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Regulating abortion after ectogestation

Abstract:

A few decades from now, it might become possible to gestate fetuses in artificial wombs. Ectogestation as this is called, raises major legal and ethical issues, especially for abortion rights. In countries allowing abortion, regulation often revolves around the viability threshold – the point in fetal development after which the fetus can survive outside the womb. How should viability be understood – and abortion thus regulated – after ectogestation? Should we ban, allow or require the use of artificial wombs as an alternative to standard abortions? Drawing on I.G. Cohen, I evaluate three possible positions for the post-ectogestative abortion laws: restrictive, conservative and liberal. While the restrictive position appears untenable, I argue that the liberal and conservative positions can be combined to form a legally and morally coherent basis for post-ectogestative abortion legislation, offering an improvement from the point of both pro-life and pro-choice positions.

Keywords: Abortion, Foetal Viability, Law, Reproductive Medicine

INTRODUCTION

Developments in neonatal intensive care and animal studies have brought us closer to someday gestating human fetuses outside the human womb. For instance, a team of researchers from University of Western Australia, and Tohoku University Hospital recently showed that preterm lambs were successfully maintained in a healthy condition, with significant growth, for a period of one week using ex-vivo uterine environment (EVE) therapy.[1] Prior to that, scientists at the Children's Hospital of Philadelphia, Pennsylvania, managed to keep extremely premature lambs alive in an artificial uterus for four weeks.[2] The fact that different research groups have managed to successfully gestate animals in artificial wombs, holds promise that such technology will one day be usable on humans as well. Some say it is just a matter of time until we find a way to overcome the existing obstacles for artificial wombs for human fetuses.[3]

Ectogestation, as this speculative technology is called, raises substantial legal and ethical questions, some of which have been examined elsewhere.[4-5] One especially important question is how the development of ectogestation affects abortion rights. In many states and countries, abortion laws are built around the concept of viability: a fetus' ability to survive outside the womb. For example, in the United States, in *Roe v. Wade*[6], (and later reaffirmed in *Planned Parenthood v. Casey*[7]) the U.S. Supreme Court ruled in favour of a woman's right to an abortion, yet, concluded that the states are free to completely prohibit abortions after the viability threshold (which at the time was around 27 weeks).[i] Similar remarks have been made, for example, in the U.K, in *The Abortion Act 1967*[8] (and later in *Human Fertilization and Embryology Act 1990*[9]) which nowadays, permits the termination of pregnancy at up to 24 weeks.

This paper considers how abortion laws based on viability should be interpreted after an artificial womb becomes an option. I raise three initial readings on how the state could regulate abortion when it is possible to transfer the fetus to an artificial womb. I argue that there is a way to interpret existing laws so that the use of artificial wombs would be an improvement to both pro-life and pro-choice advocates.

First, some clarifications. Many scholars have raised conceptual worries regarding the terms we use.[10-11] Artificial wombs, biobag, ectogenesis and ectogestation are terms that are often used in this context but which do not necessarily have a fixed and shared meaning.

The term 'ectogenesis' refers to a future technology that enables fetuses to be gestated outside human body. The focus here is on ectogestation, where the living fetus is removed from the woman's womb and is gestated in an artificial one. The ethical issues of ectogenesis, in which the fetus is never located inside a female body, are beyond the scope of this paper. Those interested in the ethical issues related to full ectogenesis or different issues of ectogestation should consult the growing literature on the topic.[12]

For the sake of argument, I assume that a woman has a right to terminate her pregnancy, but not a right to secure the death of the fetus if it is possible for the fetus to survive outside the human womb. Although one can argue for the permissibility of the killing the fetus in addition to the right to detachment.[13] This is the most common position for the academic abortion advocates[14],[15],[16],[17],[18]

[i] At the time of writing, there is a speculation that the Supreme Court will overrule Roe. If that happens, it of course, could impact the analysis.

medical practitioners and activists, so it is the view from which legal implications should first be explored.[ii]

Abortion laws and the concept of viability

Ethicists have been sceptical whether viability, gives a fetus moral status or a right to life, or is in any way morally meaningful. Yet in many states and countries, abortion laws are built around the concept of viability. For example, the U. S. Supreme Court stated that a woman could have an abortion during the first six months of pregnancy for any reason she deems fit.[6] However, the right to abortion is not an absolute right. According to the Supreme Court statement, there were three parties whose interest are at stake: the pregnant woman, the unborn human and the state. It was ruled that the woman's liberty trumps both the value of the unborn and the interest of the state except when the unborn has reached viability. Later in *Planned Parenthood v. Casey*, the Supreme Court reaffirmed viability as the time at which the state has a compelling interest in protecting unborn life. In *Roe*, Judge Justice Blackmun wrote:

> With respect to the State's important legitimate interest in potential life, the "compelling" point is at viability. This is so because the fetus presumably has the capacity of meaningful life outside the mother's womb. State regulation protective of fetal life after viability thus has both logical and biological justification.[6]

There are similar remarks in U.K. legislation. In *The Abortion Act 1967* it was ruled that abortion is legally permissible before the point of viability. Later, in the *Human Fertilization and Embryology Act 1990*, the legal threshold for abortion was lowered from 27 to 24 weeks as a result of medical developments in shifting viability closer to conception.

My aim here is not to argue whether abortion laws should be based on the concept of viability, but on how the viability threshold should be understood when artificial wombs become possible. The question is thus: should viability be understood as the ability to survive outside the human womb or outside *any* womb?

THREE OPTIONS FOR POST-ECTOGESTATIVE ABORTION LEGISLATION

Here, I explain three possible ways how the law could be interpreted after ectogestation and then consider which of the possibilities is the most tenable one.

[ii] Of course, if anti-abortion theorists are right and abortion is (almost) always seriously immoral, it could change the conclusion of this paper.

To understand the possible ways to interpret abortion laws, suppose that a pre-viability fetus (say, at a gestational age of 18 weeks) could be removed from the woman's womb by way of minimally invasive surgery, and transferred to an artificial womb. There are at least three *prima facie* possibilities – raised by Professor I.G. Cohen[19] – for how abortion laws should be interpreted in such a case. How, then, should the state regulate abortion under existing laws?

To illustrate the situation, see ***figure 1***, where conception *c*, birth *b*, current viability threshold at around 24 weeks *v*, and *e* the new viability as stipulated for 18 weeks are marked on a gestational timeline.

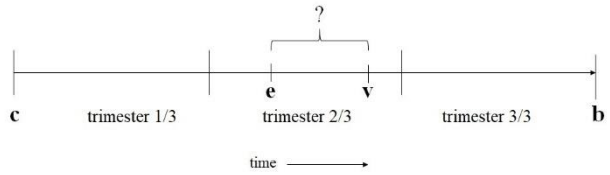

Figure 1.

The restrictive post-ectogestative abortion law

The first option is that viability could be understood as the fetus' ability to survive outside the human womb. The fetus could therefore be understood to reach the point of viability at the point where transferring to an artificial womb becomes possible because the fetus could then survive *outside the female body*.

In *Roe*, Judge Justice Blackmun seemed to understand viability as the ability to survive outside the human womb (outside the female body): 'With respect to the State's important legitimate interest in potential life, the "compelling" point is at viability. This is so because the fetus presumably has the capacity of meaningful life outside the *mother's womb*.' Call this Viability$_1$.

> Viability$_1$: the fetus is viable if and only if it has the capacity for meaningful life outside the human womb.

According to Viability$_1$, because the state can prohibit abortion *after* the viability threshold under current legislation, it can (but is not required to) ban abortions from 18 weeks onwards. This is because abortion is, by definition, termination of pregnancy, and since, according to this view, pregnancy ends when the now-viable fetus is transferred into an artificial womb, abortion could thus be prohibited. Call this the *restrictive post-ectogestative abortion law*, see figure 2.

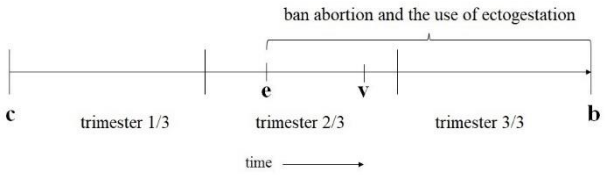

Figure 2.

The conservative post-ectogestative abortion law

The second possibility is that the state may, as before, prohibit abortion only after 24 weeks but that it may *require* use of ectogestation instead of normal abortion for women between eighteen weeks and 24 weeks. Call this Viability$_2$.

> Viability$_2$: the fetus is viable if, and only if, it has the capacity for meaningful life without any support from a womb – human or artificial.

