacy of the truth – “the logic of the sciences” (Foucault 2014, 97) – which places pregnancy under the constant scrutiny of the obstetricians’ medical gaze. This medical gaze imbued within the biopolitical apparatus is a political process, as it captures both the pregnant body and the foetus (another potential human body) as its objects of knowledge, problematising them through various prenatal practices and policies. Whilst the pregnancy is facilitated, diagnosed, managed, interrupted by medical experts, how can we account for these practices being inscribed in the pregnant body (and the foetus)? And, most importantly, how can we answer to the ethical dilemmas that rise when the pregnant body and the foetus are becoming the objects of scrutiny through prenatal testing and reproductive technologies?

### UNWANTED: Challenging the ethics of prenatal testing and reproductive technologies

#### When is a foetus a person?

When referring to bodies in the context of prenatal testing, there is also a need of critical analysis of this embodiment, more specifically the humanness or the personhood of these bodies in their incipient uterine phases. By-passing and rejecting the claim that embryos are persons, and that the personhood starts at the moment of fertilisation (Gallagher 1984), philosophers, bioethicists, and policy makers consider that aspects of biological human development are more relevant in defining personhood, rather than fertilisation (sperm/egg penetration). However, they do not agree on the exact elements that establish one’s personhood: some say that only at birth an infant “does become a biologically separate human being” (Warren 1989, 62), others pinpoint “physical autonomy (...) as the most important qualification for personhood” (Morgan 1996, 59), whereas others believe that personhood can be attribute once the foetus resembles to a human, around week nine of gestation, or once the central nervous system and organs are developed and functioning, at around twenty-six weeks gestation (Miklavcic and Flaman 2017).

Although I criticise the technologies inextricably linked with the surveillance of bodies inside the uterine territory, I stand with the autonomy, safety and privacy of the body that owns the uterus and I agree with the claim that “human rights begin at birth” (Copelon et al. 2005). Therefore, my rationale holds closely the idea that reproductive autonomy should be the soundboard of any decision, whether taken as a consequence of the predictive sentencing of prenatal screening, caused by the economic costs of childrearing and support, or any other reasons. As Mary Warren puts it, “to extend equal legal rights to fetuses is necessarily to deprive pregnant women of the rights to personal autonomy, physical integrity, and sometimes life itself. There is room for only one person with full and equal rights inside a single human skin” (Warren 1989, 63).

In supporting the primacy of the right of the mothers on the foetus residing in their bodies, Sarah Franklin proposes a new “ontological construction” (Franklin 1991) through which the mother and her foetus are not connected, but separated. This separation of the foetus from its mother is extended to the separation between the biological features of a foetus and its socially constructed features of a child-to-be. Her argument is important in the conceptualisation of the foetal subject – and its “extensive reliance on high technology” (Franklin 1991) – to be seen in the female womb.

This reliance on technology is also something that Lisa Featherstone uses in her work on the “making” of the foetus as a baby. Featherstone argues that since the beginning of the twentieth century, the foetus has become “more infant than the embryo” (Featherstone 2008, 452). Although her analysis is based on the Australian in-vitro “space”, it can be applied to the whole Western world, given that “the new medical concern for the foetus was embedded in social, political and economic discourses stressing the need for population growth” (Featherstone 2008, 454). Furthermore, Featherstone adds that the “medical interest in the foetus resided in its potential for a new life for the white nation” (Featherstone 2008, 459), which could be seen as a demarcation point for the introduction of the foetus (as a future human) into the realm of public health care. In this way, through systematic prenatal praxis, the administrative power of the state reinforces its intention to cultivate proper, abled humans subjects, attempting “to ensure, sustain, and multiply life, to put this life in order” (Foucault 1978, 138).

Some feminists (alongside ob-gyns, bioethicists and geneticists), such as Laura Purdy (1996), applaud the gaze into the woman’s womb and claim that prenatal testing for disabilities enhances the autonomy of women and their reproductive choices, saving them from biological uncertain outcomes. Other feminists, such as Barbara Duden (1993) and Sarah Franklin (1991), argue that prenatal technologies do not help women to see their future bundle of joy in its potentiality to become a baby, but they only visualise and measure the foetal data and the potential foetal abnormalities, constructing a technologised, artificial reality.

Shelley Tremain, who identifies as a disabled feminist philosopher of disability, brings the critique on the prenatal testing even further, claiming that these technologies are warped and vacuumed inside the fabrics of biopolitics. As she argues, the very constitution of the prenatal disability/impairment as a “thing” is “a widening form of modern government, that is, a calculated mode of influence that increasingly limits the field of possible conduct in response to pregnancy” (Tremain 2006, 37). This mode of influence does not forbid but does not encourage either, yet (morally) condemns pregnancy conducts deviating from the standardised one.

#### The normalisation of prenatal testing: standard of care or risk management?

The routinary prenatal screenings offered nowadays were at their beginnings, half century ago in the Western world, anything but routinary. These exceptional tools were not meant to become instrumental in standard universal prenatal procedures applied in the pregnancies (in the developed world), as they were initially meant solely for pregnancies with “increased risk” (Duden 1993, 27). Signalling the universalisation of sonar screening, Tremain warns about this transition from high risk to all pregnancies, pointing out that “the emergence of risk may be seen as a technology of modern government” (Tremain 2006, 48) in the West.

I want to offer an explanation for the risk management rational inscribed in the prenatal apparatus by using the lens of Judith Butler’s notions[[9]](#footnote-9) of “precariousness” (Butler 2004) and “grievability” (Butler 2009). Butler demonstrates that some lives are the epitome of ungrievability because their very essence is not considered human but rather a threat for humanity, hence humans’ shared precariousness. She shows that power distributes precarity unevenly, making a difference between lives that are worth protecting versus lives which are not: “the shared condition of precariousness leads not to reciprocal recognition, but to a specific exploitation of targeted populations, of lives that are not quite lives cast as "destructible" and "ungrievable." Such populations are "lose-able," or can be forfeited, precisely because they are framed as being already lost or forfeited; they are cast as threats to human life as we know it” (Butler 2009, 31).

Following Butler, we can argue that, through the prenatal screening procedures, the modern government indirectly and subliminally wishes to localise and divide lives into two categories: some worthy of grief and mourning (normal foetuses), some disposable and ungrievable (foetuses with disabilities). In addition, the discourse of risk imbricated in the prenatal practices and procedures implicates power relations that have not been properly interrogated, and which work as a self-fulfilling prophecy [[10]](#footnote-10) as they continuously reinforce the risk they want to minimise. But who determines when the risk is real and not fabricated?

Launching a critique in this direction, Tremain warns about the dire need of problematising the notion of risk. She notes that although feminist and bioethicists alike insist that genetic counselling protocol and prenatal testing for disabilities should be “noncoercive and value neutral” (Tremain 2006, 37), there is very little interest in understanding the “risk”, which is the underlying reason for the counselling or testing. The birth of the foetal subject (the subject that is tested, morphologically analysed, measured) is facilitated on one side by the technological development of sonar screening and on the other side by the “technology of modern government” (Tremain 2006). Subsequently, this discursive birth (the foetal subject is enacted through the practices of testing, morphological analysis and measurements) is produced before its actual transition from intra-uterine to extra-uterine life. Ultimately, it is facilitated by the politicisation and medicalisation of human reproduction oriented towards the minimisation of the risk.

But how has risk become the common denominator of all pregnancies, even as not all pregnancies are risky? In her attempt to explain “the government of risk” of prenatal testing in the contemporary United States context, Tremain shows that the normalisation prenatal testing into a standard of care has a two-fold root cause. On one side, is the involvement of the state in the regulation of obstetrics care through public health policies and on the other side, is the legitimisation of prenatal care through the notion that “prenatal testing is an inherently good (and, therefore, necessary) intervention of which pregnant women can avail themselves” (Browner and Press, quoted in Tremain 2006, 45).

The standardisation of prenatal testing is deeply rooted in the workings of biopolitics, and as Foucault puts it, “a normalizing society is the historical outcome of a technology of power centred on life” (Foucault 1978, 144). However, the political apparatus governs its subjects *through* their freedom, wants them autonomous, active and free in their choices, but fully responsible of their outcomes. In this way, responsibility and rationality become catch phrases that pressure women to become assertive and accountable pregnancy managers, as “responsibility is equated with the capacity to behave rationally, the term presupposes a calculation of expected benefits and risks, and a decision to follow the path with the greatest possibility of benefit with the least risk” (Ruhl 1999, 96).

The mechanism at play here, biopolitics, obliges from afar, constituting new subjects *(mothers-managers)* just to govern them again: “for power functions best when it enables subjects to act in order to constrain them” (Tremain 2006, 46). Therefore, pregnant women are in the continuous limbo “between reproductive autonomy and public health” (Ravitsky 2017), as they simultaneously bear the responsibility for the outcome of the pregnancy and for the common future of humanity, deeply embedded in their choices during pregnancy. They are “both disempowered and held responsible at the same time” (Balsamo 1996, 110), uncovering a tension that Foucault points out to be hidden in the liberal governments, under the a “framework of political rationality” (Foucault 2008, 317). According to him, there is a paradox between “the technology of government” (Foucault 2008, 323) – biopolitics – concerning with issues of life and populations, and the way in which it has “constantly been haunted by the question of liberalism” (Foucault 2008, 324).

