

Artificial womb technology, pregnancy, and EU employment rights

Victoria Hooton ^{1,*} and Elizabeth Chloe Romanis ²

¹Max Planck Institute for Legal History and Legal, Theory, European and Comparative Legal History, Frankfurt, Germany

²Durham University, Durham Law School, Durham, UK

*Corresponding author. E-mail: hooton@lhlt.mpg.de

ABSTRACT

This article considers challenges for the European Union (EU) maternity and pregnancy rights framework when faced with advances in reproductive technology. Specifically, we consider how the introduction of the ‘artificial womb’ technology, an alternative to bodily gestation, would impact the availability of rights that exist under the maternity and discrimination framework. Employment rights in the EU context have already been confronted by the challenges of advancements in reproduction. We use the case law on in vitro fertilization (IVF) and surrogacy as a baseline for unpacking the challenges that ‘artificial wombs’ will bring. This analysis of the legal framework on maternity rights and sex discrimination will highlight potential avenues for integrating this technology and ensuring the continuation of rights for those opting for it. We advocate against the stratification of maternity and pregnancy rights based on the reproductive and gestational choices made by the pregnant person.

KEYWORDS: employment, pregnancy, maternity, reproductive technology, artificial wombs

I. INTRODUCTION

Artificial womb technology—more accurately Artificial Amnion and Placenta Technology (‘AAPT’)—is highly anticipated for its ability to help pregnant people experiencing dangerous pregnancies¹ and as a superior alternative to neonatal intensive care

1 E. C. Romanis, *Artificial Womb Technology and the Frontiers of Human Reproduction: Conceptual Differences and Potential Implications*, 44 J. MED. ETHICS, 751, 754 (2018); N. Hammond-Browning, *A New Dawn: Ecogenesis, Future Children and Reproductive Choice*, 14 CONTEMP. ISSUES LAW, 349 (2018).

for entities born prematurely.² The technology³ is intended to facilitate the continued gestation of human entities after premature delivery from a pregnant person's uterus. While initially intended for clinical purposes to aid those that experience clinical difficulty during pregnancy,⁴ in the future, the technology might also have broader uses—some that might further equality between the sexes⁵ in reproduction.⁶ Some speculate that technology that can 'take over' gestation, allowing a person with female reproductive biology to become a biological parent without undertaking a full 9-month period of gestation, might be welcomed by many, eg people who find pregnancy difficult or unpleasant, or those who see opting out of gestation as a way to reduce physical labor in reproducing.⁷ Some have also suggested that many might want to opt out of gestation for social reasons, such as reducing the work place discrimination that they may experience,⁸ or the amount of time they have to spend out of work.⁹

The technology might bring broader social benefits in addressing the gender disparity in reproduction and childrearing,¹⁰ and potentially in the realm of employment—as this is a place where people who carry pregnancies consistently experience discrimination. There is no literature considering what impact AAPT might have on employment rights. This investigation is critical, as claims about these technologies reducing discrimination against pregnant people/new parent(s) is distinctly lacking without it. While this technology is speculative, issues arising as a result of the technology are better engaged with in advance of their occurrence.¹¹ The literature about AAPT and its socio-legal impact is growing. This article makes an important addition by considering the employment rights of AAPT users.

2 Romanis, *supra* note 1, at 745; EC Romanis, *Artificial Womb Technology and the Significance of Birth: Why Gestatlings Are Not Newborns (or Fetuses)*, 45 J. MED. ETHICS, 728, 728 (2019).

3 There are currently prototypes under construction in the United States, Japan/Western Australia, the Netherlands, and Israel. The most famous of which—because it has attracted the most press coverage—is the 'biobag' (also known as EXTEND therapy) currently undergoing animal testing in Philadelphia: E. Partridge and others, *An Extra-uterine System to Physiologically Support the Extreme Premature Lamb*, 8 NAT. COMMUN., 1 (2017).

4 Romanis, *supra* note 1, at 752; C. Horn and E. C. Romanis, *Establishing Boundaries for Speculation about Artificial Wombs, Ectogenesis, Gender and the Gestating Body*, in A JURISPRUDENCE OF THE BODY 230–31 C. Dietz and others (eds.) (2020).

5 Note this is a binary approach to sex and the authors recognize that this is limited, but it is the conventional way that biology is discussed.

6 A. Smajdor, *The Moral Imperative for Ectogenesis*, 16 CAMB. Q. HEALTHC. ETHICS, 336 (2007); E. Kendal, *Equal Opportunity and the Case for State Sponsored Ectogenesis*, (2015); K. Mackay, *The 'Tyranny of Reproduction': Could Ectogenesis Further Women's Liberation?*, 34 BIOETHICS 346 (2020).

7 E. C. Romanis, *Artificial Womb Technology and the Choice to Gestate Ex Utero: Is Partial Ectogenesis the Business of the Criminal Law?* 28 MED. LAW REV., 342, 349–353 (2020).

8 Kendal, *supra* note 6, at 15; Mackay, *supra* note 6, at 352.

9 Mackay, *supra* note 6, at 352.

10 Many scholars disagree and argue that technology cannot solve what are actually social problems eg E. Jackson, *Degendering Reproduction?*, 16 MED. LAW REV., 346 (2008); E. C. Romanis and C. Horn, *Artificial Wombs and the Ectogenesis Conversation: A Misplaced Focus? Technology, Abortion, and Reproductive Freedom*, 13 INT. J. FEM. APPROACHES BIOETH. 174 (2020); C. Horner, *Imagine a World . . . Where Ectogenesis Isn't Needed to Eliminate Social and Economic Barriers for Women*, 46 J. MED. ETHICS, 83 (2020).

11 A. ALGHRANI, *REGULATING ASSISTED REPRODUCTIVE TECHNOLOGIES*, 142 (2018); Horn and Romanis, *supra* note 4, at 232—noting that there must be careful limits to speculation to ensure its utility; E. C. Romanis, *Abortion & 'Artificial Wombs': Would 'Artificial Womb' Technology Legally Empower Non-gestating Genetic Progenitors to Participate in Decisions about How to Terminate Pregnancy in England and Wales?*, 8 J. LAW BIOSCI., lsab011, 5 (2021)

In the second part of this article, we explain how AAPT is designed and expose some potential practical problems for working people using the technology. We examine the limitations of AAPT as a tool to address workplace discrimination against people with female physiology, and how this technology might result in the need for robust workplace protections. Finally, we outline the EU pregnancy and maternity rights framework and consider the legal issues arising from AAPT. We look at the EU framework because of the statutory protection relating to pregnancy and discrimination, which influences the approach taken in many European jurisdictions.¹² Moreover, AAPT technology is without borders—and all of the issues we raise about its development and the impact on working people will be raised in most jurisdictions.

We add to existing commentary illustrating that the EU pregnant and maternity employment rights framework has failed to respond to technological developments,¹³ by demonstrating that the framework is ill-equipped to deal with further advancements presenting unique challenges to our understanding of pregnancy and birth. We argue that even where gestation is facilitated by machine, this must be recognized as a period in which there is caring labor exerted by people in reproducing, although this is not the same as the bodily labor involved in a continued pregnancy. This would ensure that the framework of maternity rights applies to AAPT users and, therefore, that the objectives of the EU rights framework are met—protecting reproducing people from workplace discrimination during pregnancy, and in the period immediately following a birth in which new parent(s) begin child-rearing. Our contribution to the literature is an important one—about how far the EU pregnancy and maternity rights framework is fit for purpose, in light of existing and future developments in reproductive biotechnologies. Assisted reproduction has already transformed the way that many families are constructed. Worldwide, Europe has the highest rates of assisted reproductive technology use in family formation.¹⁴ With medical, technological, and societal advancements comes pressure on the law to adapt and change to recognize these family structures under existing provisions that aim to offer protection to workers who are new parents—such concerns are only more pressing with developments such as AAPT in the future.

12 Through the Treaty recognition of equality of the sexes in the labour market: Consolidated version of the Treaty on the Functioning of the European Union OJ 326, Art. 153(i) (2012); and the secondary legislation aimed at the protection of equality, health and safety, and family rights: Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding OJ L 348 (1992) ('Pregnant Workers Directive'); Directive 2006/54/EC on the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation (recast) OJ L 204 (2006) ('Recast Directive').

13 Kate Ewing, *Surrogacy: Beyond Equality?*, 120 EMP. L.B. 6 (2014); Michèle Finck and Betül Kas, *Surrogacy Leave as a Matter of EU Law: CD and Z*, 52 C.M. LAW REV. 281 (2015); Connie Healy, *Once More With 'Sympathy' But No Resolution for Intended Mothers: the EU, Ireland and the Surrogacy Dilemma*, 39(4) J. Soc. WELF. FAM. LAW, 504 (2017).

14 P. Präg and others, 'Childlessness and assisted reproduction in Europe. Families and Societies Working Paper,' (2017), <https://doi.org/10.17605/OSF.IO/SXGU4>.

We use gender-neutral terminology to refer to people who carry pregnancies. While it is people with typically female physiology¹⁵ who undertake this role in human reproduction, not all of these people identify as women. The majority of people who carry pregnancies and birth do identify as women, and the historical subordination of women was closely related to the treatment of the female body such that structural discrimination against women has, in many ways, been perpetuated by expectations surrounding reproduction. It is, however, possible to recognize the role of gender in the structural perpetuation of discrimination (and institutional violence) against women while using gender-neutral language to describe individuals who carry pregnancies and birth. Adopting inclusive language to acknowledge the experiences of those who are transmasculine or genderqueer and gestate and birth is important, as they are subject to the same structural violence as those who identify as women, as well as further institutional discrimination on the basis of their gender identity.¹⁶ It is important for us to note that the EU framework does not currently take an inclusive approach to pregnancy discrimination, which has its foundations in direct sex discrimination, assuming that only women can fall pregnant. We take this a symptom of a dated framework and endeavor to use gender neutral language even when discussing the discrimination provisions.

II. ARTIFICIAL PLACENTA TECHNOLOGY

In 2017, results were published of ‘artificial womb’ prototypes that had successfully ‘taken over’ the gestation of lambs removed prematurely from ewe uteri for a period of time, meaning the potential gestation *extra uterum* began being discussed as a realistic possibility.¹⁷ These technologies are often described as ‘artificial wombs’¹⁸ because in emulating gestation, they are attempting to replicate a process that has—until the advent of such technology—immutably taken place in the human uterus/-womb.¹⁹ However, the technologies are more accurately described as ‘artificial placenta technology’ (AAPT) because it is the function of the placenta that they emulate.²⁰

15 In this article, where we refer to ‘typically female physiology’ we refer to people who have physiology that was assigned female at birth. We recognise that sex is not a binary, but that it is people with typical female physiology that can become pregnant and birth.

16 They experience discrimination in many aspects of their experience of pregnancy; eg they cannot be recognized as ‘father’ on a child’s birth certificate. See *R (on the application of McConnell) v Registrar General for England and Wales* [2020] EWCA Civ 559; L. Davis, ‘Deconstructing Tradition: Trans Reproduction and the Need to Reform Birth Registration in England and Wales,’ (2021) 22 INT. J. TRANSGEND. HEALTH, 179.

17 Eg Romanis, *supra* note 1; E. C. Romanis, *Artificial Womb Technology and Clinical Translation: Innovative Treatment or Medical Research?*, 34 BIOETHICS, 392 (2020).

18 The term has become self-perpetuating (despite its inaccuracy) because for work to be accessible to those researching on the subject there is a tendency to default to terminology that has been used in the past.

19 J. Bard, *Immaculate Conception? How will Ectogenesis Change Current Paradigms of Social Relationships and Values?* in ECTOGENESIS: ARTIFICIAL WOMB TECHNOLOGY AND THE FUTURE OF HUMAN REPRODUCTION, 149, S. Gelfand and J. Shook (eds.) (2006).

20 E. Kingma and S. Finn, *Neonatal Incubator or Artificial Womb? Distinguishing Ectogestation and Ectogenesis Using the Metaphysics of Pregnancy*, 34 BIOETHICS, 354, 361 (2020).

