

Artificial wombs, birth and 'birth': a response to Romanis

Nick Colgrove 

ABSTRACT

Recently, I argued that human subjects in artificial wombs (AWs) 'share the same moral status as newborns' and so, deserve the same treatment and protections as newborns. This thesis rests on two claims: (A) subjects of partial ectogenesis—those that develop in utero for at time before being transferred to AWs—are newborns and (B) subjects of complete ectogenesis—those who develop in AWs entirely—share the same moral status as newborns. In response, Elizabeth Chloe Romanis argued that the subject in an AW is 'a unique human entity...rather than a fetus or a newborn'. She provides four lines of response to my essay. First, she argues that I have 'misconstrued' what birth is. Once we correct that error, it becomes clear that subjects of partial ectogenesis have not been born. Second, she argues that my claims imply that non-implanted embryos (existing in vivo) 'would also be "born"'. But that is absurd. Third, she claims I fail to 'meaningfully respond' to distinctions she draws between subjects of ectogenesis and neonates. Finally, she criticises my essay for focusing on subjects of AWs rather than focusing on pregnant persons (who should be at the 'centre' of debates over AWs). I respond to each of these charges. In doing so, I reaffirm that (contra Romanis) some subjects of ectogenesis are newborns and all subjects of ectogenesis—even those that have not been born—share the same moral status as newborns.

CLAIM (A), BIRTH AND 'BIRTH'

Previously, I argued that Claim (A) is true given how terms like 'live birth' are defined by the 'WHO, European Union, US Law and international medical community'.¹ The WHO, for example, defines 'live birth' as

...the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life - for example, beating of the heart,

pulsation of the umbilical cord or definite movement of voluntary muscles - whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live born.²

I will call this the *conventional definition* of 'live birth' given its widespread acceptance.¹

To satisfy the first part of the conventional definition, a human subject must be completely expelled from its mother or completely extracted from its mother. Either event will do. To satisfy the second part, the expelled/extracted subject must either breathe or show some other 'evidence of life' (such as 'beating of the heart, pulsation of the umbilical cord', and so on). Any such event suffices. Two questions, therefore, allow us to determine whether or not a human subject, *S*, has undergone the process of live birth:

(Q1) Has *S* been completely expelled or completely extracted from its mother?

(Q2) After being completely expelled/extracted, was *S* breathing or did *S* exhibit 'any other evidence of life'?

If we answer Q1 and Q2 affirmatively, then *S* is 'considered live born'.²

Regarding Q1, subjects of partial ectogenesis (PE) have been completely extracted from their mothers. Regarding Q2, do subjects of PE exhibit any 'evidence of life'? Yes. Romanis observes that artificial womb (AW) technology is 'dependent on the subject's heart working with an oxygenator' as it 'mimics normal placental circulation'.³ Put differently, subjects of PE have a pulse. This holds even for embryos that lack fully developed hearts, as (theoretically) AW technology would continue the 'pulsation of the umbilical cord' artificially. So, regarding subjects of PE, the correct answer to both Q1 and Q2 is 'yes'. Thus, subjects of PE are 'live born'.

Romanis rejects this conclusion.⁴ She claims that '(Colgrove) fails to acknowledge...that this definition—the same definition quoted above—delineates

¹Regarding the definition's 'widespread acceptance', previously, I claimed that the same language is found within US Law, endorsed by the European Union and so on, and Romanis did not dispute this claim.^{1,4}

two events encompassed in the process of *complete* birth: first, the expulsion of the entity from a pregnant person, and second, the emergence of that entity from the process of gestation'.⁴ The conventional definition mentions the first event. It makes *no* reference to the second. It is unreasonable to fault me for 'failing to acknowledge' something that is not there.⁴

Romanis continues, however, by unpacking an account of 'birth' found in Greasley's work (ie, *not* the conventional definition quoted previously).^{4,5} On this alternate definition of 'birth', to count as 'live born', subjects must undergo extraction/expulsion from a pregnant person *and* undergo 'emergence...from the process of gestation'.⁴ Subjects of PE satisfy the first requirement but not the second. Hence, on Romanis's account of 'birth', subjects of PE are 'born only in a geographical sense' and should 'be described as unborn' as they have 'not completed *all* of birth'.⁴ Put simply, Romanis claims that because subjects of PE fail to satisfy her own definition of 'birth', Claim (A) is false.