Lorna Weir talks about this “polymorphous character” (Foucault 1995) of liberalism observing that the “rationality of liberal governance establishes the practices of freedom as a field of constrained conflict” (Weir 1996, 373). As Weir puts it, women become free to have reproductive choice and to obtain genetic counselling, ostensibly gaining autonomy, while they are made unfree by this autonomy, for the latter constrains them in ways that serve the same political apparatus that granted them this freedom. This form of freedom theoretically assembled by Foucault appears as a new form of governance – *the foetal politics* – to which pregnant women submit. Although women are not near being forced to undergo prenatal testing and screening[[11]](#footnote-11), they are offered options and are expected to be good risk-managers, making decisions which will lead to a desirable outcome. By being exposed to the biomedical standards and the health care policies, women are not forced into complying, but are motivated to have a choice of their own, a “choice defined by the instruction they receive on the risks and potential consequences of their menu of options” (Samerski 2016, 705). Borrowing the definition of the term “policy” from Foucault, “understood as a rational art of governing” (Foucault 1997a, 70), or as a “set of means necessary to make the forces of the state increase from within” (Foucault 1997a, 69), we notice that these policies appeal to the responsibility and rationality of pregnant women themselves.

#### Somatechnics of pregnancy and the foetus/technologised baby

The medicalisation of pregnancy and birth was possible and has gained extreme momentum in our contemporary societies, in the last century, catalysed by experiments on women’s bodies[[12]](#footnote-12). Obstetricians went from listening the heartbeat of the foetus to using an ultrasonography to capture a 3D image of the foetal heart; birth giving went from home to the delivery rooms of the hospital[[13]](#footnote-13); from drugs-free all natural to drugs on demand; from midwives or doulas to gynaecologists, obstetricians, or ob-gyns; from the occasional, emergency C-section to planned, on-demand C-sections. As Silja Samerski argues, birthing, before its medicalisation started in the eighteenth century and deepened today, was cushioned in a women’s-only sphere, and it was the “source of the epiphany of an expected child within a socio-somatic… activity, that started with labor, culminated in cutting the cord and was finished by afterbirth and – sometimes – with swaddling. It happened between women. Birth was a beginning” (Samerski 2016, 708).

However, throughout the history, pregnant women have become consumers of foetal commodity, waiting for specialists to sign-off their pregnancy and to give them the confidence that they can carry on with the pregnancy. As Janelle Taylor puts it, “obstetrical ultrasound plays a part in constructing the fetus more and more as a commodity at the same time and through the same means that it is also constructed more and more as a person” (Taylor 2000, 415). So how did such an intimate and personal experience, once a women-only event, become a science project, with the foetus being closely monitored by medical representatives, creating a huge gap (and sometimes a conflict of interests) between the ethics of care concerning the mother and the foetus respectively, and a cultural opposition between a woman-centred pregnancy and a foetus-centred pregnancy which disembodies and disempowers the woman carrying it (Duden 1993)?

What was once discovered and sensed inside the womb, at the first quickening, “the first movement of a foetus in the uterus that is felt by the mother, usually after about 16 weeks of pregnancy” (Martin and McFerran 2008, 391), is now replaced by a “technological quickening” (Mitchell and Georges 1997, 375), through pregnancy tests and ultrasounds test, way sooner, when the mother cannot even feel the foetal movements inside her. However, because of this intensive technification, the foetus becomes a discursive object, a “public fetus” (Duden 1993, 50), as its emergence as a subject of public interest is intimately related to the politicisation and medicalisation of human reproduction. For Duden, the personal experience of a woman who feels the foetal movement inside her womb, “the first stirring of the unborn” is almost untraceable and cannot be monitored, as “is a part of a whole set of experiences that lie outside the blinders of historiography” (Duden 1993, 80-81).

Nonetheless, Duden warns that this phenomenon of being “quick with child” (quickening) has been replaced by the intervention of obstetricians and their phallic-shaped transducers, or by the sonographer’s hands which “have invaded woman’s gendered interior and opened it to a nongendered public gaze” (Duden 1993, 81). As Duden argues, after the eighteenth century, there has been produced an irreparable chasm between what women know (feel) deeply in their *soma* (Greek: “body”) about their pregnancy and what men know (see) through *techne* (Greek: “craftmanship”, “craft”, “art”) – that is, through prenatal visualisation technologies.

The definition of somatechnics offered by Joseph Pugliese and Susan Stryker (2009) can be instrumental in unpacking the somatechnics of pregnancy and understanding how the maternal body and the foetal body are subjected to the technologies of power and knowledge. Pugliese and Stryker explain how “embodiment and technology” are intertwined, for the “material corporeality (soma) is inextricably conjoined with the techniques and technologies (technics) through which bodies are formed and transformed” (Pugliese and Stryker 2009, 1). Technologies of prenatal screening have the power to form and transform these bodies by deeply looking into the fleshy contents of the mother and foetus. Therefore, although these powers are acting at the micro level of testing, screening or diagnosis, they are both oppressive and productive[[14]](#footnote-14). The maternal pregnant body, together with its blossoming content, is mapped out through the means of imagining techniques, the foetus being transformed into a baby through the technological power of a sonogram, which not only substantiates the materiality of the baby through measurements and screenings (by giving it a certain meaning), but also it classifies it against a standard of humanness: normal baby vs. baby with abnormalities, malformations, etc.

Building on the cyborgian scaffolding raised by Donna Haraway, who has claimed that “the machine is us, …. an aspect of our embodiment” (Haraway 1991, 180), Mitchell and Georges talk about the “cyborg fetus”, which “arises through the coupling of human and machine” (Mitchell and Georges 1997, 375). This “cyborg fetus”, brought to life not by its blood parents but by the technification of the pregnancy, leads its mother onto the path of disembodiment, because of this forcefully created dependency on experts. As Samerski explains, the pregnant woman doubts her corporeal ability to know when exposed to the technologies of prenatal care which not only know, but also show this knowledge on a screen. As the expected baby is discursively transformed by the technology into a “cyborg fetus”, the woman is transformed “into an ecosystem, the unborn into a life, and life into a supreme value” (Duden 1993, 2). Thus, pregnancy becomes a technological abstraction, an apparatus where probabilities are looked at and calculations are made, while the corporeal self-experience is utterly ignored.

This technological apparatus can be compared to the “surveillant assemblage” discussed by Kevin Haggerty and Richard Ericson (2000). Haggerty and Ericson envision a new surveilled body – “increasingly a cyborg; a flesh-technology-information amalgam” (Haggerty and Ericson 2000) – which is removed from its natural state of being, and reassembled through technology into a different plane of existence (a datafied one), under the rules of governance: “the assemblage operates by abstracting human bodies from their territorial setting and separating them, into a series of discrete flows” (Haggerty and Ericson 2000, 239). In our case, these discrete flows, and the technological abstractions of the transformations happening in a woman’s body, make the process of scrutiny and control exponentially easier.

Feminist studies on foetal politics, inspired by Foucault’s theory of biopolitics, show the dangerous trap of technological abstractions and demolish the idea that scientific knowledge aided by technology is pure, objective science, as it only performs the “god-trick of seeing everything from nowhere” (Haraway 1991, 189).Therefore, we must understand that the modern institutions, while they proclaim to allow the mother to autonomously and responsibly self-manage her pregnancy, in fact provoke a “disorientation of the sensual-somatic perception of the pregnant woman” (Duden, as cited in Pankratz, Viol, and de Waal 2012, 18). That is to say, they simultaneously provoke this disembodiment and put pressure on women to be responsible for their choices, by managing the possible outcomes in the best possible way. As Samerski shows, “women are led into the disembodied sphere of risks, genes, and fetuses, where they are made responsible for the management of scientific and technological artifacts. Thus, (…) the other side of the new fetal subject is the new maternal subject: the pregnant woman as a responsible self-manager” (Samerski 2016, 705).

But as Samerski continues, this systematic way of seeing from outside vs. feeling from inside reflects how our Western societies work, unmasking the onto-techno-scientific apparatus built in times of governmentality. In this sense, she shows that the foetus is “a child of our times”, ”an object that is scientifically defined, technologically measured, and professionally administered” (Samerski 2016, 716). Consequently, Samerski invites us to wonder whether there is a way out, a way of escaping the scientific and epistemological regime of truth and to envision different potentialities for mothers and their pregnancies.

Samerski’s invitation to envision different futurities holds potentiality for the entire umbrella of prenatal soma-techniques, therefore in the next subchapter, I will engage with the feminist critique on sex selection, intimately implanted in the somatechnics of pregnancy.