AAPT enables the continued gestation of an entity with fetal physiology outside of a human uterus/body.²¹ Gestation outside of the body is referred to as ‘ectogestation’.²² The prototypes currently being tested on animals are designed to address the definite limitations of neonatal intensive care at supporting human entities born prematurely.²³ Conventional neonatal intensive care relies on mechanical ventilation using the human entity’s lungs, meaning no support can be given to entities without sufficiently formed lungs (usually at 22 weeks gestation). Limitations of mechanical ventilation have prompted researchers to design technology better able to facilitate the continued development of entities *as if they had not been delivered from the uterus* rather than assisting entities with life support functions that their bodies are attempting, but struggling, to perform.²⁴ AAPT prevents the developing human entity having to transition from liquid- to gas-based ventilation before they have the physiology to cope.²⁵ The prototypes are sealed systems (to minimize infection risk)²⁶ in which the subject (the ‘gestateling’²⁷) is contained and surrounded by artificial amniotic fluid, attached to cannula that act as an ‘umbilical cord’ and a pump-less oxygenator circuit.²⁸ These features replicate the functions performed by the placenta and thus enable continued fetal development.²⁹

The technology, as it is currently being designed, is only capable of facilitating *partial* ectogestation.³⁰ The function of the device is dependent on the subject already having fetal physiology,³¹ and it is currently unknown whether the device would *ever* be capable of facilitating development from embryo to fetus.³² These devices cannot ‘grow babies from scratch’, but they could ‘take over gestation’ by supporting the *continued* gestation of human entities extracted from a person’s womb after the entity develops fetal physiology (13 weeks+) but before the full process of gestation is completed (38 weeks).³³ Consideration of *partial* ectogestation is important because the technology is more realistic and likely to be developed first,³⁴ and it enables us to ensure that the embodied experiences of pregnancy are not completely disregarded.³⁵

21 Romanis, *supra* note 1; Romanis, *supra* note 2; E. C. Romanis, *Challenging the ‘Born Alive’ Threshold: Fetal Surgery, Artificial Wombs, and the English Approach to Legal Personhood*, 28 MEDICAL LAW REVIEW 93 (2020); Kingma and Finn, *supra* note 20.

22 Literally meaning gestation taking place outside of a mammalian body: Kingma and Finn, *supra* note 20, at 356.

23 Romanis, *supra* note 2; E. C. Romanis, *Is ‘Viability’ Viable? Abortion, Conceptual Confusion and the Law in England and Wales and the United States*, 7 J. LAW BIOSCI., lsaa059 (2020).

24 Romanis, *supra* note 1, at 755; Romanis, *supra* note 2, at 728–729; E. Kingma, *In Defence of Gestatelings: Response to Colgrove*, 47 J. MED. ETHICS, 355, 356 (2021).

25 E. Partridge and A. Flake, *The Artificial Womb* in FETAL THERAPY: SCIENTIFIC BASIS and CRITICAL APPRAISAL of CLINICAL BENEFITS, 83, M. Kilby and others (eds.) (2020).

26 *Id.*, 83.

27 Romanis, *supra* note 1, at 751.

28 Partridge and Flake, *supra* note 25, at 84–85.

29 *Id.*, 83.

30 Romanis, *supra* note 23, at 13.

31 Romanis and Horn, *supra* note 10, at 176.

32 The process of embryogenesis is far more complex—Jackson, *supra* note 10, at 358; Romanis, *supra* note 11, at 7.

33 Romanis, *supra* note 11, at 7.

34 *Id.*, 233; Romanis and Horn, *supra* note 10, at 178–179.

35 *Id.*

For AAPT to facilitate *continued* gestation, there is inevitably a process of extraction.³⁶ The human uterus remains the place where the process of development from embryo to fetus must occur. Extraction is likely to be a surgical procedure that resembles a caesarean section³⁷ but more invasive because the procedure is more delicate earlier in a pregnancy.³⁸ When we describe an individual ‘opting for ectogestation/AAPT’, they are choosing to undergo a major surgery in place of continuing their pregnancy. There will be a substantial recovery time after this, the estimated recovery time following a caesarean section is 4–6 weeks. Moreover, there may be bodily adaptations post-extraction that are difficult for the formerly pregnant person. Their body may start lactating in the expectation of feeding; natural levels of the hormone oxytocin (known as the ‘bonding hormone’) may increase and encourage caring behaviors;³⁹ and their body will begin making its physical recovery from surgical delivery.

Despite extraction—and ‘delivery’ of the product of the pregnancy for the individual—ectogestation is not a complete ‘birth’.⁴⁰ In the artificial placenta, the gestating has not yet made all the necessary adaptations to survive in the external environment.⁴¹ A gestating has fetal physiology and physicality.⁴² In English law, a complete birth requires an entity to be ‘born alive’⁴³ meaning existing and interacting with the external environment.⁴⁴ Romanis has observed that the gestating, therefore, cannot and should not be considered (legally) born.⁴⁵ The gestating does not have the aspects of ‘natality’⁴⁶ that we associate with being born—being held, smelled, heard, and physically nurtured. AAPT introduces the interesting possibility, therefore, of a pregnant person experiencing their delivery (or bodily birthing) *before* the developing human entity is birthed. As a result, ‘giving birth’ on the part of the pregnant person and the ‘being born’ of the gestating entity—two events previously thought to be coetaneous—are not.⁴⁷ The experience of delivery on the part of the pregnant person need not have the same temporality as the ‘birth’ of the entity into the world⁴⁸ that means it needs physically caring for. This could introduce practical problems, in terms

36 J. Murphy, *Is Pregnancy Necessary? Feminist Concerns about Ectogenesis* in *ECTOGENESIS: ARTIFICIAL WOMB TECHNOLOGY AND THE FUTURE OF HUMAN REPRODUCTION*, 34 S. Gelfand and J. Shook (eds.) (2006); Jessica Schultz, *Development of Ectogenesis: How Will Artificial Wombs Affect the Legal Status of a Foetus or Embryo?*, 84 CHI.-KENT L. REV., 877, 888 (2010); Alghrani, *supra* note 11, at 316; Romanis and Horn, *supra* note 10, at 183; Romanis, *supra* note 11, at 7.

37 Murphy, *supra* note 36, at 34; Alghrani, *supra* note 11, at 316.

38 Romanis, *supra* note 11, at 7.

39 E. Nissin and others, *Elevation of Oxytocin Levels early Post Partum in Women*, 74 ACTA OBSTET. GYNECOL. SCAND. 530 (1995).

40 Romanis, *supra* note 2, at 727–728; Romanis, *supra* note 21, at 110–112; Kingma, *supra* note 24, at 356; Romanis, *supra* note 23, at 14–15.

41 Romanis, *supra* note 2, at 727; Kingma and Finn, *supra* note 20, at 358–359.

42 Romanis, *supra* note 2, at 727–728; Kingma and Finn, *supra* note 20, at 359.

43 *Attorney-General's Reference (No 3 of 1994)* AC 245 [1998]; *Burton v Islington Health Authority* QB 204 [1993]; Romanis, *supra* note 21, at 100.

44 Romanis, *supra* note 21, at 100; K. GREASLEY, *ARGUMENTS ABOUT ABORTION: PERSONHOOD, MORTALITY and LAW* 190 (2017).

45 Romanis, *supra* note 21, at 112; note 23, at 14–15—note that these arguments rely on work by Greasley (*ibid*).

46 A. STONE, *BEING BORN: BIRTH and PHILOSOPHY*, 3 (2019).

47 Romanis, *supra* note 2, at 727.

48 Stone, *supra* note 46, at 3; EC Romanis, *supra* note 23, at 21.

of the nature/duration of the maternity leave a person may need—and even whether leave would be an entitlement at all.⁴⁹

II.A. AAPT—increasing choices, increasing pressures

In this article, we assume that individuals will have access to AAPT. Though we do acknowledge that in reality, access may be difficult because it involves the technology being recognized as a clinically appropriate alternative to continuing pregnancy,⁵⁰ and AAPT may be an expensive option only available privately.⁵¹

We focus on people who want to become parent(s) and for whom AAPT may have specific benefits, whether on the basis of ‘medical need’ or broader preferences.

Alternatives to complete pregnancy

AAPT would be a welcome development for people who want to reproduce (and can become pregnant) but do not want to gestate to full term, eg people who are informed that their pregnancy is, or could become, dangerous,⁵² who have had previous difficult or traumatic pregnancies and/or births, who experience difficult symptoms in pregnancy such as longer term pregnancy-related sickness or swollen limbs,⁵³ or who do not enjoy pregnancy and/or the physical impact on their body.⁵⁴ As AAPT involves major surgery, with inherent risks, it is unlikely that this decision would be made lightly. Subjective preferences are important. Not all people feel the same way about pregnancy. Some will feel drawn to opt for technologically assisted gestation by way of an invasive process rather than complete a pregnancy; others feel that pregnancy is a valuable, human experience. There are individuals who want to experience pregnancy so much that they seek out uterus transplantation⁵⁵ or volunteer as surrogates for those who cannot reproduce.⁵⁶ Decisions about how to complete a gestation, whether that be a full pregnancy or a decision to opt out of pregnancy in favor of AAPT, must be afforded equal respect. Without ensuring concrete protections for both avenues, there is the potential for serious inequality where persons may have a choice about their reproductive and gestational experience and others do not.

49 See Romanis, *supra* note 21; 23.

50 This is assuming that AAPT is clinically deemed a ‘reasonable alternative’ to the continuance of pregnancy (following *Montgomery v Lanarkshire* UKSC 11 [2016]—this determination would be made by healthcare professionals) and made accessible Romanis, *supra* note 7.

51 Romanis and Horn, *supra* note 10, at 187; Horn and Romanis, *supra* note 4, at 246–47; G. Cavaliere, *Gestation, Equality and Freedom: Ectogenesis as a Political Perspective*, 46 J. MED. ETHICS, 76, 79 (2020).

52 Romanis, *supra* note 1; Hammond-Browning, *supra* note 1; A. Alghrani and M. Brazier, *What is it? Whose it? Re-positioning the fetus in the context of research*, 70 CAMB. LAW J., 51 (2011).

53 Romanis, *supra* note 7, at 353.

54 Kendal, *supra* note 6, at 12–13.

55 L. O’Donovan, *Pushing the Boundaries: Uterine Transplantation and the Limits of Reproductive Autonomy*, 32 BIOETHICS, 489 (2018).

56 Sarah Jones, *I Have Been a Surrogate Four Times—And This Is What It’s Really Like*, INDEPENDENT, 2018 <https://www.independent.co.uk/voices/surrogate-parent-surrogacy-kim-kardashian-family-childbirth-bond-pregnancy-a8166591.html> (last accessed Sept. 16, 2021).

Pressure about how to gestate

Potential problems arising as a consequence of the technology must also be considered. There is the potential of people being considered ‘substandard’ gestators⁵⁷ and being coerced into ‘opting’ for ectogestation.⁵⁸ The concept ‘of there being an alternative to the pregnancy for the fetus is consistently used inappropriately . . . to control the behavior of pregnant women’⁵⁹ and ectogestation may only exacerbate this.⁶⁰ As Horner explains, ‘Having the option to avoid in utero gestation may inadvertently become a duty to do so’.⁶¹ This is particularly pertinent in employment context. Some may feel pressured to either give-up work to ensure they are an ‘optimal gestator’ (compared with a machine) or to opt for ectogestation to remain in or return to work. This will particularly affect people in roles considered riskier during pregnancy, like work that encompasses ‘heavy lifting or carrying, standing or sitting for long periods of time without adequate breaks, exposure to toxic substances, long working hours’.⁶² Pressure is most likely to affect people working in sectors such as emergency workers, people in the armed forces, and in manufacturing. These are groups of people that already report issues with their employment during pregnancy.⁶³ Employers may try to claim that their duty to offer a reasonable alternative to ‘risky work’ needs no longer exist when people have a choice about how their fetus is gestated. This argument, of course, assumes that AAPT is readily available, eg is state-sponsored and thus free to access,⁶⁴ or alternatively that employers are willing to subsidize AAPT.

Second, there might be concern about whether pregnant workers will have access to a genuinely maximally autonomous choice about *how* to gestate in some circumstances. A number of large technology companies offer employee benefits in the form of reproductive technological assistance. In the USA, Google, Apple, and Facebook offer ‘company-subsidized’ social egg freezing to employees.⁶⁵ This technology is a relatively recent⁶⁶ development that allows young, fertile female people to have ovum extracted and preserved as a form of facility preservation.

While some consider egg-freezing a substantial benefit, it allows employees to access a service they may otherwise be unable to afford;⁶⁷ it has also been subject to criticism

57 Cavaliere, *supra* note 51, at 79.

58 E. C. Romanis and others, *Reviewing the Womb*, JOURNAL OF MEDICAL ETHICS online first doi: <https://doi.org/10.1136/medethics-2020-106160> (2020).