My argument, however, was that subjects of PE satisfy the conventional definition of 'live birth'.¹ It does not matter that subjects of PE fail to satisfy some other definition(s). In my original essay, I noted that 'refusing to acknowledge that subjects of partial ectogenesis have been born' will 'either demonstrate a misunderstanding of terms like "live birth" or would rely on a highly unconventional use of those terms'.¹ Romanis's response fails in both ways. That is, her response not only relies on an unconventional definition of 'birth' but also confuses it with the conventional definition.⁴ This is made especially clear when Romanis claims that the details of the alternate definition are stated within the conventional definition.⁴ They are not.

This aspect of Romanis's response is particularly problematic given that elsewhere, she states that Greasley's 'arguments about the significance of birth only work if "birth" is not defined as emergence from the female body, but *redefined as the emergence of a human being from the process of gestation...*'.⁶ Here, Romanis acknowledges that the definition of 'birth' she advances against my essay is, in fact, a 'redefinition' of the term. And as the conventional definition—not an alternate definition—is central to my argument, Romanis fails to refute it.

CLAIM (B) AND TWO NON SEQUITURS
Next, Romanis rejects Claim (B):

Philosophy department and the Center for Bioethics, Health & Society, Wake Forest University, Winston-Salem, NC, United States

Correspondence to Dr Nick Colgrove, Philosophy, Wake Forest University, Winston-Salem, NC 27103, USA; colgron@wfu.edu

(Colgrove) posits that the subject of PE is born and shares the same moral status as a newborn, and thus, we must also accept that the subject of (complete ectogenesis) has this same status. This seems implausible. If entitlement to equal treatment comes only from being biologically alive and ex utero, this logic counterintuitively suggests that a non-implanted embryo alive in vivo would also be 'born'.⁴

Romanis's conclusion is a non sequitur. If entitlement to equal treatment comes from being biologically alive and ex utero, it follows that non-implanted embryos alive in vivo *are entitled to equal treatment*. It does not follow that they have been born.ⁱⁱ

Romanis continues, however, and attempts to reverse my argument. She argues that 'intuitively, the subject of CE is not born, and thus, if all subjects of the technology should be treated the same, the subject of PE is not born either'.⁴ I did explicitly affirm the first two claims: subjects of CE have not been born and subjects of PE and CE should be treated equally.¹ But Romanis's conclusion is another non sequitur. Whether or not a subject has been born is not a matter of how it is treated. If Romanis's account of 'birth' implies otherwise, then that is more reason to conclude that the concept of 'birth' her response relies on is an unusual one.

'EVIDENCE OF LIFE' IS NOT 'EVIDENCE OF SELF-SUFFICIENCY'

Romanis returns to Claim (A), arguing that my essay failed to address other ways in which subjects in AWs are (supposedly) different from neonates. I listed Romanis's distinctions, but 'merely dismissed' them 'as irrelevant'.⁴ Romanis criticises my essay on these grounds, given that the features in question—which neonates in the neonatal intensive care unit possess but subjects in AWs lack (supposedly)—are 'material to birth'.⁴

In response, my original dismissal of these distinctions is justified. They are not relevant to (or 'material to') the conventional definition of birth. When asking whether or not a subject of PE is 'live born', Q1 and Q2 provide all the guidance we need. Q1 asks whether the subject has been completely extracted (or completely expelled) from its mother's

body. It has. And this fact has nothing to do with Romanis's distinctions. Q2 asks if the subject exhibits 'evidence of life' (eg, does it have a heartbeat?). It does. And Romanis's distinctions have nothing to do with our ability to answer Q2. Whatever work Romanis's distinctions *are* doing, they have nothing to do with our assessment of whether or not human subjects have been born (according to the conventional definition).

Romanis continues, however, by arguing that 'there are two qualities to sufficient proof that a human is engaged in the exercise of independent life, and the (subject of PE) does not perform any activities of these nature'.⁴ First, they must perform activities that demonstrate they 'are suited to...the external environment' and second, they must perform activities that 'are exertive'.⁴ Romanis argues that having a heartbeat does not count as an 'exertive' activity and that 'it seems absurd to treat the primitive signs of life' like a heart beat 'as evidence of self-sufficiency'.⁴ When advancing this argument, it seems she is claiming that subjects of PE do not show any 'evidence of life' relevant to Q2 and so, should not be considered 'live born'.