#### Sex selection and abortion based on sex selection

The sex selection procedure[[15]](#footnote-15) has been used around the world most commonly (but not exclusively) to choose a male over a female child, which has resulted since the 1980s in an emergence of a skewed sex ratio males/females at birth[[16]](#footnote-16). This sex imbalance, “approximatively 126-134 million missing women worldwide” (Hendl 2017, 427), leads to a continuous reinforcement of gender bias and inequity, violence and discrimination against women and violation of their rights and reproductive autonomy. Given the rapid evolution of reproductive technologies, some countries have put in place legislative projects that regulate sex selection on grounds that have nothing to do with the medical domain. Thus far, the members of the Council of Europe have banned sex selection almost entirely, “except to avoid serious genetic illness” (Garrison 2008, 1623). In Germany, the 1990 Embryo Protection Act makes sex selection a criminal offense punished with up to one year of prison, and in the Australian state of Victoria, non-medical sex selection procedures are punished with two years of imprisonment (Dahl 2005). At the opposite side of the spectrum, the United States is one of the few Western countries least vocal on this topic, which not does not have a regulation on sex selection, but also fosters the practice of procreative tourism and the commodification of babies. Parents willing to undergo this procedure of sex selection visit the US, this “Wild West of reproductive technology” (Birdsall 2010, 226) from countries where the procedure is not available in order to shop for a specific sex for their babies.

We must also acknowledge the ambivalence between the feminist pro-choice rationale which advocates that a pregnant woman has all the rights to end a pregnancy vs. the rationale of the advocacy against abortion based on sex selection. To support the latter, some scholars consider that this specific type of abortion can be considered the eugenics of our times. For example, feminist biologist Ruth Hubbard (2006) equals contemporary prenatal testing and sex selection procedure with Nazi’s eugenics, reiterating Hannah Arendt’s moral question raised during the trial of Adold Richmann in 1977: *who has the “right to determine who should and who should not inhabit the world?”* (Arendt 2006, 104). Others argue that through this technology, and choosing for a specific gender (male), parents make gender assumptions about the “role of the future children in the family (…) because they expect the child to perform certain masculine of feminine roles” (Hendl 2017, 428).

The feminist critique involves the ethics of sex selection and the consequences that this might have on society and on life in general. While some feminist voices claim that “sex selection technology could mean the death of the female”, others coined the term “gendercide” to show the effect that sex selection technology has on women (Birdsall 2010, 232). Against these critiques, the advocates for sex selection consider that sex selection is actually part of the procreative autonomy, hence a reproductive option and a personal choice. Tereza Hendl investigates the work of several bioethicists and argues that their motivation for validating sex selection is constructed by four justifications: the argument of natural sex selection, the argument for procreative autonomy (as a basic human right), the “family balancing” argument, and the argument for children’s wellbeing (Hendl 2017). In her analysis, she demonstrates that the choice for this technology stems from gender essentialism and is inevitably fabricated by a desire of reinforcing the sex-gender binary, which will not only harm the children, but will also harm society through its embedded sexist rationale.

Another important feminist critique, rooted in the clash between reproductive freedom and sex selection, is the intersectional feminist perspective on pre-implantation sex selection proposed by Maneesha Deckha (2007). In her attempt to “map the intersectional dimensions of pre-implantation sex selection” (Deckha 2007, 3) in Canada, Deckha shows that the practice of sex selection is imbued in colonial narratives of Western society, and is misrepresented as being a simple issue of sexism when in fact it is linked to gender, race, culture and ableness. According to Deckha, postcolonial feminists like Chandra Talpade Mohanty have shown in their analysis of the “western eyes” (Mohanty, Russo, and Torres 1991) that this technology of sex selection is used by Western feminists, along with “veiling, female genital mutilation, dowry deaths, honor killings, sati, foot binding, and arranged marriages” (Deckha 2007, 39), just to demonstrate that non-Western cultures are misogynist and gender-backwards.

Deckha also criticises the Western problematisation of sex selection and its colonial discursive dynamic, showing that, although combating sexism and patriarchy is a noble and needed goal, this discourse is violent against other “Others” than the women. As Deckha notices, this discourse not only reinforces the “tradition/modernity dichotomy” between West and non-West, but also proliferates a double standard. The Canadian legislation bans the use of technology to obtain designer babies of a certain sex, yet it uses the exact technology to eliminate embryos that are exiting the normality spectrum of humanity by presenting chromosomal abnormalities. Deckha argues that this legislative project “sustain(s) one type of discrimination while trying to end another” (Deckha 2007, 15). Concluding, she proposes that the state should educate its constituents though an intersectional approach “including the gendering, racializing and normalizing practices that affect sex selection” (Deckha 2007, 38). The intersectional intervention proposed by Manisha warns that we should not treat the sex selection technique only from the perspective of “gendercide” (Birdsall 2010), but also adding into the conversation topics such as sexism, classism, racism and, crucially for the debate on prenatal screening and testing, ableism.

#### Disability activists’ critique on prenatal testing and selective abortion

Disability is a necessary variable not only in the critique of the sex selection procedure, but also in the critical analysis of prenatal testing/diagnosis. In this sense, reproductive rights supporters (and bioethicists) have diametral opposed agendas from the disability rights activists, the former emphasising “the right to have an abortion” whilst the latter defending “the right not to have an abortion [when the fetus is disabled]” (Saxton 2013, 88).

A position statement released in 2000 by Disabled Peoples’ International Europe, a human rights organisation invested in the protection of disabled people’s rights, argues that prenatal testing/diagnosis, genetic procedures and selective abortion are used as tools to homogenise the normality pool of humanity. Therefore, getting rid of foetuses with impairments threatens the “essential diversity of humankind” (Disabled Peoples’ International Europe 2000, 4). In addition, the organisation considers that abortion of impaired foetuses should be put on the same balance with abortion based on sex selection, arguing that the genetic and prenatal technologies are a new form of eugenics. This neo-eugenics, which proposes the abortion of all foetuses with impairments, promotes the idea that a life with disability is inherently not a life worth living. While some critics of prenatal diagnosis do not totally oppose the termination of a pregnancy in the case of a lethal condition, they warn about its outcome on the longer run, because it becomes an “eugenic ‘slippery slope’ that will not stop at the rejection of severely impaired fetuses but will lead to the rejection of all those who fail to meet the guidelines of ‘the perfect child’” (Löwy 2017, 15).

We can interpret the eugenic threat identified by Löwy using the dramaturgic analogy of Chekhov’s law – if a murder is committed in the last act of a play, then the gun must have been introduced in the first act. Hence, if at some point the prenatal testing technologies will pursue the abortion of all foetuses that do not fit in the matrix of perfection, this must have been because the “gun” (here metaphorically coded as the abortion based on impairment) was introduced in the scene at an earlier stage.

The disabled foetus, in its incipient form of embodiment, deeply carved in the pregnant person’s body is often rendered by the prenatal technology and diagnosis into disposable existence, as “homo sacer” or “bare life” (Agamben 1998), automatically getting submitted to the “normative schemes of intelligibility establish what will and will not be human, what will be a liveable life, what will be a grievable death” (Butler 2004, 146).

Thorvald Sirnes argues that prenatal diagnosis, alongside abortion and the “neomort”[[17]](#footnote-17) and the prenatal diagnosis are cases of contemporary homo sacer (Sirnes 2005). Sirnes shows that the disabled foetus finds itself in a state of exception, both inside and outside the law, under a “double insecurity – not only about where each individual is situated in relation to normal, but also about what will be normal in the near future” (Sirnes 2005, 215). In addition, the lack of a consistent definition of what it means to be seriously disabled (as a foetus) becomes problematic when the disability is seen as a scale and treated differently by different obstetrics specialists. This inconsistency raises a tension between ethical issues of personhood, foetal rights or killing without getting legal punishment. Ultimately, as Donna Reeve points out, the highest proof of bare life is within the polarity between the “political life” – *foetal rights of a non-disabled foetus* – and the incertitude and *lack of rights of a disabled foetus*, “who by the very interpellation of being labelled as disabled, becomes abjectified” (Reeve 2009, 208).

Disability rights critics engage with the expressivist argument to show that selective abortion fosters discriminatory attitudes. According to Erik Parens and Adrienne Asch (1999), this argument’s principal claim is that prenatal testing against disability promotes a very hurtful and discriminatory attitude against the people who already live with those disabilities. Therefore, disability activists show that not only the trait is undesirable (the impairment, disability), but also those who carry it, violating the human rights of people with impairments, “as with discrimination more generally, with prenatal diagnosis, a single trait stands in for the whole, the trait obliterates the whole. With both discrimination and prenatal diagnosis nobody finds out about the rest. The tests send the message that there’s no need to find out about the rest” (Asch 2000, 13). Similarly, the selective abortion of foetuses with impairments reinforces the discriminatory public discourse of hierarchical ableism, according to which “disabled people’s lives are not worth living, nor worthy of support” (Tremain 2006, 38).