59 *Id.*

60 See also Jackson, *supra* note 10, and Cavaliere, *supra* note 51.

61 Horner, *supra* note 10, at 83.

62 UK Government, ‘Pregnant employees’ rights,’ (nd) <https://www.gov.uk/working-when-pregnant-your-rights> (last accessed Sept. 16, 2021).

63 These are people in professions that might be deemed unsafe or less safe during pregnancy: B. Banerjee, *Physical Hazards in Employment and Pregnancy Outcome*, 34 INDIAN J. COMMUNITY MED., 89 (2009).

64 Many have advocated that it ought to be state-sponsored to ensure equal access: Kendal *supra* note 6.

65 C Weller, *What You Need to Know About Egg-freezing, the Hot New Perk at Google, Apple, and Facebook*, BUSINESS INSIDER (2017) <https://www.businessinsider.com/egg-freezing-at-facebook-apple-google-hot-new-perk-2017> (last accessed Sept. 16, 2021).

66 The technology was declared no longer experimental by the American Society of Reproductive Medicine in 2013: Practice Committees of American Society for Reproductive Medicine, Society for Assisted Reproductive Technology, *Mature Oocyte Cryopreservation: A Guideline*, 99 FERTIL. STERIL. 37 (2013).

67 In the UK, the average cost of egg freezing is £7,000–£8,000. Human Fertilization and Embryology Authority, ‘Egg Freezing,’ (nd) <https://www.hfea.gov.uk/treatments/fertility-preservation/egg-freezing/> (last accessed 16 Sept. 16, ember 2021).

because a decision to freeze eggs, and even to delay becoming pregnant may not be maximally autonomous.⁶⁸ It should be noted that the motives for offering egg-freezing are not homologous. In some instances, it may be a deliberate attempt by employers to delay their employees from having reproducing. In other instances, it may be a genuine attempt to offer a substantial benefit to encourage more women to work for their company.⁶⁹ Whatever the potential reason for offering egg-freezing as a benefit, the information that employees are provided about their options may necessarily be impacted by their employer's interests.⁷⁰ The practice is criticized for reinforcing harmful notions around female responsibility for negative employer attitudes. Baylis writes that egg freezing 'as an employee benefit is not only counterproductive but offensive. It not only fails to empower young women, it actually disempowers them by overtly entrenching the otherwise subtle message that women who have babies are not serious about their careers'.⁷¹ Such narratives persist whether egg-freezing is offered to encourage people to delay becoming pregnancy or as a genuine 'benefit' to encourage more female people to apply to work for the employer. If framed as a 'benefit', the pressure to use it still exists, as otherwise the employee is not making use of an exclusive good that their employer is offering them. There could equally be a perception that people who choose a complete gestation by pregnancy are less interested in their careers. This might be the case regardless of whether partial ectogestation would actually hasten their return to work, their decision about how to complete a gestation could be seen as a symbolic declaration of their values.

It has been suggested that, unlike countries without statutory maternity leave, UK employers do not have cost incentives to encourage employees to use egg freezing. The statutory requirement to pay maternity leave⁷² means that it is cheaper to offer good childcare to attract female talent rather than encouraging people to delay reproducing.⁷³ It might, however, be argued that the greatest 'costs' to an employer result from the disruption of temporarily replacing an employee, while they are on a period of maternity/parental leave.⁷⁴ If this were the case, there might be a greater incentive for countries where there is statutory maternity leave to subsidize egg-freezing because this might postpone pregnancy to a time when the individual concerned is no longer an employee, or it might result in preventing a pregnancy that could otherwise have transpired. Should technology become capable of gestating a human entity from conception to full-term, there could be incentives on the part of employers to encourage employees to use these, especially where they would otherwise have to make reasonable accommodations for a pregnant employee. The reality of the function of AAPT as-designed could also mean that there are limited incentives to encourage employees to

68 S. Mohapatra, *Using Egg Freezing to Extend the Biological Clock: Fertility Insurance or False Hope*, 8 Harvard Law & Policy Review 381 (2014); F. Baylis, *Left Out in the Cold: Arguments Against Non-Medical Oocyte Cryopreservation*, 37 J. OBSTET. GYNAECOL., 64 (2015).

69 We are grateful to an anonymous reviewer for encouraging us to clarify this.

70 H. Mertes, *Does Company-Sponsored Egg Freezing Promote or Confine Women's Reproductive Autonomy?* 32 J. ASSIST. REPROD. GENET., 1205, 1208 (2015).

71 Baylis, *supra* note 68, at 65.

72 Eg in the UK—Social Security Contributions and Benefits Act 1992, s.164.

73 E. Jackson, *The Ambiguities of 'Social' Egg Freezing and the Challenges of Informed Consent*, 13 BIOSOCIETIES, 21, 29 (2018).

74 We are grateful to an anonymous reviewer for raising this point.

opt for this technology, because it may mean that a person needs more leave (because of the gap between ‘delivery’ after which there needs to be recovery, and ‘birth’ after which there is a newborn to care for). AAPT also does not have the benefit that employers might actually be seeking in subsidizing assisted reproduction: delaying, or even preventing, their employees reproducing.

Gestation and workplace equality

Some argue that technology capable of facilitating a complete gestation could better equalize the labor of the sexes in reproducing⁷⁵ and eliminate discrimination against female people, including in the workplace. We do not advocate for AAPT, in any form, as a ‘solution’ to the discrimination that pregnant people, and women more generally, experience in working environments. To do so is to suggest that female bodies and the role that they play in reproduction are the problem. This section demonstrates that AAPT is not the ‘solution’ to workplace inequalities and that framing it as such is problematic for a number of reasons.

As Horn and Romanis argue, claims that AAPT can solve particular aspects of gender inequality ‘present the gestating body as a barrier to gender equality, suggesting that the social burden on women as caretakers and gendered oppression in general can essentially be boiled down to the association of pregnancy with women’s bodies’.⁷⁶ Such framing is problematic because it redirects attention from the actual problem: ‘the social devaluing of care labor and structural and social barriers to resources for sharing the work of child rearing’⁷⁷ including employment rights. In placing the reasons for sex and gender inequality at work in biology means that we are unlikely to see any progressive change with the advent of the technology. Even if pregnancy and birth are *entirely* facilitated by machine, there are still a number of social and legal changes needed to facilitate equality, as we demonstrate in this article. However, if we understand the problem as solely being one of the physical and physiological labor in pregnancy and birthing, we neglect to center the necessity substantive reform needed to protect those who have reproduced. As Jackson observes, pregnancy and birth are 9 months compared with a lifetime of child rearing.⁷⁸

If pregnancy and birth are not undertaken solely by female bodies, it could be argued that the primary burden of care after birth will, therefore, not fall on female people.⁷⁹ De Beauvoir argued that, ‘the fundamental part that from the beginning of history doomed woman to domestic work and prevented her taking part in the shaping of the world was her enslavement to the generative function’⁸⁰ essentially stating that people with the physiological capacity to gestate are ‘biologically doomed’.⁸¹ If there were a ‘conscious uncoupling’ of gestation and being typically female, there could be claim that this will liberate women from being overburdened with childcare. However, given the capacities of technology, it is unlikely that AAPT would achieve any such thing given that current

75 Mackay, *supra* note 6.

76 Horn and Romanis, *supra* note 4, at 239.

77 *Id.*

78 Jackson, *supra* note 10, at 359.

79 Mackay, *supra* note 6.

80 S. DE BEAUVOIR, *THE SECOND SEX* 117 (1949).

81 Reyes Lázaro, *Feminism and Motherhood: O’Brien vs Beauvoir*, 1 *HYPATIA* 87, 88 (1986).

anticipated uses of the technology still anticipate a pregnancy before ectogestation. Furthermore, even if the technology was capable of complete ectogestation (and no female person, therefore, needs to partially carry a pregnancy), it is unclear whether the existence of this technology in itself would challenge the deeply rooted social association of female bodies and a specific role in child-rearing. With such technology, there would need to be a conscious attempt to challenge cultural and institutional legacies about parenting and the division of childrearing. The Hoover made housework easier, but it remains overwhelmingly gendered labor. Similarly, AAPT might come to reduce the physical and physiological demands on female bodies in reproducing, but without a shift in how we conceive of reproductive roles, it is likely that bonding with a newborn and childrearing after delivery will remain gendered labor. As Gregoratti and Horn stipulate:

Uncoupling gestation from the body is also unlikely to redress the inequalities of other forms of socially reproductive labour, such as care work and productive labour. By itself, ectogenesis is unlikely to either shift the norms that define women in their reproductive capacities or alter the precarious and gendered nature of labour markets.⁸²

It is also unclear how AAPT would stop discrimination against women/pregnant people in the workplace. For example, there will remain discriminatory hiring or promotion practices that favor men because there is not the same perception that at some point, they will prioritize caring responsibilities. This results from the social association between women and the primary responsibility for childrearing, irrespective of how a child was gestated before birth.

Furthermore, suggesting that technology ‘solves’ inequality at work expects people wanting to become parents to opt for particular types of gestation over others. Technology ought to facilitate choice, rather than become another tool for oppression or coercion. Were pregnancy framed as the root of inequality, this might end up precluding individual choice about how to gestate.⁸³ Despite the technology not ‘solving’ workplace inequality, it may bring benefits. We are committed to supporting people’s autonomous decisions about how they want to gestate. Employment rights are a crucial aspect of this, because of the necessary security that they provide individuals deciding whether/how to reproduce, that have been thus far overlooked in the existing literature.

AAPT presents opportunities for greater choice for pregnant people. The law must account—to respect a person’s bodily autonomy, reproductive autonomy, and equal opportunity in the workplace—for the possibility of people carrying pregnancies to term and of opting for AAPT. A failure to account for both possibilities exposes individuals to harm, specifically in the denial of their bodily and reproductive autonomy. For AAPT to be a real and genuine choice open to all,⁸⁴ national and regional employment law needs to support these choices. AAPT changes the nature of birth and maternity

82 Catia Gregoratti and Laura Horn, *A New Wheel to Keep Capitalism Moving? The Artificial Womb in Feminist Futures and the Capitalist Present*, in *POST-CAPITALIST FUTURES: POLITICAL ECONOMY BEYOND CRISIS and HOPE*, 33 Adam Fishwick and Nicholas Kiersey (eds.) (2021).

83 E. C. Romanis, *Assisted gestative technologies online*, *JOURNAL OF MEDICAL ETHICS* (2022), <https://jme.bmj.com/content/early/2022/03/10/medethics-2021-107769>.

84 Subject to the stipulation that AAPT is available—and that choice is legally supported (see the potential limitations on access to choice about gestation in the current legal framework in Romanis, *supra* note 7).

in such a way that changes to employment law are inevitable. We highlight practical problems and associated avenues for change, which should be considered necessary to support the choices that AAPT could bring.

III. CHALLENGES IN THE EU PREGNANCY AND MATERNITY RIGHTS FRAMEWORK

In this section, we discuss specific employment law rights at the EU level, and the challenges of integrating AAPT use into the existing framework. We draw on case law relating to existing advancements in reproductive practices, such as in vitro fertilization (IVF) and surrogacy, to develop an understanding of how the framework may become exceedingly dated and ineffective.

EU law has created a positive legal landscape of protection for pregnant workers and those who have just given birth, securing the health and wellbeing of pregnant people and new parents. However, the framework is misaligned with the social realities of reproduction and parenthood and it harms non-traditional families. Two clear instances of EU law's failure to keep up to date with social and medical advancements are its considerations of IVF treatment and surrogacy. Specifically, the Court of Justice of the European Union's ('CJEU') findings that these experiences do not always warrant the same protection as 'traditional',⁸⁵ physiological conception and pregnancy. AAPT may create an even larger divide between the EU maternity framework and the social realities of reproducing. We advocate for EU law to avoid this, with particular avenues of interpretation to be taken that will ensure AAPT-users do not fall outside the protection of the EU maternity framework as commissioning parent(s) and IVF parent(s) have in the past.

EU law provides two primary systems of protection for maternity rights: those relating to the health and safety of the worker during pregnancy and maternity leave, legislated for in the Pregnant Workers Directive;⁸⁶ and a general prohibition of discrimination on the grounds of maternity or pregnancy, advanced by the jurisprudence of the CJEU and the Recast Directive.⁸⁷ The two systems complement one another, although they have different objectives and afford different rights.