This means, as stated in *Roe v. Wade*, that the state has an interest to protect potential human life, but that the pregnant woman has an interest in privacy and therefore a right to abortion. Therefore, once a safe detachment becomes possible, the fetus should be removed from the woman's womb alive– and transferred into an artificial womb, applicable to all cases where the pregnant woman wants to end the pregnancy between (in this example) 18–24 weeks.

This effectively allows the woman to end her pregnancy in a way that would not kill the fetus. Some have called this ectogenesis abortion. In some sense, it is a form of abortion because it ends the pregnancy, but it is very different from standard abortion because it preserves the life of the fetus.[13] Call this the *conservative post-ectogestative abortion law*, see ***figure 3***.

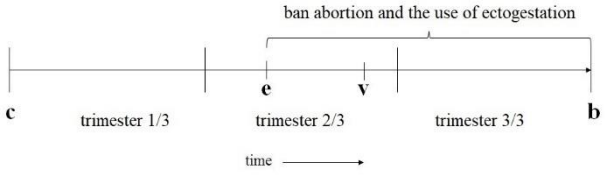

Figure 3.

The liberal post-ectogestative abortion law

The third possibility for post-ectogestative law is the expansion of post-viability pregnancy rights. States that would have prohibited abortion after viability would now at least *allow* women to

transfer the fetus to the artificial womb as an alternative for gestating the fetus to full term. This sounds reasonable because the state should respect a woman's right to privacy and autonomy. Call this the *liberal post-ectogestative abortion law*, see ***figure 4***.

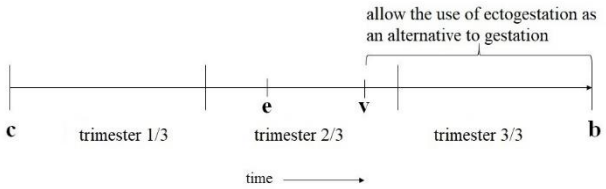

Figure 4.

WHICH POST-ECTOGESTATIVE LEGISLATION SHOULD WE USE?

Which of these three readings is the most tenable one? Consider first the *restricive* post-ectogestative abortion legislation. Initially, it seems to be in line with current legislation and understanding of the viability threshold. As mentioned earlier, the legal upper limit for abortion in the U.K was lowered in 1990 from 27 weeks to 24 weeks in response to advances in neonatal medical technology. Thus, it would seem that one option would be to lower the legal limit for abortion to 18 weeks (to stick with our chosen example) since gestation in an artificial womb would at that point be possible.

This could be a plausible reading if artificial wombs were nothing more than just another advancement of neonatal intensive care; however, it is not clear that that is the case. There are compelling arguments that neonatal intensive care and artificial womb technology are conceptually different. If so, it would not seem reasonable to understand the viability threshold as having simply moved from 24 weeks to 18 weeks. What reasons, then, might one give for the claim that artificial wombs are conceptually different from current neonatal intensive care technologies?

First, an artificial womb has the capacity to entirely replace a human function. As Elizabeth Romanis frames it: '[an artificial womb] works by replicating and replacing a biological process, rather than attempting a rescue.'[20] The gestateling, as Romanis calls the fetus inside an artificial womb, does not need to exercise any independent capacity for life; the artificial womb does it *for* the gestateling. A striking illustration of this is that if the artificial womb were turned off, the subject inside would simply die, while if an infant incubator is switched off, the premature newborn might continue to live for a while, exercising its own capacities for life. Thus, contrary to some authors[21], neonatal intensive care is not a creative process, but artificial wombs are.

Another distinction between artificial wombs and conventional neonatal intensive care is the environment. In contrast to traditional neonatal intensive care, the support mechanisms of an artificial womb would necessarily enclose and even aggressively invade the gestateling or the fetus itself. One might suspect that the difference is just a difference in degree and not in kind, thus it might not be relevant after all. A major problem with this discussion is that we do not yet know exactly what ectogestation will be like since the technology is not present at the moment.

While Romanis' views have been criticized before,[22-23] I still think she provides compelling reasons to believe artificial wombs are likely to be conceptually different from the standard neonatal intensive care, if that is the case, it does not seem reasonable to understand the viability threshold simply moving earlier. The fetus, or gestateling, that could be gestated in an artificial womb, is not truly viable; it very much needs the creative process of a womb – albeit an artificial one. Because of this, the restrictive post-ectogestative abortion legislation seems untenable.