The activists push medical professionals to re-examine the assumptions on the quality of life of a person with impairments and to rethink the praxis and public health policy by providing information tools for taking this kind of decisions. This brings the debate to a point where the pro-choice argument is clashing with the disability critique – as the question raising is: can abortion be a matter of choice and reproductive autonomy, without any strings attached? Adrienne Asch proposes a pro-choice perspective followed by the informed support that will help the pregnant women take a better decision. Asch argues that the systematic deficit of information and support, combined with the “unreflective uses” of prenatal testing is more damaging than enabling of women’s choices. In this sense, she suggests a fundamental socio-political change, which “challenges the view of disability that lies behind the social endorsement of such testing and the conviction that women will or should end their pregnancies if they discover that the fetus has a disabling trait” (Asch 1999, 1649).

With this fundamental socio-political change, she envisions an inclusionary society where prenatal testing for disabilities will not be necessary, as disability will not be treated as an undesirable outcome. As Erik Parens and Asch put it, “in a society that welcomed the disabled as well the nondisabled, there would be no reason to prevent the births of people with traits called now disabling” (Parens and Asch 1999, 2).

However, Tremain argues that a society that welcomes people situated everywhere in the ability-spectrum is utopic, as everyday bioethicists work around the clock to come up with new theories on which impairment should be detected with prenatal testing. Moreover, bioethicists try to find an acceptable moral border which separates the impairments, dividing them into “types of impairment that it is morally permissible to selectively abort and the types of impairment that it is morally impermissible to selectively abort” (Tremain 2006, 38). In this attempt, they invoke another type of society where every individual can produce and contribute, thus fulfilling the moral duties of citizenship. Therefore, bioethicists argue that they need to correct or genetically enhance all embryos and foetuses with impairments so that they can reach this full capitalist potential to “fully participate in the cooperative framework of society,” for a “fully cooperating citizen” is one whose “opportunity range” is compatible with “normal species-typical functioning” (Buchanan, Brock, Daniels, and Wikler, as cited in Tremain 2006, 38). This utilitarian vision of society envisions a society where people who do not achieve their true potential are a burden to themselves and to society, which has to acquire them different conditions and standard of life, and overall “would be better off without the inconvenience and expense of disabled people” (Disabled Peoples’ International Europe 2000, 6).

So the question we must raise again is, how can we envision different futurities for differently-abled individuals, whilst the pregnant body and the foetus are seized and regulated at the concatenation between reproductive technologies, procreative autonomy and prenatal care? In this chapter I shed light on several variables of the prenatal apparatus, and their ambivalence and multidimensionality within the onto-techno-scientific apparatus that is the prenatal care, hoping that inquiring these dilemmas will carve a route in the collective consciousness of pregnancy, escaping the biopolitical project.

### UNLEARNT: A Dutch case study of prenatal testing

Digging the path of *how* prenatal testing has become a standardised procedure in our society, we must look inside the apparatus that has helped achieving this standardisation and universalisation of prenatal care, hence the institutionalisation and medicalisation of childbirth. To narrow down the scope of the research, I will contextualise my analysis through the case study of Dutch prenatal debates and policy/scientific transformations from the 1990s to the present (a timeframe characterised by an increasing prenatal technological upheaval). Therefore, I propose to interrogate issues like obstetrics care systems, perinatal mortality and the implementation of the Non-Invasive Prenatal Testing (NIPT) program and the beginning of genetic screening (carrier gene testing), as methods to monitor and diagnose disabilities. The reason I chose to analyse the Dutch prenatal apparatus is because my intervention is strongly planted in the idea of “identity politics” (The Combahee River Collective 2014), that “personal is political” (Hanisch 2006). By this, I mean that I chose my own identity (as a pregnant woman/mother) and the ambivalence risen from the experience inscribed within the Dutch prenatal apparatus as a political point of departure for this thesis, and in essence, an allocation and motivation for my politics.

Nonetheless, the task of linearly reconstructing the Dutch prenatal landscape seems far from straightforward, as there are no clear demarcation lines when it comes to such subtle conceptual changes that act at the level of a society. Thus, trying to understand the current prenatal apparatus requires a sustained effort of tracing back how the current reality came into being gradually and historically. As this apparatus is organically entangled with and within its components, genealogy, as Foucault suggests, helps us see not *why* we think or act in certain ways, but rather *how* did we come to act in these ways. In this sense, “the union of erudite knowledge and local memories (…) allows us to establish a historical knowledge of struggles and to make use of this knowledge tactically today” (Foucault 1980, 83), understanding how historically dependent practices (like the ones that regulate prenatal care) have enabled and fuelled the current models of thinking and practices.

#### The Dutch trend of giving birth at home

The obstetric care system in the Netherlands is unique in the world due to a 3-tier system depending on the risk posed by pregnancy[[18]](#footnote-18), concatenating between midwives, clinical midwives and obstetricians. The rationale behind this threefold care model is that normal pregnancies can follow a natural process, and because they pose a low-risk can be supervised by a midwife, without any clinical intervention, or hospital care costs. The pregnancy, birth and the postnatal care is offered by an autonomous midwife, who will only consult with an obstetrician in case of complication (Koninklijke Nederlandse Organisatie van Verloskundigen 2017). In the Netherlands, midwives play a very important role in the health care, a “gate-keeper function”, as 78% of pregnant women start prenatal care at the primary level (Manniën et al. 2012), in the case of a low-risk pregnancy[[19]](#footnote-19). While in the 1965, two-thirds of all births were happening at home, in the next 25 years the situation has switched, with two-thirds happening in the hospital – which was still a high rate of home birth, contributing to the necessity of increasing the level of training for midwives (Therese A. Wiegers, Van Der Zee, and Keirse 1998). Until 1993, the Dutch Central Bureau of Statistics (CBS) has monitored the number of home births in the Netherlands, and showing that between the period 1965-1993, the percentage of home births has decreased from 68% to 31% (Anthony 2005).

This declining rate can be correlated with the introduction of the short stay births in the hospital[[20]](#footnote-20) and the increasing choice of women towards a safer birthing experience. Of course, the institutionalisation and medicalisation of birth in the past decades worldwide has not only increased the feeling of safety, but has also reduced maternal mortality (Anthony 2005). As a result, the decrease in maternal mortality has brought back the very vocal belief that home birth is safe, and is a woman’s right to choose where to give birth (Anthony 2005). In this way, safety becomes the reason for opting for a home birth for many women in the Western world, when in the past safety was the reason to choose for a hospital birth. These women believe that giving birth in the hospital leads to medical intrusion and they choose for the natural birth without interference (Catling, Dahlen, and Homer 2014).

In the Netherlands, the question of safety is ambiguous, given the lack of complete data on home birthing. While some studies show that home birth was found to be at least as safe as the planned birth in the hospital (T. A. Wiegers et al. 1996), others show that the safety lays in the intervention rate among the different risk group and is not always as safe to give birth at home as in the hospital for all groups (van der Kooy et al. 2017, 10). The intervention rate is lower in home planned birth, and the chosen place of birth is also determinant in the likelihood of offering a medical intervention. According to a 2017 observational comparative study between home vs. hospital birth and perinatal mortality rates, the mortality rate was lower in planned home births (0.15% vs. 0.18%). However, for pregnant women in risk groups, the mortality rate was higher in planned home births, therefore “the benefit of substantially fewer interventions in the planned home group seems to be counterbalanced by substantially increased mortality if intervention occurs” (van der Kooy et al. 2017, 10).

Other researchers show that overall, a home birth experience means fewer interventions, less medication than in the hospital with lower likelihood of having an epidural, induced labour or episiotomy[[21]](#footnote-21) (Borquez and Wiegers 2006). We can then argue that most of the times homebirth is safe, it is because there is no need for intervention, but if intervention is needed, the risk is higher. Similarly other study has shown that pregnant women with low risk pregnancy, at the onset of the labour of a home planned birth, had lower risks of maternal morbidity, postpartum haemorrhage, and manual removal of placenta than those with planned hospital birth. This results are also backed up by the fact that in the Netherlands mid-wives are very well trained and pregnant women are also always recommended to have the closest hospital as a backup plan (de Jonge et al. 2014)

While the Dutch maternity system works on risk-attribution base, cost-effectiveness is a variable that is not as obvious as the risk, but important for women when deciding the place of birth. The costs and the outcomes of home vs. hospital birth in the Netherlands have been part of a wide debate, especially since the Dutch national perinatal mortality rate was one of the highest from Europe in the past decade (Mohangoo et al. 2008). According to a study published in 2017 regarding the cost-effectiveness of births, delivering women would have to pay €3330 for a planned “on-site” birth (hospital), €3327 for an “alongside” birth (birth centre) and a significantly less €2998 for a “freestanding” birth (at home). Regarding the score of OI[[22]](#footnote-22) (health benefits), there was no difference between giving birth in a birth centre vs. hospital, while giving birth at home scored the highest for both nulliparous and multiparous[[23]](#footnote-23) low-risk women (Hitzert et al. 2017).