The Pregnant Workers Directive regulates what employers can expect from pregnant workers/workers who have recently given birth, and how risks (such as night work patterns,⁸⁸ or activities that may be harmful⁸⁹) should be mitigated for those workers.⁹⁰ The Directive provides minimum standards of maternity leave,⁹¹ time-off for antenatal examinations,⁹² and a prohibition of dismissal during pregnancy and mater-

85 We use the term 'traditional' to refer to the reproductive practices that the law was built to reflect, and in no way to convey these practices as 'normal' or 'better' than alternatives to conception-gestation-birth.

86 Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding OJ L 348 (1992) ('Pregnant Workers Directive').

87 Directive 2006/54/EC on the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation (recast) OJ L 204 (2006) ('Recast Directive').

88 Pregnant Workers Directive, Art.7.

89 *Id.*, Art. 3.

90 *Id.*, Art. 5.

91 *Id.*, Art. 8.

92 *Id.*, Art. 9.

nity.⁹³ The reasoning for this protection is the special status awarded to pregnancy: EU law recognizes that there is ‘legitimacy, in terms of the principle of equal treatment, first, of protecting a woman’s biological condition during and after pregnancy and, second, of protecting the special relationship between a woman and her child over the period which follows pregnancy and childbirth’.⁹⁴ There is no definition of pregnancy, the Directive leaves ‘pregnant worker’, ‘worker who has recently given birth’, and ‘worker who is breastfeeding’ to be interpreted in line with national legislation.⁹⁵

The Recast Directive preserves sex equality through prohibition of discrimination (direct and indirect) for access to employment, promotion, vocational training, working conditions of employees, and occupational social security regimes. The definition of discrimination includes ‘any less favourable treatment of a woman related to pregnancy or maternity leave’.⁹⁶ For instance, dismissing a pregnant person for financial reasons relating to pregnancy cover/maternity period is strictly prohibited.⁹⁷ The CJEU has found employers dismissing workers because of pregnancy to be direct discrimination on the grounds of sex.⁹⁸ In *Webb*,⁹⁹ the Court determined that pregnant workers may not be dismissed because of absences related to pregnancy even when there is an objective and reasonable need for their presence presented by the employer.

In the following sections, we consider some of the main provisions of EU law in relation to pregnant workers, and how they may be interpreted in light of AAPT. We specifically address three key provisions aimed at the protection of pregnant workers: the right to maternity leave, protection from dismissal, and the prohibition of discrimination. The challenges faced by AAPT users under the maternity framework are the most pressing, as the considerations of when ‘birth’ occurs and when maternity leave kicks in will have a knock-on effect on the scope of their protection from dismissal and pregnancy discrimination. For all three rights, protection will depend upon whether the worker is considered to be ‘pregnant’. Therefore, our interpretation suggests that AAPT gestation must allow the worker to retain their ‘pregnant worker’ status.

It is important to note that the interpretations that we suggest for the law would provide equality of outcome, rather than equality of substance. For instance, the length of maternity leave would (potentially) need to be lengthened in AAPT cases to account for the longer period between recovery and birth. There are technical reasons for this that we uncover during the following analysis, based on the law’s intended purpose and the ability to meet that purpose in AAPT cases. However, we also argue for equality of outcome for a more fundamental reason. Equality of substance alone (ie maternity leave that is the same length as it would be for bodily gestation, which does not cover recovery as well as caregiving in the first few months of the child’s life) would *de facto*

93 *Id.*, Art. 10.

94 C-421/92 *Habermann-Beltermann* ECLI:EU:C:1994:187 [21] [1994]; C-184/83 *Hoffmann v Barner Ersatzkasse* ECLI:EU:C:1984:273 [25] [1984].

95 Pregnant Workers Directive, Art. 2.

96 Recast Directive, Art. 2.

97 C-177/88 *Elisabeth Johanna Pacifica Dekker v Stichting Vormingscentrum voor Jong Volwassenen (VJV-Centrum) Plus* ECLI:EU:C:1990:383 [1990].

98 C-179/88 *Handels- og Kontorfunktionærernes Forbund i Danmark, (on behalf of Birthe Vibeke Hertz) v Dansk Arbejdsgiverforening* ECLI:EU:C:1990:384 [13] [1990]; *Habermann-Beltermann*, *supra* note 95, at [24]–[25].

99 Case C-32/93 *Carole Louise Webb v EMO Air Cargo (UK) Ltd* ECLI:EU:C:1994:300 [1994].

remove AAPT as a genuine choice for those who need or want to use it. If the substantial outcome of maternity and equality rights were to be lost by utilizing AAPT, this would leave pregnant people with a choice between their bodily preferences and autonomy or in some instances necessity, or a full realization of their workplace rights. In such instances, this does not allow for true autonomy over gestational choices. Since the goal of advancements in reproductive practices and technology is to increase choices and possibilities for conception and gestation, we believe the law ought to facilitate these advancements. Thus, we argue against the stratification of rights based upon the bodily choices of pregnant persons.

There are, of course, counter-arguments against interpretations that grant equality of outcome. For instance, it may be said that treating AAPT as similar to bodily gestation is unfair and makes little normative sense, given that other reproductive practices are not awarded equality of outcome, such as surrogacy or IVF. While we strongly argue against a system that is dependent on reproductive choices to allocate rights, we also acknowledge that this is how the current system of maternity works. The key difference between AAPT and other reproductive practices is that AAPT starts with bodily conception and pregnancy. Thus, it will fall under the scope of the provisions on maternity law and pregnancy non-discrimination. The same cannot always be said for the early stages of IVF or for surrogacy.

Other counter-arguments could be made at the more practical level. First, that it is best to let national legislatures decide what framework to apply to AAPT users. In matters of reproduction and birth, there is always a potential for national cultural sensibilities to differ greatly. We also acknowledge that this is the case, but also find normative evidence that AAPT would fall under the scope of EU law as it stands. As such, the maternity framework will need to be applied to AAPT use somehow. Our interpretation allows for the underlying goals of the framework to be achieved. Finally, one may argue that the costs and disruption faced by employers, by giving equality of outcome to AAPT users, will be unreasonable. In the following analysis, we attempt to present lines of interpretation that would strike a balance between realizing the employment rights of AAPT users and avoiding unnecessary disruption to the employer. Given that EU law will undoubtedly have an impact on how AAPT users are treated in labor settings and that there may be a way to incorporate AAPT use into the existing framework, we advocate that an interpretation should be given that allows these users the same rights as those undertaking bodily gestation.

III.A. Maternity leave

Under Article 8 of the Pregnant Workers Directive, pregnant workers, workers who have just given birth, and breastfeeding workers are legally entitled to ‘a continuous period of maternity leave of at least 14 weeks allocated before and/or after confinement in accordance with national legislation and/or practice’. The aim of maternity leave is to allow for physical recovery after birth and also to enable bonding and caregiving between the worker who has just given birth and their child.¹⁰⁰ AAPT users will need both, but not in the timeline foreseen by the Directive. Recovery and maternity care are not ‘continuous’ for AAPT users, who will have an invasive procedure some time

100 C-167/12 C.D. v S.T. ECLI:EU:C:2014:169 [2014], at [34].

before their gestating becomes a baby. Article 8 is an ill-fitting provision for those opting for reproductive techniques outside of the ‘traditional’ conception-gestation-birth pattern. Specifically, those opting for ectogestation (AAPT) or surrogacy will not experience ‘confinement’ in the manner foreseen by the drafters of the Directive. In fact, both may be considered to involve no ‘birth’ at all. The caesarean-esque delivery of the developing fetus to the AAPT may not (and *should* not) be considered ‘birth’. Whether the extraction of the child from the machine would be considered that ‘birth’ is also debatable, but this would probably be the best way to protect maternity leave rights for AAPT users.

Our concern with the provisions is that interpretations of the scope of the Directive have been unforgiving toward those who do not experience birth or physiological gestation. While the CJEU has not yet had to tread into the sensitive area of considering when confinement occurs, the Court has had to consider who would fall under the scope of ‘pregnant worker’, ‘breastfeeding worker’, and ‘worker who has just given birth’. The rulings show how an individual who has not experienced gestation and birth may fall outside of the scope of the Directive entirely, and are therefore not entitled to maternity leave.

The right to maternity leave was the central focus of two CJEU decisions relating to surrogacy and employment rights, with the outcome hinging on whether the commissioning parents (mothers, in both instances) fell under the scope of the Directive. *CD v ST*¹⁰¹ and *Z v A Government Department*¹⁰² were decided on the same day. The former was referred to the CJEU by the UK Employment Tribunal, the latter by the Equality Tribunal in Ireland. Neither legal system provided an obligation to grant maternity leave for commissioning parents. In both cases, the CJEU confirmed that EU law does not oblige an employer to provide commissioning parent(s) with maternity leave under Article 8 of the Pregnant Workers Directive. Refusing to grant maternity leave would not be a breach of gender equality provisions.¹⁰³

In surrogacy arrangements, an independent person with female physiology (the surrogate) carries out pregnancy, gestation, and birth for ‘commissioning’ parent(s).¹⁰⁴ This means that commissioning parents are not ‘pregnant’ nor can they have ‘just given birth’, although they can assume the role of breastfeeding the new born. This was the case in *CD*.

The two cases received very different legal opinions from Advocates General Kokott (CD) and Wahl (Z). The former suggested that the Court take a functional interpretation of the provisions in the Pregnant Workers Directive to include surrogacy within the scheme, for those who breastfeed their new born *and* those who do not. She notes that ‘in view of the possibilities created by medical advances, the objectives pursued by Directive 92/85 mean that the class of persons defined in Article 2 of the Directive must be understood in functional rather than monistic biological terms’. Kokott’s preferred interpretation of EU law leaves maternity leave accessible for those making use of advancements in reproductive technologies and practices. She argues

101 *C.D.*, *supra* note 100.

102 C-363/12 *Z. v A Government Department, The Board of management of a community school* ECLI:EU:C:2014:159 [2014].

103 Nor did the courts find any breach of disability discrimination provisions.

104 The genetics of the resulting child varies, depending on the type of surrogacy (genetic vs. gestational).

that the scheme of EU law is not solely focused on the health and safety of pregnant workers, and thus not entirely on physiological vulnerability, meaning that even parents who have not followed the conception-gestation-birth pattern should benefit from the crucial bonding and caring time. She opines ‘Maternity leave is also intended to protect the special relationship between a woman and her child over the period which follows pregnancy and childbirth.’

Kokott’s view attempts to retain the key functions of the law in cases concerning reproductive advancements, with a modern interpretation of an arguably outdated framework. By comparing the situation of commissioning parents and ‘traditional’ maternity, she advocates for more flexibility in interpreting maternity, divorcing it from ‘pregnancy’. She finds that this fulfills the legislative intention of the Directive.

The Court, unfortunately, did not agree with Kokott’s assessment. Instead, the approach advocated by AG Wahl in *Z* was followed in both cases. He had suggested that commissioning parents fall outside the scope of the Pregnant Workers Directive, because the aim of that legislation is to protect workers in a vulnerable condition during pregnancy/after birth. The scope of protection does not extend to parenthood/motherhood in general, so only those who have been pregnant and given birth can enforce a legal right to maternity leave under EU law. The Court accepted the importance of the biological condition as the guiding factor for protection, based on explicit references to confinement in the Directive, and the overall health and safety objectives. Accordingly, the right to maternity leave presupposes that the worker has, themselves, given birth, leaving commissioning parents outside the scope of the Directive.

Both AG Wahl in *Z* and Kokott in *CD* found that there had been no discrimination on the basis of sex.¹⁰⁵ The Court in both cases agreed that a refusal to offer commissioning mothers maternity leave would not constitute direct sex discrimination, as the national framework creates the same circumstances for commissioning fathers.¹⁰⁶

We do not foresee any Court considering a worker using AAPT to be taken out of the entire scheme of the health and safety framework, because these individuals will be pregnant for some period of time and have a caesarean-esque procedure.¹⁰⁷ However, we are concerned about how the issue of ‘confinement’, and the triggering of maternity leave, would work for these individuals. Considering how the physiological (recovery) objective has been taken as the main reason for maternity leave by the Court in surrogacy cases, the CJEU may be tempted to see AAPT transplant as ‘birth’ so that maternity leave kicks in to cover the recovery period of the worker when they are physiologically most vulnerable.