Next, consider the conservative post-ectogestative abortion legislation. According to it, because the state has the interest to protect unborn human life and the woman has the interest to avoid the burdens of pregnancy, we should find a middle ground. Therefore, we could demand the use of artificial wombs instead of standard abortion whenever that would be an option; (after 18 weeks in our example). This solution appears to solve the abortion debate for those who argue for the permissibility of abortion from the bodily rights.[24] Nevertheless, it is not clear what the options are after the normal viability point (24 weeks mark) in such a case. We could either A) demand that the woman should gestate the fetus to full term or B) offer her option to use an artificial womb for the final stages of pregnancy in order to exonerate her from the burdens thereof.

Next, consider the liberal post-ectogestative abortion legislation. According to it, the state should allow pregnant women to avoid the burdens of pregnancy by using an artificial womb for the final weeks. Because fetuses which have reached viability have a good chance for survival already, this possibility does not seem that different from a modern caesarean. But the question remains: what should or could be done for fetuses between the stages of ectogestative viability and traditional viability?

Combining the conservative and liberal positions

I believe we can combine the conservative and the liberal post-ectogestative legislations together. This seems a natural choice; after all, the liberal position did not initially say anything on what to do with fetuses that could survive outside the woman's body in an artificial womb, while the conservative position did not say anything new on what to do in the later stage of pregnancy.

To illustrate this combination see figure 5. Between points *c* and *e*, the fetus is not viable in any way, so regular abortion (ending both the pregnancy and the life of the fetus) should be legally permitted. Between points *e* and *v*, the woman can terminate the pregnancy if she wants to, but only if doing so preserves the life of the fetus by transferring it into an artificial womb to gestate and later be offered up for adoption. The state can then require the use of ectogestation as an alternative to standard abortion. After point *v*, when the fetus is viable on its own, the state cannot require ectogestation as an alternative to abortion, because that is not needed for the fetus to survive. However, the woman should not simply kill the fetus either, since the fetus can have a meaningful life outside the female body.

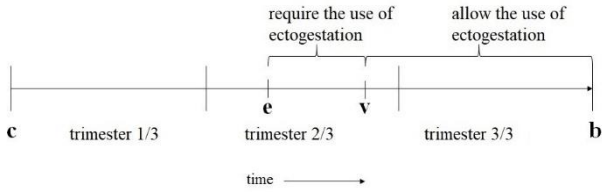

Figure 5.

Objection and the reply

Someone might object to my arguments by claiming that requiring the pregnant woman to use ectogestation either violates her autonomy and/or poses a significant risk to her or to the fetus – thus changing nothing. For instance, Daniel Rodger claims that ectogestation is unlikely to radically transform the abortion debate if ectogestation poses a risk to the mother or to the fetus.[25]

Whether this objection is successful depends at least partly on the details of the yet future technology. It is unlikely that transferring the fetus to an artificial womb is risk-free. However, continuing pregnancy and giving birth or having an abortion are not risk-free either. Because we do not yet know the risks that this technology would pose, it is difficult to know whether this objection will successfully refute the argument presented in this paper.

I am not entirely convinced that my proposal violates woman's autonomy either. Since the woman is already willing to consent to a somewhat similar medical procedure (abortion) she should have no reason not to consent to a slightly different medical procedure as well (detaching the fetus alive instead). For instance, suppose I give consent to a hernia surgery that will be performed under general anaesthesia. After the successful operation, I claim that my autonomy has been violated since the operation was performed under open surgery and I consented to a laparoscopic (keyhole)

surgery. I do not think my autonomy was violated, I consented to the treatment and the doctor simply selected the best possible method for treating me.

Whether detaching the fetus alive is similar enough to abortion, so that the same consent is still valid, depends probably on the details of the procedure – which are currently unknown since the technology does not exist.

Conclusion

I have considered in this paper how abortion laws should be interpreted after ectogestation. Since abortion laws are often based on the concept of viability, it is not clear how we should interpret viability once artificial womb technology advances. I have attempted to shed light on the issue and proposed what I think is the most convincing view for post-ectogestative abortion legislation, namely rejecting the restrictive view and instead combining the conservative and liberal views.

Others have argued that artificial wombs are a welcome technology.[26-27] and that it could offer a unique moral compromise from the pro-life and pro-choice positions.[28] If I am right, we could also reach a compromise regarding post-ectogestative abortion legislation. This might not satisfy all pro-lifers or pro-choicers – but such is the nature of compromises: no one is entirely happy.

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