Aimed to provide “objective, reliable and valid information to support decision making and policy making in healthcare” (Hitzert et al. 2017, 11), the study’s motivation was to inquire why the number of home births in the Netherlands has decreased from 48% in 2004 to 24% in 2014. In this way, the authors intended to see whether the “alongside” birth could substitute “freestanding” birth, offering a “more home-like environment (…) based on the philosophy of physiological birth” (Hitzert et al. 2017, 11). The results show that, while the health outcomes are quite similar, the home birth is the most economic, cost-effective option. We could argue then, that by promoting this results with the intention to be transformed into a policy, the researchers can influence the trend of the revival of home-birth, reinforcing a dangerous “historical-cultural problem” (Foucault 2014, 97), that Foucault warned about. This problem, the “game of truth”, “a set of rules by which truth is produced” (Foucault 1997a, 297) has the economic purpose of maintaining the costs of birth at their lowest rate, while reassuring the pregnant women that giving birth at home do not pose any risk for undesired perinatal outcomes.

#### Perinatal mortality and prenatal testing in the Netherlands

Observing the trend of giving birth in the Netherlands under the lens of *biopolitics*, by rationalising “the problems posed to governmental practice by phenomena characteristic of a set of living beings forming a population: health, hygiene, birth rate, life expectancy, race…” (Foucault 2008, 317), we can pinpoint the coagulation of the prenatal apparatus around the concern for perinatal mortality. Perinatal mortality, a health indicator reflecting the quality of health care offered by a state (Buitendijk et al. 2003), has been a concerning topic in the past years in the Netherlands. The issue of foetal death stirred up in 2003, when the European Commission-financed project Peristat-I[[24]](#footnote-24) was published, aiming to provide a set of indicators for monitoring and describing perinatal health in Europe. Its results have provoked some commotion in Dutch media and policymaking, given the unfavourably high rates of foetal and early neonatal mortality in the Netherlands compared to the other 26 European countries included in the research.

The high level of Dutch perinatal mortality observed in the data from 1999 (Peristat-I) have been explained by risk factors like “multiple births, advanced maternal age, high parity, non-western ethnicity, smoking, maternal obesity, increased birth weight” (A C J Ravelli et al. 2009, 17). However, more importantly, mortality was correlated with risk factors such as restrictive policy of resuscitation and intensive care for very preterm infants, the lack of prenatal screening programs for congenital anomalies and care considered to be under the standard, like home birth. Although the study includes “substandard” of home birth as a risk factor, it also shows that actually the prevalence of home deliveries for term infants is correlated with very low perinatal mortality risk (0.4 per 1000 births) (Ravelli et al. 2009). Few years after the publication of Peristat-II[[25]](#footnote-25), the trends observed in perinatal mortality risk groups were preterm birth, congenital anomalies and gestational age (Anita C. J. Ravelli et al. 2020, 1). The Peristat projects – and especially the political uproar they provoked – help us identify a historical shift in the attitude of the medical Dutch specialists, switching from “too expectative, based on too much confidence in a non-intervention policy” (Merkus 2008), towards the adoption of a systematic national prenatal diagnosis policy.

Attempting to understand the “worsening international ranking” (van der Pal-de Bruin et al. 2002) scenario of perinatal mortality in the Netherlands, some researchers propose a reform of the national obstetric system. Indeed, they believe that “obstetric collaborations” between autonomously acting midwives and obstetrics caregivers in the hospital will streamline the prenatal and birthing process and decrease perinatal mortality (Posthumus et al. 2013). Others suggest that antenatal care can be one of the weak points and argue that Dutch care professionals in the past did not fully use all the antenatal technics they could have used in order to offer diagnosis in case of birth defects, meaning that “fewer foetuses with serious defects are aborted than in other countries. This results in more deaths shortly before or after birth” (Van der Pal-De Bruin et al., 2002, in Garssen and van de Meulen 2004, 306).

The authors of the research point out that other European countries score lower in the overall perinatal mortality because of the differences in the policy on prenatal screening. In those countries, the screening policy in place leads more often to the termination of pregnancy in case of congenital anomalies, preventing foetuses to die after 22 weeks or even shortly after birth. Although they suggest that there is need for more prenatal testing and diagnosis to lower the rates, they use a moral disclosure to justify their research outcomes and to defend their connection between high rates of mortality and low rates of prenatal care. In this sense they argue that ”pregnancy terminations are not performed to decrease the perinatal mortality rate but to give pregnant women the opportunity to discontinue their pregnancy in case of a serious, life-threatening congenital anomaly or to allow appropriate early interventions to be planned when a congenital anomaly is discovered at prenatal screening” (van der Pal-de Bruin et al. 2002, 971).

This connection between perinatal mortality and a lack of systematic plan for anomaly scanning can be considered the catalyser of the policy regarding ultrasounds and screenings in the Netherlands, offered to each woman at the beginning of their pregnancy. By comparing two reports on prenatal diagnosis and screening policies in Europe issued by EUROCAT (European Surveillance of Congenital Anomalies), we can notice that in January 2005, when the first report was published, there was no policy for any kind of routine ultrasound scan in pregnancy for all pregnant women. Furthermore, there was no routinary check-up for congenital defects, although there was an increasing number of pregnant women undergoing one scan at the first visit with the midwife or obstetrician, but this was just to determine how advanced the pregnancy was (de Walle 2005). In the second report, we can see that by December 2009 every woman was offered a routine ultrasound scan at approximatively 20 weeks of gestation. Through this ultrasound scan, women were informed on the development of the organs and the growth of the foetus, or the quantity of amniotic fluid in the amniotic sac. This practice could be performed by midwives or general practitioners and was reimbursable through the health care system (de Walle 2010).

Another difference between the policies in place in 2005 and 2010 is the screening for Down Syndrome. In 2005, two options were offered and only upon request by the pregnant woman: nuchal translucency (between 11 and 13 weeks of gestation) and triple test (at about 15 weeks of gestation). The costs were reimbursed only if the woman was thirty-six years or older and in the eighteenth week of pregnancy, or if she already had a child with chromosomal anomalies, family history of genetic diseases, or an increased risk of having a foetus with a neural tube defect (de Walle 2005). In 2010, instead, every pregnant woman received reimbursed counselling about screening for foetal anomalies and a few options for tests: nuchal translucency (between 11 and 14 weeks of gestation), early serum analysis (between 9 and 14 weeks of gestation), or the combination of the previous two – the so-called ‘combined test’. Another option was late serum analysis (at 15-19 weeks of gestation), known as the ‘triple test’. The tests were reimbursed if the woman was 36 years old or older and had an increased risk for foetal anomalies (de Walle 2010).

The shift on prenatal care policies has produced in January 2007, when a nationwide prenatal screening program had been implemented in the Dutch health care system. Before that moment there was no structural anomaly scan (SAS) in place at 20 weeks of pregnancy, so screening for congenital anomalies was not a standardised procedure across the Netherlands, but one only performed in cases of risk, like positive family history for anomalies or other intrauterine suspicions. As of 2007, all pregnant women are offered the combined test (CT)[[26]](#footnote-26) to determine the risk for Down Syndrome (T21), and for Edwards Syndrome (Trisomy 18) and Patau Syndrome (Trisomy 13), as of 2010.

Furthermore, the Dutch Association of Obstetricians and Gynaecologists has decided in 2010 that the whole foetus should be examined, not only its spine, enabling the SAS to become a complementary check-up for trisomy’s in addition to the prenatal screening (PNS). From this moment on, SAS is also reimbursed for all pregnant women. Women above thirty-five years old can opt directly for a Chorionic villus sampling[[27]](#footnote-27) or an amniocentesis[[28]](#footnote-28), and the costs for the tests are reimbursed for them, while younger women have to pay for the CT themselves. PNS is offered after counselling and women have the right to choose whether they undergo the screening or not (Bouman et al. 2017).

This turning point in the prenatal apparatus was facilitated by a liberal political system, like the Dutch one, as soon as the “technology of government” (Foucault 2008, 323) was concerned with the wellbeing of a population (disturbed by the perinatal mortality). This “problematization” (Foucault 1997b) of perinatal mortality becomes the catalysator of the Dutch prenatal policy released in 2007, as the pregnant women’s body with its content enters the site of knowledge/ power, and it is managed through actionable medical policies, recommendations, medical research.

As Foucault puts it, the state was also “concerned about respect for legal subjects and individual free enterprise” (Foucault 2008, 317), therefore we can pinpoint that the prenatal care policies were introduced in the Netherlands appealing to both the wellbeing and the freedom of its constituents. Foucault also suggest that a person is not free unless its freedom is granted by the government, as “freedom in the regime of liberalism is not a given, it is not a ready-made region which has to be respected… Liberalism is not acceptance of freedom; it proposes to manufacture it constantly, to arouse it and produce it…”(Foucault 2008, 65).

So if we are to think of the ‘management of freedom’ (Foucault 2008, 63) in the case of the prenatal testing in the Netherlands, we can see that women are free to choose whether they test their foetuses for abnormalities or not. However, the counselling for the testing gradually becomes part of a standardised procedure of prenatal care, regardless if the pregnancy poses risk or not, contributing to the normalisation of prenatal testing, produced through the conceptual tool of “government of risk” (Tremain 2006).