While this would be administratively desirable from an employer’s perspective as it would keep the pregnancy/maternity period shorter, it would significantly impact the legal protection of the ‘special relationship’ between parent and child after birth¹⁰⁸

105 *Z*, *supra* note 102, Opinion of AG Wahl [61]–[63].

106 Furthermore, it was found that no disability discrimination had occurred. Although in *Z*, the commissioning mother was fertile but had a rare condition that prevented her from carrying a fetus: she had no uterus. There was no acceptance that a lack of maternity leave from the employer would be disability discrimination because it did not interfere with her professional activities in any capacity—*Z*, *supra* note 102, at [78]–[82].

107 Murphy, *supra* note 36, at 34.

108 ‘Birth’ here constituting the end of gestation: Romanis, *supra* note 2, at 729; Kingma and Finn, *supra* note 20; Romanis, *supra* note 23.

for individuals making use of this technology. Despite the special status EU law has awarded to this time,¹⁰⁹ it has not played a substantive role in decisions on maternity leave where the physiological vulnerability of pregnancy has not been experienced.¹¹⁰ However, the bonding time between the birthing person and their child is still an important objective to be attained, and for it to be reached in AAPT cases, maternity leave would need to be triggered once the newborn is 'delivered' from the machine. As such, during the period of AAPT gestation, the individual would need to retain their 'pregnant worker' status. While the person may no longer be pregnant, the gestational labor that they undertake in reproduction does not cease. AAPT still requires the physical labor and presence of the (formerly pregnant) person intending to become a parent. This might be a function of the way the technology is designed,¹¹¹ the result of the physical implications of having partly gestated the fetus, or the result of the wishes of intended parents.¹¹² AAPT does involve a bodily birth from the perspective of a pregnant person, but a gestating is not 'born'.¹¹³ AAPT-gestation does not fit the natural scope of maternity leave, as during AAPT gestation there is no 'child' for the worker to care for.¹¹⁴

Our suggestion that AAPT-caesarean recovery, presence during artificial gestation, and 'birth' should be seen as part of the 'pregnancy' may elongate the process of pregnancy and maternity substantially for those opting to make use of AAPT. For example, a person is likely to have extraction surgery for AAPT at 24 weeks (this is currently the point at which teams developing AAPT prototypes anticipate they could be used).¹¹⁵ This person would need 6 weeks leave to recover (as is standard after caesarean), over a period of time when they could otherwise, assuming that the nature of the work is not unsuitable, be working. They may be physically able to attend work at the 30th week of the gestation period—though they would need some absences to spend time involving themselves in the machine-gestation process. It would be kinder to allow the person not to return to work and elongate maternity leave so they would be afforded the privacy and time necessary for this involvement. Many who reproduce in this way will feel the need to be at the hospital regularly, even if not able to hold or physically care for the gestating, to be involved in any necessary medical/technical decision-making, and to feel psychologically that they are still involved in their developing future child's creation. There are active discussions among those designing the technology about how to allow some interaction between future parent and gestating, eg allowing

109 *Webb, supra* note 99, at [20]; Case 184/83 *Hofmann* ECLI:EU:C:1984:273 [1984] [25]; *C.D., supra* note 100, at [34].

110 See *C.D., supra* note 100; and *Z., supra* note 102.

111 The Teams building artificial wombs often speculate about various design features eg a way for parent(s) to 'speak' to the gestating through audio designed to resemble a fetus in uterus hearing the pregnant person's voice.

112 We find it hard to imagine that intended parents using this technology would not want to be near the process—although we envisage the function of the technology meaning that parents cannot interact directly with a gestating like they would a neonate in intensive care (because it is in a sealed sterile environment), there will be other things that parents want to be present for eg to 'talk' to the gestating, or just to be around to see the process, or in case of emergency.

113 *Romanis, supra* note 2, at 728–729; *Romanis, supra* note 23, at 14–15.

114 *Id.*

115 *Partridge and others, supra* note 3, at 11.

the parent(s) to speak into the gestating-device.¹¹⁶ Such features of the design might be more to the benefit of parent(s) and their emotional wellbeing than the gestating.

We do not advocate for this approach to leave in general, there are a plethora of reasons for absence for which it would be kindest to give leave with full pay. We do not find it appropriate to compare this type of leave with sickness or compassionate leave, for instance, because reproduction, pregnancy, and birth are simply not comparable to these situations.¹¹⁷ Our reasoning here is more practical. As well as benefiting the parent, elongating maternity may also be more beneficial to the employer. Then, they would not have to deal with the logistical issue of finding maternity cover for the recovery period and then the maternity period 2 months later. While it would mean paying maternity leave and potentially covering the cost of a replacement, this might not outweigh the difficulty of finding two short-term employees to cover both periods of absence. From a productivity perspective, an employee who has only just recovered from major surgery and is anticipating the arrival of a new-born may not be as productive as an individual without these circumstances. However, we acknowledge that the core issue of AAPT is exactly how to treat the previously pregnant person during their post-recovery time. We therefore try to explore all potential options. The gestating would not be delivered from the artificial placenta until 38 weeks (this is the average full gestation period)¹¹⁸—at which point the worker would need their full maternity leave to care for the newborn. Traditionally pregnant people may continue to work under the burden of pregnancy until relatively close to due date, whereas AAPT individuals would have a caesarean recovery process long before the due date. The law will need to account for these changes in the gestation/maternity timeline, should AAPT become widely available.

Other scholars have demonstrated that AAPT should not be considered ‘birth’,¹¹⁹ despite requiring a recovery period and ending the physiological vulnerability of pregnancy. Not only would seeing this as birth fail to reflect metaphysical realities,¹²⁰ it would give AAPT users recovery time, and time to visit their gestating, but would prohibit any meaningful time to form a parent/child bond or to breastfeed. While this would be similar to the position of commissioning parents, the difference for AAPT users is the fact that they have been physiologically pregnant in order to bring them under the scope of the Directive. We do not advocate for an approach based entirely on physiology but acknowledge that AAPT *can* be integrated into the Directive’s framework. Interpreting AAPT use as the continuance of the ‘pregnancy’ (because gestation continues) and the removal of the gestating from the AAPT as ‘birth’ would keep the gestation/maternity timeline as close as possible to what is envisaged by the

116 Nicola Davis, *Artificial womb: Dutch researchers given €2.9 m to develop prototype*, GUARDIAN, 2019 <https://www.theguardian.com/society/2019/oct/08/artificial-womb-dutch-researchers-given-29m-to-develop-prototype> (last accessed Feb. 7, 2022).

117 The Court of Justice itself has recognised that pregnancy and maternity cannot be compared to sickness, for instance, in cases of dismissal: In C-32/93 *Carole Louise Webb v EMO Air Cargo (UK) Ltd* ECLI:EU:C:1994:300.

118 A. M. Jukic and others, ‘Length of Human Pregnancy and Contributors to Its Natural Variation,’ (2013) 28 HUM. REPROD., 2848.

119 Romanis, *supra* note 1; 2; 21; 23; and Kingma and Finn, *supra* note 20; Kingma, *supra* note 24.

120 *Id.*

Directive, allowing for meaningful maternity leave for those who choose machine-assisted gestation.

A potential alternative to elongating maternity is to use the right to antenatal examination to allow visitation of the gestating. Article 9 of the Pregnant Workers Directive obliges Member States to allow pregnant workers time off work (without loss of pay) for antenatal examinations. ‘Antenatal’ could be taken to mean specifically medical care of a pregnant person (which would not physiologically apply to AAPT users) or simply medical care that occurs before birth. Currently, the law’s preoccupation with the uterus would suggest that AAPT users would not be entitled to this time off, having no need for a medical examination on their bodies. This would not be an ideal interpretation to take. The use of the antenatal examination right would remove the need for elongated maternity leave but still allow the pregnant worker to interact with the gestating, be fully informed of the gestating’s health, and be involved in the development during the gestation progress. This would allow equality of substance and outcome for AAPT users and bodily gestators. This interpretation therefore strikes a good balance between allowing AAPT users time off to be informed about the development of their gestating and involved in the AAPT process, and also giving employer’s access to their employee before maternity leave after birth. The alternatives do not strike a good balance. Elongating maternity leave would potentially be unpalatable for employers. Not allowing any time off after recovery from the caesarean would remove the pregnant person’s ability to be involved in the development of their future child.

Should the health and safety directive not allow for visitation of the gestating, there would be no rectifying through a discrimination claims because the framework of sex discrimination may not cover a situation related to post-transfer AAPT, since both male and female parent(s) could attend the hospital. Indeed, this is one of the arguments made by some bioethicists who posit that AAPT technology would enable better equality between sexes in reproduction—because male genetic progenitors could take more ‘care’/‘custody’ of gestating entities before they are born.¹²¹ These arguments have been criticized by feminist scholars,¹²² and we would also contest this interpretation. If the worker were still a ‘pregnant worker’ during AAPT gestation and permitted the same rights as those who undertake bodily gestation, there would not be a need to consider whether the sex discrimination framework would allow for time off to be involved in the AAPT gestation process, thus avoiding the difficulty that surrogacy cases face in the scheme of EU law.

Although we advocate that a ‘better’ outcome should be available for AAPT users when compared with commissioning parents, we do not agree with the stratification of rights based on reproductive or gestational choices and argue that the current framework of maternity leave is ill-fitting for the reality of modern family structures and reproductive practices. Still, the best interpretation would recognize that the transfer of the fetus to an AAPT machine is not ‘birth’, but pregnancy continued, so that ‘confinement’ occurs during delivery from AAPT, and the timeline for maternity leave kicks in at the appropriate moment. Then, it would be a matter of legal argumentation

121 Eg, I. Brassington, *The Glass Womb*, in REPROGEN-ETHICS and THE FUTURE OF GENDER, F. Simonstein (ed.) (2009).

122 Horn and Romanis, *supra* note 4, at 239; Jackson, *supra* note 10, at 359; Romanis, *supra* note 7, at 33.

whether maternity should cover the 8 weeks between recovery and birth from the AAPT, or whether this period should be one spent in work with access to antenatal visitation of the gestating. What is fundamentally important is that the knock-on effect that early maternity would have on the development of the bond between parent(s) and child is not overlooked. The issue with surrogacy cases is that one objective of the Directive (the protection of caring and bonding time) cannot be reached, due to the restrictive approach to ‘pregnant worker’ and ‘worker who has just given birth’. We believe that there is scope for a more flexible approach to be taken for workers who have *been* pregnant. Our interpretation aims to fulfill the objectives of the Directive in the case of AAPT use. If the objective of recovery and bonding can be achieved, then they should.

This interpretation leaves open the issue of how the recovery time will be accounted for, after fetal extraction surgery for AAPT. The most desirable way to account for this (at the national as well as regional level) is to have a framework which splits maternity leave, instead of making it a continuous period. In the absence of such a framework that would accommodate AAPT gestation in the employment rights context, the use of sick leave may be the best way to do this. For instance, IVF processes are sometimes accommodated for under ‘sick leave’.

We accept that a continued focus on the physiological aspects of pregnancy may, despite the metaphysical, ethical, and legal arguments to the contrary, inspire a court to see AAPT transferal as ‘birth’. The views of national regulators and legislatures will also influence this, as reproductive choices are (unfortunately) a politicized matter for many Member States within the EU.

We appreciate why other commentators have agreed with the legal outcome of the surrogacy cases in *CD* and *Z* (despite the worrying social aspects of the decisions).¹²³ The CJEU is neither the EU legislature nor the national legislature.¹²⁴ Decisions regarding the EU framework have an impact on the national choices of legislatures, in an area which is politically and socially sensitive.¹²⁵ Moreover, the protection of the development between new parent and child is not the sole focus of EU law. The Directive concerns health and safety, creating the groundwork for a limited biological view of pregnancy protection. Politically, and from a perspective that the law should be closely interpreted as written (even if outdated), the decisions in *CD* and *Z* are understandable.

However, we are unconvinced by the hyper-focus on the pregnant workers’ physiological state and *physical* vulnerability as a guiding force for interpreting the Directive. There may be some room to retain the Directive’s focus on vulnerability as a guiding factor of interpretation, without boiling down ‘vulnerability’ to be synonymous with ‘physically pregnant’. The mental health of individuals in the early stages of bonding and caregiving (usually mothers) could be worthy of protection under the Directive, if a broader approach would be taken by the CJEU. Under the remit of Article 10 on the prohibition of dismissal of pregnant workers, the Court has held that the Directive protects the physical and *mental* state of those who are pregnant, have recently given

123 See Mel Cousins, *Surrogacy Leave and EU Law* 21 MAASTRICHT J EUR COMP L., 476 (2014).

124 Finck and Kas, *supra* note 13, at 291.

125 On this point in particular, we agree with Cousins’ assertion that national updates are likely to occur before an update to EU law: see *supra* note 121.

birth, or are breastfeeding.¹²⁶ The Court specifically mentions the need to protect from dismissal, because this kind of mental stress could have the unwanted impact of encouraging the pregnant person to terminate their pregnancy. However, this does not seem to be the only foreseen acknowledgement of the need to protect the mental health of individuals under the Directive. The Court acknowledges that there is protection from the start of pregnancy until the end of maternity, to protect the physical *and mental* health of pregnant workers, workers who have recently given birth, and those who are breastfeeding. The mental health of those with a newborn does not seem to be excluded from the scope of intended protection under Article 10.

While the prevention of physical and mental distress from dismissal, and allocated recovery time in maternity leave, are two distinct facets of law, it does not make sense to protect mental wellbeing in one and not the other. Surely, the purpose of protecting the mental health of individuals under Article 10, even after birth, is to ensure that they can care for their child without unnecessary distress.¹²⁷ The capacity to do so also depends on good physical and mental health during the process of becoming a parent, and the mental health status of a person intending to parent would be comparable to that of someone who has recently given birth: they undertake the same care labor, and the same difficulties if asked to return to work while also caring for an infant. Thus, making sure there is adequate maternity leave for those relying on non-traditional reproductive and gestational practices could fall under the scope of the Directive, as a way of protecting the mental and physical wellbeing of those undertaking the bonding and caring tasks foreseen during maternity leave.

This is not a perfect approach to interpretation, and it could still be argued that the core function of the Directive is to protect physical health and safety of pregnant workers and those recovering from birth. As such, surrogacy and individuals who have for some time not been pregnant (AAPT users) would simply never fall under the scope of protection. The narrow approach to the protection of pregnant physiology [rather than pregnant people and new parent(s)] is what dates the law and renders it increasingly unsuitable for the purposes of protecting the caring and bonding time that is critical for newborns and their primary caregiver. If EU law is genuinely concerned with protecting that bonding time, then law is potentially no longer fit for purpose.¹²⁸ As medical advancements continue, the gap between the rights of different child-rearing workers will continue to grow. The issues of political sensitivity cannot excuse inaction.¹²⁹ In the absence of intervention, by Courts or legislatures, pregnant people following the traditional path of gestation, birth, and maternity will not have the worry of having bonding time disturbed by their employer's demands. Pregnant people who need or choose to rely on assisted reproduction technologies will not be afforded the same peace of mind or the same benefits. The difference in legal rights will undoubtedly have a social impact, with certain forms of child-bearing or gestation being seen as 'less than' and unworthy of protection. We argue here that the 14 weeks of maternity leave should be granted to all primary caregivers that could potentially fall under the scope

126 *Webb*, *supra* note 99, at [21].

127 In fact, the Court in *Webb* suggests that dismissal may lead to women to not feeling capable of doing so—leading to potential termination (*Id.*).

128 *Ewing*, *supra* note 13, at 7.

129 *Healy*, *supra* note 13, at 515.

of the Directive, if it were given a broad enough interpretation. We have argued for a particular route to interpreting AAPT as continued gestational labor, meaning that an individual using it would be a 'pregnant worker' and would benefit from the bonding and caring time necessary after that delivery of their newborn. AG Kokott's reasonable (but rejected) approach to broadening the scope of the Directive would do the same for surrogate mothers.

This approach obviously has limitations along gender lines; the Directive is a gendered piece of legislation (because of its focus on the female physiology and perceived physical vulnerability). We cannot, for example, foresee a commissioning father being drawn under the scope of the Directive. That does not mean that the parental leave intended to protect bonding time is any less important but simply shows that maternity leave falling under a health and safety Directive that is fundamentally focused on pregnant physiology is simply unfit for purpose when modern reproductive practices and parenting are taken into account.

Finck and Kas highlight that the polarized approaches of the AGs in *CD* and *Z* demonstrate 'opposed conceptions of parenthood, an issue that could come to influence subsequent litigation as family structures and family law are undergoing a process of redefinition'.¹³⁰ Attempts to update the law should occur sooner, rather than later. Ideally, this would come into the form of an overhaul that distinguishes between critical parental leave for bonding and caring of a newborn and the protection of the health of pregnant people. Without such a change (which we believe is necessary), we argue that the Directive should be interpreted in a manner that allows maternity leave when an individual assumes care of a newborn and not simply when they have just given birth.

In any case, the inherent focus on pregnant physiology for the attainment of employment law rights is problematic. In light of the existing structural violence and policing of female physiology,¹³¹ this is not a matter of EU law refusing to take a bold step forward with its labor rights, *it is an active step back*. It is an entrenchment of the regulation of the female form, condoned by the CJEU. While this is a matter for the legislature, and a finding in the alternative would have repercussions for equality more broadly (ie in creating different frameworks for commissioning mothers than for same sex couples opting for surrogacy,¹³² or for adoptive parents¹³³), a narrow reading of the Pregnant Workers Directive remains unhelpful.

III.B. Prohibition of dismissal of pregnant workers

Under Article 10 of the Pregnant Workers Directive, individuals are protected from dismissal from the start of their pregnancy until the end of maternity, save in 'exceptional cases' where the dismissal is in no way related to the pregnancy/birth or maternity. The objective behind this provision is to prevent pregnant persons and new mothers from being discriminated against during dismissal decisions. The Court has acknowledged that a dismissal during pregnancy or maternity leave could have a detrimental impact on the pregnant person's physical and mental wellbeing, as well as potentially influencing their choices around whether to remain pregnant.

130 Finck and Kas, *supra* note 13, at 294.

131 Eg regulation of abortion.

132 Finck and Kas, *supra* note 13, at 295.

133 Cousins, *supra* note 121, at 485.

How well this provision accommodates advancements in reproductive practices and technology depends on the circumstances of the pregnancy and birth. As we have already seen, unless a Member State themselves legislates to give maternity leave to commissioning parents, there is no right to maternity. Surrogacy cases will therefore fall outside of the scope of this provision, because the person intended to parent will never have been pregnant nor on maternity leave. For AAPT users, it is clear that there will be some scope for the provision applying, because at some point, the individual will be physically pregnant. What remains unclear, as set out above, is when ‘maternity leave’ will start (and therefore when it will end) for AAPT users, and therefore when the protection from dismissal will run until.

If AAPT transfer were interpreted as ‘birth’, this would speed up the timeline of protection from dismissal considerably. The previously pregnant person would use their maternity leave to recover from the caesarean, but little (if any) leave would be used to care for (and bond with) their child. A person who had their AAPT transfer at 24 weeks, and used their full 14 weeks of maternity at this point, would have no maternity leave left by the time their baby is delivered from the artificial placenta at 38 weeks. While Article 10 would protect them from dismissals during the beginning of pregnancy, and throughout their recovery due to ‘maternity leave’, this protection would end either before the newborn arrives or very early into the bonding process. Before being delivered from the artificial placenta, the gestating is not physically situated and does not need physical interaction from a carer to survive.¹³⁴ Once the newborn arrives, there will be demands for caring and bonding from the previously pregnant persons. Thus, if maternity leave has already ended, there is a risk of a new parent requiring absences from work (to bond with and care for their child) which are not covered by the Directive in terms of dismissal prohibition, leaving them vulnerable. Disciplinary and dismissal policies around absence will apply as usual. The discrimination protection framework would not offer any protection for an AAPT user’s absences due to care of their newborn, as a dismissal for these absences would not be ‘maternity’ discrimination (maternity leave will have ended) nor sex discrimination (as a parent of any sex could need time off for child care).

For Article 10 to offer meaningful protection to AAPT users, the protection from dismissal should cover the period after the newborn has been delivered from the machine. As with the provisions on maternity leave, this will depend on whether ‘birth’ occurs when machine gestation begins or once it has finished. Again, we posit that transfer into the AAPT machine should not be considered ‘birth’. The objective of ensuring good mental and physical wellbeing for pregnant persons and those with new babies can only really be achieved if AAPT users are given meaningful maternity leave, without any concern for ramifications of the time off.

As with our discussion of maternity leave, we are doubtful that the current framework of protection from dismissal fully accounts for advancements in reproductive practices. Like with maternity leave, the protection from dismissal centers around physiological events (the start of pregnancy), and contingent, subsequent events (the end of maternity). This framework creates problems for most non-traditional reproductive practices. Surrogacy arrangements fall completely outside of the scope of the Directive,

134 Romanis, *supra* note 83.

so cannot benefit from maternity leave without fear of dismissal. For AAPT users, the potential for the CJEU to see the caesarean as ‘birth’ has the potential to leave them without meaningful maternity leave, or protection from dismissal for time taken off to care for their newborn. The focus on physiology becomes clear when one considers the prohibition from dismissal in IVF cases.

In *Mayr*,¹³⁵ the Court had to consider whether someone in the early (physical) stages of IVF would be protected from dismissal as a pregnant worker. Though IVF and AAPT are easily distinguishable since one technology is a matter of assisted conception and the other assisted gestation¹³⁶ (and thus they involve different developing human entities—embryos vs. gestatelings), the IVF case is telling about the protection EU law affords to people who, although they are in the process of reproducing/gestating, have empty uteruses.

Ms Mayr was on ‘sick’ leave while undertaking in vitro fertilization when she was dismissed. On the date of dismissal, Ms Mayr’s ova had been fertilized and the embryos were ready for transfer to her uterus 3 days later. Ms Mayr contested that she was protected from the dismissal due to her pregnancy. Her employer refused to recognize that there was a pregnancy on the date that the ova was fertilized, because transferral to the uterus had not been completed. The Higher Regional Court in Austria based its agreement with the respondent on the basis that a pregnancy independent of the female body would be ‘unimaginable’, so pregnancy could only begin once the ova had been transferred to the uterus.¹³⁷ The matter was referred to the CJEU for clarification. The CJEU was once again called upon to interpret the meaning of ‘pregnant worker’ under the Pregnant Worker’s Directive. Specifically, to answer the question of whether ‘pregnancy’ starts with fertilization of the ova, consequently allowing those in the early stages of in vitro fertilization to be protected from dismissal.

Advocate General Ruiz-Jarabo Colomer opined that Ms Mayr was not ‘pregnant’, for the purposes of the Directive. He relied upon a scientific definition of pregnancy advanced by the International Federation of Gynaecology and Obstetrics that defined pregnancy as commencing ‘with the implantation of the conceptus in a woman’. Because implantation had not occurred before Ms Mayr’s dismissal, she was not ‘pregnant’.¹³⁸ The AG considered that the ‘usual’ meaning of the term pregnancy is:

identified with the development of a new human being in the woman’s womb, a process which had not occurred at the time Ms Mayr was dismissed. [. . .] the question is not whether the zygote had become nasciturus (a fetus) in the legal sense, but whether there was a pregnancy.¹³⁹

135 Case C-506/06 *Sabine Mayr v Bäckerei und Konditorei Gerhard Flöckner OHG* ECLI:EU:C:2008:119 [2008].

136 Romanis, *supra* note 83.

137 Wording of the CJEU when recounting the national Court’s findings: *Id.*, at [25].

138 An English court took a similar approach to defining the beginning of a pregnancy in 2002—see *R (On the Application of Smeaton) v Secretary of State for Health* [2002] EWHC 610 (admin)—‘there is no established pregnancy prior to implantation . . .’ [17] per Munby J.