Since April 2014, through the scientific study TRIDENT-1, NIPT[[29]](#footnote-29) was made available for high-risk pregnant women, for whom the combined test revealed an increased risk of having a child with Down, Edwards or Patau syndrome. The women would also benefit of a partly reimbursement, if they took part in the study. Three years later, in April 2017, the Netherlands became the first country in the world to offer a non-invasive test for chromosome abnormalities to all women (TRIDENT-2), regardless of age or risk for genetic abnormalities (Buiter 2017). The effective cost of NIPT is in 2020 around 500 euros, but is partly subsidised, so the women have to pay 175 euros if they agree to participate in the study (TRIDENT-2). The Ministry of Health, Welfare and Sport has included the subsidisation of NIPT in a special subsidy scheme from April 2017 until April 2023, which costs 26 million euros per year, and the condition for accessing this subsidy is the consent for participation into the study. Through this “feasibility study”, the National Institute for Public Health and the Environment (RIVM) inquires whether it is possible to introduce NIPT into the National Screening Programme in 2023, as part of the standard screening package (Rijksinstituut voor Volksgezondheid en Milieu 2020).

The easiness and the safety of NIPT is not seen by everybody as a positive fact, and its increasing popularity is seen as carrying specific ethical implications. Critics of the standardisation of this kind of testing have shown that NIPT can be just an open door towards extending the scope of the abnormalities that are tested, so that “these features would be open to being used for testing a potentially much broader range of abnormalities than those included in the presently used method of microscopic chromosome analysis (karyotyping)” (de Jong et al. 2010, 272).

Although the project is ongoing for another three years – which is the time needed by the public health system to fully implement it in the Dutch obstetrics care system – critics are raising the concern that if NIPT will become such an accessible test included in the health insurance, early selective abortion will be normalised and trivialised (de Jong et al. 2010).

#### Perinatal diagnosis in the Netherlands

Parents in the Netherlands can also have tested the health of their future children at multiple stages of the pregnancy, shortly after birth and even before conceiving, when the baby is just a hypothesis, an inanimate conceptual desire. The road map to pregnancy starts for some parents at the stage where any genetic condition can be prevented through carrier testing (followed by the in-vitro fertilisation and embryo selection). Although carrier screening for recessive disorders is not a current local practice, it is available either within Dutch initiatives of ancestry-based carrier screening (Holtkamp 2017)[[30]](#footnote-30) or for parents that have high-risk of autosomal recessive disorders[[31]](#footnote-31) due to positive family history. Kim Holtkamp (2017) investigates the current situation in the Netherlands and shows that, although the Health Council of the Netherlands has initiated a pilot study to understand the feasibility of cystic fibrosis (CF) and hemoglobinopathies (HbP) preconception carrier screening, the minister of Health, Welfare and Sports of the Netherlands has expressed doubts about offering carrier screening structurally.

Nonetheless, as Holtkamp notices, although the pilot was never applied on a large scale, there are midwifery practices who offer the possibility for these screenings without an existing national policy: “some primary care midwives working in areas with a relatively large population at risk for HbPs offer prenatal HbP carrier screening on an ad hoc basis (i.e. on their own initiative in the absence of a structural offer)” (Holtkamp 2017, 18). Overall, the outcome of her research shows that while the screening is perceived as positive by the women who went through the HbP screening, “informed decision-making seems to be suboptimal, and both the content and timing of the information provided needs improvement” (Holtkamp 2017, 32). We can then argue that the lack of substantiated support and information that will help with deciding the outcome of the pregnancy post-screening is influencing not only the process of these screenings, but also indirectly the decision. Besides the carrier screening, in the Netherlands, people who get pregnant through in vitro fertilisation (IVF) or intracytoplasmic sperm injection (ICSI) can require a re-implantation diagnosis (PGD)[[32]](#footnote-32), if they have high chances of conceiving a child with serious hereditary diseases[[33]](#footnote-33) or if they have chances of losing a child during pregnancy due to chromosome abnormalities.

Christine de Die-Smulders, clinical geneticist at Maastricht University Medical Center+ and medical coordinator of the Preimplantation Genetic Diagnostics (PGD) in the Netherlands, explains that PGD is possible at this moment for all hereditary disorders, “provided that the underlying defect is known and that there is a serious condition” (Die-Smulders 2017, my translation). According to her, in the 1990s the Dutch government has stipulated that PGD should be limited only to serious conditions, with a high risk of occurrence and which will end with death in the childhood[[34]](#footnote-34). Since 1995, preimplantation diagnosis has been possible in the Netherlands, with the first PGD baby been born in 1997. Later in 2008, the PGD procedure was again under the ethical and political scrutiny, due to its possibility to eliminate hereditary breast and ovarian cancer. At the moment when the article was written, more than 600 IVF treatments with PGD were carried out in the Netherlands yearly (Die-Smulders 2017).

The perinatal diagnosis is an important variable in the Dutch case study of prenatal testing, given the lack of consistency in defining what a “serious condition” is. This inconsistency in defining what deems a life worth living corroborates Tremain’s recommendation of clearly defining the notion of “risk”. Tremain points out that the expansion of genetic testing and diagnosis have turned into “practices that produce knowledge about the genetic bases of an expanding number of ostensibly natural human characteristics and a host of risks posed to the integrity of that genetic material” (Tremain 2006, 35). In this sense, she believes that this new genetic knowledge, this new form of “truth” has redefined not only the ability to have a choice, autonomy and privacy with regards to one’s pregnancy, but also and most importantly, “the quality of human life, and the properties that define a thing as a ‘human being’” (Tremain 2006, 35). She challenges us to critically inquire what kind of human embodiment is normal by looking at “certain philosophical assumptions about what exists, what is natural, what is a product of human invention and intervention, and what qualifies as normal" (Tremain 2006, 35), implicitly questioning why a disabled body does not qualify as normal?

Therefore, using the biopolitical lens we can understand that the prenatal project in the Netherlands is just a layer in the continuous and multidimensional process of keeping the population healthy. By conveying the in-utero domain in its object of scrutiny, the biopolitical project is invested in maintaining the “political, cultural and social necessity to identify those who are dying, unhealthy and facing degeneracy” (Goodley, Lawthom, and Runswick Cole 2014, 349). In this sense, the foetuses facing degeneracy, could be diagnosed, tested and prevented from entering the domain of living.

### Conclusion

Throughout this thesis I have aimed to demonstrate the role of biopolitics in the normalisation of prenatal testing and its transition from a risk-conditioned antenatal practice to a standard practice of care, employed to analyse, regulate and separate human life into two datasets: worth and not worth living. By using the lens of biopolitics (Foucault 2008) as my analytical framework and methodological tool, I signalled, questioned and pinpointed (using as a case study the Dutch parental apparatus) the internal workings of the vast machine of the surveillant state, and its technologised dream for a healthy, fully-abled humanity. By deconstructing the prenatal apparatus, I have shown that prenatal testing is a tool that although marketed as being focused on the well-being of the foetus, is in fact instilled in the biopolitical agenda, as it cannot cure, but only diagnose disabilities. In this vein, prenatal testing is a lever in the administrative, technological and scientific apparatus, invested into maintaining and enhancing communal health.

Placing the “prenatal diagnosis dispositif” (Löwy 2017, 2) under the Foucauldian biopolitical lens, I have analysed the obstetric-administrative apparatus an its medical gaze (which screens, tests, measures, calculates, surveys and provides diagnosis and recommendations) as an intersection of human biology with the political domain. Enacted through actionable medical policies, and backed by medical research, this technology of power transforms the pregnant women and the foetus into a site of knowledge, through the subtle act of "problematization" (Foucault 1997b, 114). In my view, this problematisation, fortified by the notion of risk (specifically its eradication or minimisation) becomes the catalyser of standardisation of prenatal testing, contributing to the process of medicalisation and technologisation of pregnancy in the Western world. As a result of this problematisation of the "increased risk" (Duden 1993, 27) of pregnancy, the sonar screening becomes an antenatal routinary analysis, due to the involvement of the state in the regulation of obstetrics praxis and legitimisation of prenatal care as being a good, necessary, empowering praxis. In this plane of thought, the emergence or risk as part of the modern governmentality is intimately linked with the project of localising and dividing life into indestructible/grievable - normal foetuses and "destructible"/"ungrievable" (Butler 2009) - foetuses with disabilities.

I found the project of localising and diving life deeply embedded in the somatechnics of pregnancy, as the maternal pregnant body and its foetus are mapped out, technologically “formed and transformed” (Pugliese and Stryker 2009, 1), measured and classified against a standard of humanness: normal baby vs. baby with disabilities. In this sense, I drew from feminist studies on foetal politics, in showing the dangerous trap of technological abstractions and demolish the idea that scientific knowledge aided by technology is pure, objective science, as it only performs the “god-trick of seeing everything from nowhere” (Haraway 1991, 189).