139 Opinion of AG Ruiz-Jarabo Colomer, *Mayr*, *supra* note 133, at [38].

As a result, ‘the knowledge that the embryos were not yet within Ms Mayr’s uterus [ruled] out her being pregnant at the time she was given notice of dismissal’.¹⁴⁰

Ms Mayr’s situation was not found to fall within the Directive’s scope. Since the intention of the legislation was to ‘encourage improvements in the safety and health at work of pregnant workers, meaning their physiological condition’.¹⁴¹ The AG relied upon the Court’s own assertion that the Directive’s protection ensures that dismissal does not influence pregnant people into terminating their pregnancies. Because Ms Mayr was not considered to have the biologically vulnerable status at the point her dismissal notice was given, she fell outside the scope of protection.¹⁴²

Lastly, the AG formed his opinion on the basis of ensuring legal certainty in the administration of protection from dismissal. Ova can be frozen and the transfer into the uterus may be postponed for a considerable length of time, and (although generally prohibited by national law) it could even be transferred to another uterus rather than the employee’s. As a result, a consideration that pregnancy begins when the ova is fertilized would make the protection from dismissal run almost indefinitely, beyond or before the time that a person is physiologically vulnerable from pregnancy.¹⁴³

While the AG’s opinion aligns with an intuition that is not incorrect, where an embryo exists *ex utero* there is no pregnancy, it also enables some sex-based discrimination on the basis of pregnancy to slide through the net. Employers are able to terminate employment knowing their employee is undergoing fertility treatment without being found to have discrimination against a person for *being* pregnant—when in fact, they may have discriminated against them *because they intend to be or are trying to be pregnant*. Such discrimination is also what many female-presenting people experience in the workplace in general, being a person with the physiology to become pregnant (or appearing as one) renders people vulnerable to being treated differently on the basis that they *could* become pregnant.¹⁴⁴ The AG did note the potential for discrimination provisions to play *a* role in the dispute, although Ms Mayr could not be considered a pregnant worker for the purposes of the Pregnant Workers Directive that did not preclude the fact that dismissal on grounds of pregnancy is discrimination.¹⁴⁵ The AG noted that medical assistance in reproduction does not change the fact that only women¹⁴⁶ can get pregnant,¹⁴⁷ including by IVF, and so there would be a need to consider whether the dismissal in this case was related to sex. So long as IVF users can show that the dismissal was due to their IVF, the sex discrimination provisions may be able to protect them from discriminatory dismissals. While this works in cases directly concerning the female physiology, discrimination for other intended parents (surrogacy) or those who are finished with the physiological aspect of pregnancy (AAPT users) will not be as easily established.

140 *Id.*, at [40].

141 *Id.*, at [41].

142 *Id.*, at [42].

143 *Id.*, at [45].

144 C. Verniers and J. Vala, *Justifying Gender Discrimination in the Workplace: The Mediating Role of Motherhood Myths*, 13 PLOS ONE, e0190657, 3 (2018).

145 Opinion of AG Ruiz-Jarabo Colomer, *Mayr*, *supra* note 133, at [50]–[68].

146 This was the language used in the opinion.

147 We would challenge the absolutist language here but accept that this would still be the case unless the law adapts to more nuanced and inclusive understanding of gender.

The Court generally agreed with the overall findings of the AG. The judgment held that the fertilization of ova pre-transfer to uterus could not be considered ‘pregnancy’ under the Directive, so Ms Mayr was not a ‘pregnant worker’, and thus, her dismissal was not unlawful under the tenets of the Pregnant Workers Directive.¹⁴⁸ The act of dismissing Ms Mayr could constitute discrimination on the grounds of sex, if the national court found that the dismissal related to her absence while she was undergoing in vitro fertilization. Because only individuals with typically female physiology can receive a follicular puncture, any dismissal based on the absence during this procedure would be discriminatory.¹⁴⁹

While the outcome of this case is disappointing from a pregnancy and maternity protection standpoint and says a lot about the scope of EU law to protect those opting for (or needing) medical assistance in reproducing, the decision of the Court is understandable. The Court avoids treading into politically charged debate on the start of life. Importantly, the reasoning of the Court leaves space for the development of ‘pregnancy’ and ‘pregnant worker’ to also include AAPT-users. That the ova had not reached the uterus was not taken as a determinative factor of the beginning of pregnancy. Had it been, this would have a grave impact on *extra uterum* gestation being construed as equivalent to continuing pregnancy for the purposes of the Directive. Instead, the Court’s consideration of the earlier stages of IVF falling outside the scope of protection was based on the legal uncertainty that such a finding would impart upon the law. Because fertilized ova can be kept for a long period of time, classifying this as pregnancy could extend the protection from dismissal to a near-indefinite period.¹⁵⁰ The same effect would not occur if *extra uterum* gestation via AAPT were recognized as the equivalent to or continuance of pregnancy under the Directive. AAPT gestation is time-limited and concludes after the development of the fetus. With AAPT having an decisive difference to early stages of IVF,¹⁵¹ in that there is an existing fetus already developing in a process with a reasonably predictable timeframe,¹⁵² we are confident that gestation outside the uterus does not stop (for the purposes of EU secondary legislation) an individual being a ‘pregnant worker’ under the scope of the Directive.

However, it is important to note that the IVF cases still highlight a broader problem with the law. Though the Court relied upon arguments around legal certainty, the fact remains that *Mayr* rested most upon the timing of the dismissal in the IVF procedure. The focus on the physiological experience of pregnancy, and specifically the role of the uterus, for protection under the Directive may foreshadow how AAPT-users could be treated under EU law. Those who opt for machine-assisted gestation will be relieved from the physiological experience of later term *in-utero* gestation. The references to traditional physiological experiences and biological vulnerability being the driving force of the protection may indicate that AAPT-users would fall outside the scope of

148 *Mayr*, *supra* note 133, at [41]–[42].

149 *Id.*, at [50].

150 Court judgment, *Id.*, at [42].

151 They are very different processes; Romanis, *supra* note 83.

152 Human gestation is usually a period of 266 days (though this varies from person-to-person)—Jukic and others, *supra* note 116. The (average) duration of AAPT-facilitated gestation will depend on how long a person has been pregnant before they opt for AAPT. If we take a person who has gestated 24 weeks as an example (this is the current recognized point of viability) AAPT-facilitated gestation could be expected to last approximately 98 days.

that protection. An opinion from over 15 years ago may not accurately portray the current understanding of pregnancy, or the approach taken by Advocates General and the Court. There is also a significant difference between an interpretation of when pregnancy begins, and the impact that this important determination will have on secondary legislation, and when pregnancy could potentially ‘end’ for the purposes of the same legislation. However, the law (and therefore opinions of judges or advocates general) may not have advanced enough to afford more inclusive protections for reproducing people by the advent of AAPT, and both issues highlight the difficulty that the law faces, in light of advancements in reproductive practices. The physiological focus is what will cause a similar problem for interpretation of the law in relation to AAPT, the issue of when pregnancy ‘ends’ will be as pivotal for AAPT as the start of pregnancy is for IVF. While we highlight one route to overcome this issue (to consider AAPT gestation a continuation of pregnancy), the broader issue of the law failing to protect the rights of those making use of the technological and social advancements in reproduction would benefit more from reform.

III.C. Prohibition of pregnancy and sex discrimination

Pregnant workers, or those involved in the reproductive process, have two general equality-based rights relating to their employment. The first is the right not to be discriminated against for being pregnant, and the second is the broader right not to be discriminated against based on their sex. Pregnancy and maternity have a uniquely protected status as establishing discrimination on the basis of these characteristics requires no comparator assessment. Usually, discrimination requires the person with a protected characteristic to show that they were treated less favorably than those who do not have their protected characteristic. Pregnancy and maternity is considered a gendered issue and any discrimination based on pregnancy is considered ‘sex’ discrimination, because only those with typically female physiology can become pregnant.¹⁵³ However, the traditional model of proving discrimination is unavailable to pregnant workers, because there is no real possibility of comparison with a male colleague/candidate for pregnant workers. To overcome this difficulty, the CJEU has accepted that pregnant workers do not need to have their situation compared with a male colleague’s to assess whether they have been the subject of discrimination because of their pregnancy.

In *Dekker*, the CJEU refused to accept a lack of comparator as evidence that the refusal to hire a pregnant woman (out of a range of women candidates) was not discrimination. It was held ‘whether the refusal to employ a woman constitutes direct or indirect discrimination depends on the reason for that refusal. If that reason is to be found in the fact that the person concerned is pregnant, then the decision is directly linked to the sex of the candidate’.¹⁵⁴ Workers establishing discrimination on the basis of pregnancy do not have to show that a non-pregnant (male) colleague would have been treated more favorably.

The most obvious issue with the discrimination framework is the inherent linking of pregnancy and ‘womanhood’. That pregnancy discrimination is specifically sex dis-

153 This is an approach also taken by the European Court of Human Rights, when hearing pregnancy discrimination claims under the European Convention on Human Rights: see *Napotnik v Romania* (2020) ECHR 33139/15; *Jurčić v. Croatia* (2021) ECHR 54711/15.

154 *Dekker*, *supra* note 98, at [17].

crimination because only those with typically female physiology can become pregnant and fails to acknowledge that those who identify as genderqueer, or transmasculine, could have physiology capable of pregnancy. It may be better if pregnancy discrimination was broader, and encompassed discrimination suffered around reproduction, rather than relying on it being a facet of sex discrimination. A full consideration of this is outside the scope of this paper, but it is important to note that the linking of equality rights with female physiology, much like the linking of health and safety rights to the female physiology, can create difficulties for non-heteronormative reproduction and gestation.

For the purposes of this paper, the pregnancy discrimination framework (CJEU jurisprudence and the Recast Directive) potentially offers limited support for AAPT users. As with the issue of maternity leave and prohibition of dismissal under the Pregnant Workers Directive, the prohibition of discrimination on the grounds of pregnancy and maternity will depend largely upon the definition of ‘pregnancy’. If an individual opting for AAPT is considered a pregnant worker throughout the machine-assisted gestation, then the discrimination framework will protect them from being treated less favorably by employers in terms of promotion, training, employment opportunities, and dismissal in much the same way as it does ‘traditional’ pregnancies.¹⁵⁵ If an individual is only considered pregnant until their fetus is transferred to the AAPT, then the pregnancy discrimination framework will cease to apply to them at the end of their (early) maternity leave. Any discrimination after (for instance, refusal to give training or promotion opportunities because an individual works part-time to care for their newborn) would need to fall under the general sex discrimination framework, requiring a comparator assessment.

A sex discrimination claim depends on whether a comparator of the opposite sex would be treated the same in the circumstances of the claimant. Should an AAPT-user try to avail themselves of this framework, they may struggle to show that a comparator of the opposite sex would be treated any differently. There is always the possibility of practices that put the previously pregnant person at a disadvantage being indirectly discriminatory, because they are more liable to negatively affect women rather than men. However, this largely depends on the circumstances and it is clear that using the sex discrimination framework creates a much higher burden of proof for the AAPT user than if they were considered to be pregnant for the entirety of gestation, at which point any less favorable treatment due to their AAPT use or maternity leave would be prohibited.

It is clear that the discrimination framework itself cannot account for advancements in reproductive technology and practices too well. We do not foresee AAPT users losing all of their rights under the discrimination framework, because the situation is more comparable to IVF (the *Mayr* decision) than surrogacy. The individual arguing for the rights will have some physiological pregnancy and fetal development,¹⁵⁶ so

155 As well as having their right to maternity leave protected, and having their employer prohibited from dismissing them until the end of their maternity leave.

156 We have not considered the situation of a surrogacy arrangement where the surrogate decides to opt for AAPT. However, we must acknowledge that a case involving IVF, surrogacy and AAPT may be a physical possibility one day and protection under the EU law framework would depend entirely on the timing of the less favourable treatment.

will be protected from pregnancy discrimination during this time. Even in the event that AAPT transfer is not considered ‘birth’ or ‘pregnancy continued’, less favorable treatment linked to AAPT-use *could* be direct discrimination on the grounds of sex because, like *Mayr*, it requires typically female physiology. However, the availability of discrimination law to protect workers opting for AAPT may be limited. Cousins presents the hypothesis that *Mayr* may be somewhat shaky legal foundation for an equality claim, because there are conditions that exist only in men which can require the use of IVF for reproduction.¹⁵⁷ Therefore, both sexes are involved in IVF. The Court specifically highlighted the issue of ovum-extraction being only related to female physiology, not the necessity of IVF in general, which is highlighted in the commentary. The Court’s assertion is more convincing, as it recognizes that only those with typically female physiology are the subject of the medical intervention necessary for IVF. In physical terms, for people with female physiology, this is a long and invasive treatment; males need only ejaculate. In terms of AAPT, the strain on the female form ends after recovery from the caesarean-esque procedure (a point at which maternity leave may have ended, depending on the interpretation of confinement in the Pregnant Workers Directive). Once the worker has recovered from this, then any ‘less favorable treatment’ (for instance, dismissal) will depend on whether the employer would treat a colleague of the typically male sex the same way. If they can show that a (usually male) colleague would have been treated the same way, then the discrimination provisions offer no protection to the worker.