Converging several feminist and disabilities theoretical streams through the notion of "truth”, I deconstructed the techno-"ontological construction” (Franklin 1991) of the foetus, uncovering its “extensive reliance on high technology” (Franklin 1991). This transformation of a foetus into a baby (the birth of the foetal subject) through prenatal visualisation technologies is, in my view, an essential demarcation point for the introduction of the foetus into the realm of public health care, and one of crucial points in demonstrating the involvement of biopolitics in the prenatal universe. Although some feminists consider prenatal testing for disability to be enhancing women’s autonomy, while saving their foetuses from biological uncertainties (Purdy 1996), others critique prenatal testing technologies, due to the *thingification* of disability/impairment, as a tool of modern governance, by limiting the “field of possible conduct in response to pregnancy” (Tremain 2006, 37). Two additional variables of prenatal testing relevant for the unpacking of the apparatus in my analysis were abortion based on sex selection and abortion based on disability, and their potency to create ambivalence and a clash between reproductive rights supporters and bioethicists and feminists, respective disability rights activists.

In the last chapter of this thesis, a Dutch case study of prenatal testing, I have dived with the same magnifying glass of biopolitics, into the debates and policy/scientific transformations within the prenatal apparatus in the Netherlands, from the 1990s to the present. By looking at the obstetrics care systems, perinatal mortality, the implementation of the NIPT projects TRIDENT -1 and -2 and the beginning of carrier gene testing, as methods to monitor and diagnose disabilities, I inquired the modus operandi of Dutch prenatal care. Firstly, I have shown the Dutch trend of giving birth at home, which is justified through the preference of women (with low-risk pregnancies) for non-medicalised home-births, but it’s in fact correlated with cos-effectiveness, a variable that is not as obvious as the risk, but also important for women when deciding the place of birth. Secondly, I have analysed the evolution of prenatal testing in the Netherlands, as a consequence of its high perinatal mortality rate (compared with other European states), caused by the lack of systematic antenatal anomaly scanning practice until 2007. In this sense, I have shown that the Dutch care system has adopted a nationwide standardised prenatal program, with a structural anomaly scan at 20 weeks of pregnancy and a combined test to determine the risk for Down, Edwards Syndrome and Patau Syndromes and two NIPT projects, as of 2014, the Netherlands becoming the first country in the world to offer a non-invasive test for chromosome abnormalities to all women. This 10-years shift into the Dutch prenatal care towards a normalisation of testing against disabilities, together with the increasing interest in the carrier testing, and pre-implantation diagnosis (in case of IVF), demonstrate the prevalence of the biopolitical project of keeping the in the nation’s health in check. By subjugating the uterine territory through the standardisation of prenatal care imbued in the liberal governmentality, the Dutch state aims to inform the mothers, enable them to be risk-accountants in their pregnancies, in order to provide the best outcomes for the future population, saved from any biological misfortunes.

I want to conclude this thesis by re-engaging with the question of humanness (in our society), as it is continuously warped due to the rapidly changing human reproduction practices and technologies. In this way, PGD, ectogenesis[[35]](#footnote-35) or prenatal whole genome sequencing[[36]](#footnote-36) are designed and potentially standardised in a near future, by the surveillant state, so that they could produce the perfect (genetically enhanced) human. So these advances in bioscience are impregnated with transhumanistic desires and posthumanistic concerns, as they attempt to convey “the ancient human aspiration to be wiser, longer lived, and to transcend the limitations of the human body” (Hughes 2014, 133). Relying on the posthumanistic thought, I propose a possible answer (and a potential continuation of my research) for the question of and the entanglement of disability in it, while embracing the potentiality and its future facing stance. In this sense, we can agree that post-humanism is an alternative for the humanism crisis that we are facing now, meaning that “structural others of the modernist humanistic subject re-emerge with a vengeance’ (Braidotti, 2013, 37). This vengeance, the posthuman turn, is a potential new path, a reinvention of the human, by creating ‘other visions of the self’ (Braidotti 2013, 38), ‘experimenting with new models of the self’ (Braidotti 2013, 39). This self is opposing the axis mundi of humanism, and in its becoming (post)human, the new self emerges through “heteronomy and multi-faceted relationality, instead of *autonomy* and self-referential disciplinary purity’ (Braidotti 2013, 145, my italics).

The new post-humanist future envisions a life where testing for anomalies won’t be necessary, as children with disabilities will rely on collective support, rather than their own autonomy (Goodley, Lawthom, and Runswick Cole 2014). In this respect disability will challenge us to understand not only what kind of humans we consider important and allow to come into existence and thrive, but also what humans represent, not through the fabrics of their/our own beings, but through their connections with others. This future urges us to rethink our interactions with our fellow humans and non-humans, and to build collective ways of living that are beyond the humanist norms of *autonomy*.