In relation to the rights in Article 8 and 10 of the Pregnant Workers Directive, we argued that an individual opting for AAPT would need to be seen as a ‘pregnant worker’ for the entirety of machine gestation. This is the only way to keep the framework of protection working to protect childbearing workers as it does in ‘traditional’ pregnancies. Our assessment of the discrimination rules provides a similar outcome: if the individual is a ‘pregnant worker’ throughout machine gestation, and maternity leave kicks in at the appropriate time, the framework of protection from pregnancy and maternity discrimination will cover the AAPT-user. If AAPT transfer were considered ‘birth’, then the individual may face discrimination in the period after their ‘maternity’ leave (when they have a newborn, without adequate leave to provide care) that may or may not be prohibited, dependent on a comparator assessment. Both frameworks of protection (discrimination and health and safety) require a broad approach to ‘pregnancy’ in order to protect the employment law rights of those opting for AAPT. Our discussions show how the frameworks inherently overlap but also how they offer different protection. On the one hand, when (or even if) maternity leave kicks in will influence the period that the prohibition of pregnancy and maternity discrimination lasts. On the other, the Recast Directive or discrimination provisions cannot give an enforceable right to meaningful maternity leave for an AAPT user, only falling under the provisions of the Pregnant Workers Directive can do this. EU law’s understanding and interpretation of pregnancy has a direct impact upon both streams of protection.

157 Cousins, *supra* note 121, at 486.

Lessons for AAPT

The preceding discussion demonstrates the truth in Cousins' assertion that 'Advances in reproductive technology have tended to outpace the capacity of legislators to respond to these changes, leading to difficult legal questions for the courts'.¹⁵⁸ The introduction of AAPT as an alternative to traditional gestation will bring complex legal questions about the interpretation of existing rights within the pregnancy protection framework. If assisted reproduction, in its many current facets, cannot be integrated into the scope of existing protection, it is difficult to speculate that AAPT would be integrated smoothly. We have identified several key issues and lessons from the consideration of the rights framework, and case law on assisted reproduction, which help to determine the key problems resulting from AAPT use.

First, the issue that EU law has 'embedded' traditional notions of pregnancy/motherhood: *mater semper certa est*. A legal mother is somebody who gestates and births a child.¹⁵⁹ For the purposes of EU law, a pregnant worker must be/have been engaged in the physical and physiological vulnerability of pregnancy. In the EU, 'maternity related rights in the workplace are triggered by the birth of the child rather than the actual caring (and thus arguably the best interest) for a child'.¹⁶⁰ The hyper-focus on biology does not reflect the social reality of child-rearing and creates a situation whereby circumstances that should logically be appreciated as child-rearing are simply not.¹⁶¹ That physiology and gestation is important for the Court that is concerning from an AAPT perspective. Questions may arise as to whether the traditional notion of pregnancy and maternity can accommodate a situation where a machine *continues* gestation, and whether an individual who has opted for AAPT has given birth, or the machine has. The issue will be *if* or *when* an individual opting for AAPT would gain maternity rights¹⁶² and whether maternity leave would be meaningful. It is the birth that triggers the right to maternity. When 'birth' occurs will be subject to legal interpretation in the AAPT context.¹⁶³ We subscribe to the view that birth only occurs when the gestating is delivered from the artificial placenta.¹⁶⁴ As discussed in detail above, this is the only way to ensure that existing employment law rights can account for AAPT use.

Second, existing case law relating to employment law rights and advancements in reproductive practices show how the regulation of rights for parent(s) opting to use AAPT will initially depend upon the choices of national legislatures. It is almost undoubtable that the CJEU will be involved in a legal dispute, if one arises in the EU,

158 Cousins, *supra* note 121, at 476.

159 Eugenia Caracciolo di Torella and Petra Foubert, *Surrogacy, pregnancy and maternity rights: a missed opportunity for a more coherent regime of parental rights in the EU* 40(1) E.L. REV. 52, at 56 (2015).

160 *Id.*

161 *Id.*, at 58.

162 Romanis, *supra* note 83.

163 See Romanis, *supra* note 1; 2; 21; 23 and Kingma and Finn, *supra* note 20; Kingma, *supra* note 24, for arguments as to the subject of an artificial placenta not being 'born'—see N. Colgrove, *Subjects of Ectogenesis: Are 'Gestatelings' Fetuses, Newborns or Neither?* 25 J. MED. ETHICS, 723 (2019); P. Wozniak and A. Fernandes, *Conventional Revolution: The Ethical Implications of the Natural Progress of Neonatal Intensive Care to Artificial Wombs*, J. MED. ETHICS, online first doi: 10.1136/medethics-2020-106754 (2020) for (weaker) arguments as to why the subject of the artificial placenta is born.

164 Romanis, *supra* note 1; 2; 21; 23 and Kingma and Finn, *supra* note 20; Kingma, *supra* note 24.

regarding AAPT and employment law. The minimum harmonization of maternity leave rights under the Pregnant Workers Directive, and the prohibition of discrimination on the grounds of pregnancy (or sex) more generally make this probable. If current experience is replicated in the employment and AAPT legal disputes, the complicated questions that will face the court will be whether machine gestation is pregnancy, and even more so when does *confinement* or 'birth' happen in such instances.¹⁶⁵ In light of this, it is difficult to not suggest a rethinking of the framework of protection—but in absence, we suggest that AAPT can be incorporated into the system very easily (more easily, perhaps, than surrogacy or even IVF).

Third, the way that the pregnancy protection framework operates, viewed through the lens of advancement in reproductive practices, highlights a too-prevalent focus on pregnant physiology as warranting protection. This is to the detriment of other important facets of reproduction, such as autonomy of the pregnant person. Interpretations which would kick-start the maternity process too early for AAPT users would essentially be a punishment issued to persons regarding their choices about gestation (assuming they have had a choice). This punishment may interfere with the autonomy of pregnant people. For AAPT to be a genuine choice, those opting for this form of gestation must be sure that there will be no adverse work-related consequences by doing so. As we note, the best way to do this would be to have a legal framework which ensures the retention of rights to maternity leave, and prohibition of dismissal, for those opting for non-traditional gestation and reproduction. In the absence of such a framework, our suggestion that AAPT is a form of continued pregnancy for the purposes of the law reduces the likelihood of employers pressuring employees to opt for/against this technology, or using the law (or absence of law) to punish them for their choices.

The Court has already acknowledged a belief that employer policies, especially around dismissal, could impact upon the choices pregnant people make. In *Webb*, the Court held that the potential harmful effects that risk of dismissal can have on a pregnant person include 'that pregnant women may be prompted voluntarily to terminate their pregnancy'.¹⁶⁶ The CJEU acknowledges that employment issues could have significant impact on reproductive choices made by people with the physiology to become pregnant. It must also be accepted that a risk of pregnant people's choices for gestation would be at just as much risk of interference as their choices around termination, and that these choices are worthy of protection.

Finally, this paper has uncovered how AAPT will new legal problems in front of the courts, should the maternity and pregnancy discrimination framework not be altered to accommodate for the advancement in this technology. In light of the developments of surrogacy and IVF, the CJEU has had to decide when a pregnancy starts, and who falls under the scope of 'pregnant worker'. The latter question will also need to be answered in light of AAPT transfer, where there will be a legal question of whether a person who was previously pregnant and opted for machine-gestation is still a 'pregnant worker'. Moreover, a far more politically and socially sensitive issue will be that the CJEU may potentially have to rule on the matter of birth, or when pregnancy ends. In an AAPT

165 Romanis has argued that such legal questions are inevitable in the Courts of England and Wales—see Romanis, *supra* note 7; note 21.

166 *Webb*, *supra* note 99, at [21].

scenario, is ‘birth’ the process of transferral from the uterus to the AAPT, or is it the removal of the fully gestated baby from the AAPT? This difficult legal scenario then presents another difficult decision to make: when ruling upon when ‘birth’ occurs, the Court will also have to rule on when ‘confinement’ and maternity leave starts and ends. The most challenging aspect of AAPT use under the framework of protection will be accommodating for recovery from the surgery undertaken, and time off to care for the new-born.

III.D. Summary

The preceding discussion highlights how existing provisions aimed at the protection of pregnant workers often fail to accommodate advancements in reproductive technology and practices. To protect users from falling outside of the pregnancy protection framework, AAPT gestation should be considered ‘pregnancy’ continued, assuming that no special framework of employment rights is forthcoming with AAPT. The Court’s focus on the physiology of pregnancy being the protected matter under the EU health and safety framework leads us to believe that maternity would be interpreted as the leave necessary for recovery, not for childcare. This takes a court into the tricky area of deciphering when ‘birth’ (or ‘confinement’) occurs, and potentially removes the right to meaningful maternity leave for those wishing (or needing) to opt for machine-assisted gestation. The discrimination framework cannot always soften the blow of the binary nature of the Pregnant Workers Directive, and we have explored how equality rights may be lost if the maternity leave framework starts too early in the AAPT process. These evaluations lead us to believe that it is not the specific provisions of the law which are problematic, as they can and should accommodate for assisted reproduction and gestation, but the underlying values of the law. While specific legislation on assisted reproduction and gestation would solve some of the legal issues, such legislation will be a long time in the making. There is a lack of European consensus on matters of pregnancy, birth, and parenthood. However, if EU law was built to value autonomy, dignity, and respect for the family unit, rather than *only* the physiology of pregnancy, the rules may be interpreted in a way which accommodates for individual state’s regulation and acceptance of new family structures.

CONCLUSION

Academic commentary is almost united on the fact that EU law surrounding discrimination and health and safety during pregnancy will become (if it is not already) an outdated forum for the protection of the rights of workers seeking to reproduce using assistance technology (with conception or gestation).¹⁶⁷ We demonstrated how—in addition to existing technologies such as IVF and Surrogacy—the EU framework of pregnancy and maternity rights does not offer sufficient protection to individuals who need/want to access AAPT. The development of AAPT—in the functional separation of the ‘end of pregnancy’ and of ‘birth’—creates some unique challenges, which the current legal framework is not well equipped to respond to. In this article, we argued that within existing law, use of AAPT after pregnancy to continue gestation should be understood as the continuance of the pregnancy so that the person who was pregnant

167 Ewing, *supra* note 13; Cousins, *supra* note 121; Healy, *supra* note 13.

before the extraction to AAPT receives the same rights as workers opting for bodily gestation. It is important that fetal extraction for AAPT is not recognized a birth (in addition to the metaphysical and ethical/legal reasons that have been provided by others elsewhere)¹⁶⁸ because of the practical realities resulting from the fact that the gestating does not need to be physically cared for in the way that a newborn does—and maternity leave must also be available to new parent(s) at this point.

We did not have space to dedicate to broader reflections about a necessary paradigm shift in the law. There is no existing literature outlining the legal problems AAPT might raise in the context of employment nor any legal analysis of these problems in the EU context so we focused on this. Furthermore, adaptations to the existing legal framework may be more realistic, although a critical reimagining is necessary. Our concluding reflections turn to this point—the law needs to shift its focus in how it protects individuals in the context of reproductive technologies. Reproduction is an aspect of our social lives, our interconnectivity, and our identities, and the current approach is too narrow to be attentive to lived realities. Workers' rights during pregnancy and maternity are not just about the physical labor in reproducing—but must reflect the realities of our socio-cultural expectations including parental bonding following birth and throughout childhood.

By categorizing protection for pregnancy and maternity as a matter of health and safety, the EU legal framework does not adequately address many issues raised in the process of reproduction. We expressed concern that many female people (with or without the physiology to become pregnant) may feel unable to opt for assistance in reproduction or feel as if they are punished by their reproductive choices because technologies that could offer opportunities (such as surrogacy and AAPT) would take them outside of the framework for protection from discriminatory employment practices. It is important that employment rights are secured for all people to ensure that more comprehensive rights are afforded to individuals. This requires a fundamental shift in the basis of the regulatory scheme in the EU.

There is a need for a shift in perspective about what protection pregnant people and new parent(s) need from their employers. At present, the physiological 'vulnerability' of pregnancy takes center stage, entrenching an association with (and regulation of) female physiology. The basis of the framework excludes non-normative reproductions and equally signals that the vulnerability of female people/women is their physiology. The protections people need while pregnant/attempting to reproduce do not result from their condition or their bodies themselves, but from the way in which these are responded to by others (including employers). It is only with these shifts that there will be a strong framework of protection—encompassing different reproductions and gestations—that protect individuals' rights.

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168 Romanis, *supra* note 1; 2; 21; 23; and Kingma and Finn, *supra* note 20; Kingma, *supra* note 24.