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1. Although throughout my paper I refer to pregnant women, I acknowledge that you do not necessarily need to identify as a woman to give birth. Furthermore, I use the term motherhood, but similarly, I feel the need to encompass and voice the birthing experiences of gender nonbinary people and trans men, trying to avoid falling in the false gender binary and the fallacy that pregnancy is an experience only associated with those identifying as women. [↑](#footnote-ref-1)
2. Nuchal translucency or a nuchal scan is a sonographic prenatal screening scan used in detecting chromosomal abnormalities in a foetus . [↑](#footnote-ref-2)
3. Although the term “gestational” presumes a limited period of time, spanning between conception and birth, I use it here associated with the term “permanent” to show the continuous development and regulation of the pregnant bodies and their foetal contents within the framework of the prenatal apparatus: as long as there will be human life, there will be biopolitics to deal with its maintenance. [↑](#footnote-ref-3)
4. In this case, the constituents are pregnant people, carrying a baby. [↑](#footnote-ref-4)
5. By measurements, I mean the screening of pregnant women for infections that can kill the foetus, such as HIV, hepatitis B, syphilis, rubella or cytomegalovirus, followed by screenings for conditions that can provoke anomalies in foetuses such as heart diseases or diabetes and, finally, tests for pathologies that occur only during pregnancy, like preeclampsia and Rhesus factor incompatibility. [↑](#footnote-ref-5)
6. The exception here can be the foetal surgery, a medical intervention through which a woman is operated for the potential benefit of the foetus (Samerski 2016). [↑](#footnote-ref-6)
7. “Apparatus” in English translation. [↑](#footnote-ref-7)
8. The standard prenatal screening procedure for the standard pregnancy starts between 6 and 8 weeks with a sonogram to examine the uterus and other pelvic anatomy, to determine the gestational age of the pregnancy, the number of foetuses and the heartbeat, or to detect a potential miscarriage or ectopic pregnancy (pregnancy during which the fertilised eggs implants itself outside the womb in one of the fallopian tubes, and does not transform into a foetus, posing a high risk to the mother if pregnancy is not immediately terminated). The next available test is at 10 weeks, with the NIPT (non-invasive prenatal test) which can detect Down Syndrome (Trisomy 21), Patau Syndrome (Trisomy 13) or Edwards Syndrome (Trisomy 18). At 11-12 weeks, pregnant women suspected to have foetuses with chromosomal or genetic can take the Chorionic villus sampling test. At 15-16 weeks of pregnancy, the next test that can be taken in order to detect any abnormalities is the Amniocentesis, a medical procedure which raises the risk of pregnancy loss, as a small amount of amniotic fluid containing foetal tissue is sampled from the amniotic sac where the baby develops. This prenatal test is used mainly in the diagnosis of chromosomal abnormalities and foetal infections, but also to determine the sex of the baby. The last important test is around 18-20 weeks and is known as the morphology scan, or foetal anomaly scan. With this test, obstetrics specialists check the position of the placenta and the amount of amniotic fluid, but most importantly they look for abnormalities in the structural development and growth of the foetus. In the last trimester there are also offered ultrasounds to monitor foetal growth, and to determine the position of the foetus, in anticipation for the birth. [↑](#footnote-ref-8)
9. Although Judith Butler didn’t develop the notions of “precariousness” (Butler 2004) and “grievability” (Butler 2009) in this specific context, but in the case of an actual war, I borrow the concepts she coined to show that also in the prenatal apparatus, there is a “certain kind of war effort” (Butler 2009, 22). [↑](#footnote-ref-9)
10. I must clarify what is the self-fulfilling prophecy I invoke here - because obstetrics specialist wish to minimise the risk of foetuses born with disabilities, they increase the perimeter of risk to all pregnancies. By starting from the premise that all pregnancies are risky, all foetuses, regardless the risk of the pregnancy, must be tested for disabilities; if the foetus is tested and has a disability, then the premise was true, and the risk was proven to be real. [↑](#footnote-ref-10)
11. In the Netherlands, where I analyse the discursive and concrete practices regarding prenatal care, women are not forced to passively submit to the medicalized care in the case of abortion or prenatal trajectories, but they are offered options. [↑](#footnote-ref-11)
12. One prominent example of experiments is that of James Marion Sims, a nineteenth-century physician who is considered “the father of modern gynaecology”, while he conducted experiments on enslaved women to perfect a technique to repair a condition called Vesicovaginal fistula, which usually comes after traumatic child birth. All these women, who were considered property and did not consent to participating in the experiments, are unknown and unnamed in his scientific journey to this very day, excepting three of them: Anarcha, Lucy, and Betsey (Vedantam and Gambkle, 2016). [↑](#footnote-ref-12)
13. As I will explain later on in this chapter, when narrowing down the birth practices in the Netherlands, we will notice that home birth is again encouraged in the Netherlands, under the close supervision of a midwife (verloskundige). If the birthing process goes well, the mother will not be admitted into a hospital, if she has chosen for a home-birth. [↑](#footnote-ref-13)
14. I consider these powers being oppressive because of the intrusiveness and the normalisation of the screenings, as they become a standard prenatal care routine, and productive because they are transforming both the foetus and the mother into objects of inquiry. [↑](#footnote-ref-14)
15. The sex selection procedure can be done at three conception moments: the first stage – the preconception, before fertilisation, through sperm selection; the second stage – the pre-implantation, through prenatal genetic diagnosis (PGD) followed by in vitro fertilisation (IVF) or post-implantation through sex selective abortion; and the third stage – after birth, through neglect, abandon or infanticide. [↑](#footnote-ref-15)
16. This phenomenon was first observed in some Asian countries (China, India, South Korea and Vietnam), but shortly after, countries from South-East Europe (Albania, Montenegro, the former Yugoslav Republic of Macedonia, Kosovo) and South Caucasus (Azerbaijan, Armenia, Georgia) displayed the same skewed levels (United Nations Population Fund, 2015). [↑](#footnote-ref-16)
17. The practice of keeping a dead body alive for the purpose of organs harvesting (Agamben 1998). [↑](#footnote-ref-17)
18. The obstetrics care system has three layers: primary (performed by midwifes and general practitioners), secondary (taken care by obstetricians and clinical midwives in general hospitals) and tertiary (offered by clinical midwives and obstetricians in academic hospitals). [↑](#footnote-ref-18)
19. A low-risk pregnancy trajectory starts with an initial appointment with the general practitioner, followed by a mid-wife appointment around the eighth week of gestation. During this process, the midwife will provide care and information on prenatal screening, lifestyle guidelines, pain management, birth-plan, labour process, and new-born/postnatal care. Midwives can also offer preconception care, but generally this type of consultation is coordinated by the general practitioners, given their position who is closer to the patient and familiar with their circumstances. The GPs offer guidelines and map the connection between the future parents’ general illnesses and the conception process, or search into the family history elements that can adversely affect the pregnancy. Before consulting with the family doctor, couples have to fill in the ZwangerWijzer (Pregnancy guidance), a questionnaire which inquiries into the details of lifestyle, origins and family history, work and home situation, medical history, medication and vaccination and details on previous pregnancies (if applicable). All this information will help the general practitioner to fulfil the duty of sending parents on a path where their baby can survive perinatal mortality. If the pregnancy and the birth do not pose any risk, pregnant women can choose to give birth at home or in the hospital, helped by their midwife. If the birth happens at the hospital (because the woman opted for it and not because there was a clinical need for it), the stay in the hospital is short, ranging from a few hours to 24 hours, the mother being able to spend the postpartum period at home. The care in this period is offered by a maternity home care assistant, who also helps the mother and the father with the care of the baby and with light household tasks for one week (Anthony 2005). [↑](#footnote-ref-19)
20. In Dutch “poliklinische bevallingen”. [↑](#footnote-ref-20)
21. Surgical incision to aid a difficult delivery. [↑](#footnote-ref-21)
22. Optimality Index-NL2015 (OI) is a health benefits index, “a composite tool to measure maximum outcome with minimal intervention. It focuses on optimality instead of on normality and is useful in comparing differences in processes and perinatal outcomes for women at low risk of complications”. (Hermus et al. 2017, 580) [↑](#footnote-ref-22)
23. Nulliparous means in this case to have never given birth to a child (first pregnancy), while multiparous means to have had a/more pregnancies/births before. [↑](#footnote-ref-23)
24. The Peristat-I showed that in 1999, the Netherlands had the highest foetal mortality in Europe (after 22 weeks of gestation), with a rate of 7.4 per 1,000 total number of births. The rate of early neonatal mortality was also almost the highest, after Greece, with 3.5 per 1,000 live births (Zeitlin et al. 2003). Five years later, the indicators of perinatal mortality adopted in the Peristat-I were used again in Peristat–II. The results of this project showed that in 2004, after France, the Netherlands had again one of the highest foetal mortality rate, with 7.0 per 1,000 total number of births. The early neonatal mortality rate was the highest among Western European countries, with a rate of 3.0 per 1,000 live births (Mohangoo et al. 2008). [↑](#footnote-ref-24)
25. Peristat-II showed that the perinatal mortality rates have decreased from 5.6 in 2010 to 4.6 per 1000 in 2015, due to the identification of the perinatal mortality risk. (Anita C. J. Ravelli et al. 2020, 1). [↑](#footnote-ref-25)
26. The combined tests (CT) consists of a blood test to determine the risk for Down Syndrome (T21) (between 9 and 14 weeks of pregnancy) and an ultrasound scan measuring the nuchal fold of the child, to detect any neural tube defects (between the 11 and 14 weeks of the pregnancy). [↑](#footnote-ref-26)
27. The Chorionic villus sampling is offered at 11-12 weeks of pregnancy as a diagnosis for chromosomal or genetic disorders in the foetus. It can detect the same 3 trisomy’s as the combined test, but the risk of miscarriage is increased with 0.5%. [↑](#footnote-ref-27)
28. At 15-16 weeks of pregnancy, pregnant women can opt to have an amniocentesis, a medical procedure which raises the risk of pregnancy loss with 0.3% compared to the Chorionic villus sampling. A small amount of amniotic fluid containing foetal tissue is sampled from the amniotic sac where the baby develops. This prenatal test is mainly used in the diagnosis of the same chromosomal abnormalities and fetal infections, but also to determine the sex of the baby. [↑](#footnote-ref-28)
29. NIPT is a simple blood test that can detect T21, T13 or T18 and does not pose any risk of miscarriage, as it discovers the traces the foetus leaves in the placenta, seen as DNA waste in the bloodstream of the pregnant mother. [↑](#footnote-ref-29)
30. In her PHD thesis, “Implementing carrier screening in a changing landscape: Perspectives of public and professional stakeholders”, Kim Holtkamp talks about 4 ancestry-based carrier screenings that have been carried in and around Amsterdam in the past years, such as “1) carrier screening for sickle cell disease and thalassaemia (haemoglobinopathies); 2) carrier screening for cystic fibrosis; 3) carrier screening for disorders more common in a Dutch founder population; and 4) carrier screening for disorders more common in the Ashkenazi Jewish community” (Holtkamp 2017). [↑](#footnote-ref-30)
31. Some examples of autosomal recessive disorders are cystic fibrosis, hemoglobinopathies/HbPs - sickle cell and thalassaemia or Tay Sachs disease. [↑](#footnote-ref-31)
32. Once the ova, the unfertilised female gamete, has been fertilised outside the woman’s body, one cell is removed and genetically screened for the parent’s hereditary diseases. Consequently, based on the results, the doctors implant in the woman’s uterus only the embryos that are not carrying the genetic disorder for which they were screened. [↑](#footnote-ref-32)
33. Some examples of serious hereditary diseases are chromosome disorders, cystic fibrosis, haemophilia, Huntington's disease or severe muscle disease, or breast and ovarian cancer. [↑](#footnote-ref-33)
34. In Europe, there are several countries that have totally banned the use of PGD (Germany, Ireland, Switzerland and Austria) and others, similarly to the Netherlands, have limited its use to medical purposes only (France, Greece, Belgium, Italy, Norway and the United Kingdom) (Birdsall 2010). [↑](#footnote-ref-34)
35. The growth of an organism in an environment outside the body, in this case, the growth of an embryo or foetus outside the mother’s uterus. According to Hank Greely, a good example are the ”artificial wombs” provided to premature babies: “Incubators for premature infants came into widespread use in the 1940s; mechanical ventilation became common in the 1970s; and supplementation of surfactant, a chemical important in infant lung function, followed in the 1980s. These and other advances have led to greatly improved outcomes for premature infants by, in essence, recreating some of the conditions (temperature, easy oxygen supply) inside the uterus”(Greely 2018, 216). [↑](#footnote-ref-35)
36. The process of determining the complete DNA sequence of an organism’s genome at a single time. In comparison to the prenatal genetic practice, prenatal whole genome sequencing has an increased scope of available prenatal genetic data. Because of this increased scope, some bioethicists are concerned that “technology could (1) change the norms and expectations of pregnancy in ways that complicate parental autonomy and informed decision-making, (2) exacerbate the deleterious role that genetic determinism plays in child rearing, and (3) undermine children's future autonomy by removing the option of not knowing their genetic information without appropriate justification” (Donley, Hull, and Berkman 2012, 1) [↑](#footnote-ref-36)