Again, Romanis is substituting her own account of 'birth' for the conventional definition. The conventional definition—quoted above—*explicitly* includes Romanis's 'primitive signs of life' as examples of 'evidence of life'.² Having a heartbeat, for example, is explicitly counted as 'evidence of life'. Oddly enough, when quoting the WHO definition, Romanis's response *omits* that portion of the definition.⁴ That is, her response leaves out the portion of the conventional definition that gives examples of features that count as 'evidence of life'.⁴ Whatever the reason for these omissions, if Romanis grants that subjects of PE have a heartbeat—which she does³—and maintains that subjects of PE do not display any relevant 'evidence of life', then what her response refers to as 'evidence of life' is different than what the conventional definition specifies.

This difference is made more apparent given that Romanis's account of 'birth' focuses around 'evidence of self-sufficiency', rather than 'evidence of life'.⁴ The latter—not the former—is what is relevant to the conventional definition. Whether or not, subjects of PE exhibit 'evidence of self-sufficiency' is, therefore, irrelevant.

Romanis may object: if we think 'evidence of life' includes things like 'having a heartbeat', then we will fail to recognise a distinction between 'living human tissue and an organically integrated

live human entity'.⁴ An embryo may experience 'brain death', for instance, while its 'organs remain sufficiently live for harvesting'.⁴ And 'it seems hardly intuitive to consider these tissues "actively alive"'.⁴

One wonders: if an anencephalic infant is extracted from its mother's womb and maintains a heartbeat throughout the process (even with technological aid), is it 'hardly intuitive' to describe it as having been 'born alive'? It probably depends on who you ask. But medical experts routinely refer to these subjects as 'born alive'.⁷ It would be surprising to learn that these professionals (routinely) fail to notice that what they are saying is 'hardly intuitive'.

Further, suppose Romanis is right and the conventional definition has counterintuitive implications. This may suggest the conventional definition needs revision.ⁱⁱⁱ But this line of response fails to address the arguments in my original essay.¹ Claim (A) is that subjects of PE satisfy the conventional definition of 'live birth'. Whether or not subjects of PE satisfy the conventional definition is a different question than whether or not the conventional definition requires revision. I was careful to draw this distinction, noting that 'maybe we should redefine what it means to be born...but that discussion moves us beyond the scope of this essay'.¹ Romanis's response fails to mention the distinction. Rather, her response raises (potential) problems for the conventional definition as though doing so constitutes a response to my argument. But even if Romanis is right that the conventional definition needs revision (which, again, I do not think it does), her response ignores the limitations I deliberately placed on the scope of my essay.

THE CENTER OF THE DEBATE?

Finally, Romanis claims that 'attempting to reduce the debate about AWs to a question of moral status frames AWs as something that only concerns the developing human entity'.⁴ I never claimed that my original essay or the issues in it would address all questions in debates over AWs. Nor did I make any attempt to reduce these debates to a single factor. The title of my original essay—'The Subjects of Ectogenesis...'—clearly indicated that the focus of that essay was *subjects of AWs*. There are no claims (even implicitly) that

ⁱⁱThe claim that my view implies that all ex utero human individuals have been born is surprising, as I devote a full section to explaining why subjects of complete ectogenesis have *not* been born.¹

ⁱⁱⁱTo be clear, I do not think there is sufficient reason to motivate our revising the conventional definition. But that is an argument for another time.

we should reduce debates over AWs down to questions about subjects of AWs (or their moral status). So, even if Romanis's claim is correct—in that we should not reduce the relevant debates to a single factor—this point has nothing to do with my arguments.

Relatedly, Romanis asserts that debates over AWs should focus on pregnant persons (rather than the subjects of AWs).⁴ Does this mean that all essays on AWs should 'centre on' pregnant persons? My essay failed to do so.¹ But Romanis's essays have as well (on multiple occasions).^{3 4} So, it seems unlikely that Romanis means that all essays on AWs should centre on pregnant persons. If Romanis's point is that debates over AWs should *generally* focus on pregnant persons (rather than other subjects), we can debate whether or not that claim is plausible. Certainly, we can agree that the debates are complex, and it would be a mistake to neglect paying adequate attention to all affected parties. But this discussion pushes us into a

different direction altogether; one having nothing to do with my argument that subjects of ectogenesis are—or, at least, should be treated as—newborns.

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ORCID iD

Nick Colgrove <http://orcid.org/0000-0003-0506-353X>

REFERENCES

- 1 Colgrove N. Subjects of ectogenesis: are 'gestatelings' fetuses, newborns or neither? *J Med Ethics* 2019;medethics-2019-105495.
- 2 Maternal mortality ratio. World Health organization: health statistics and information systems, 2019. Available: <https://www.who.int/healthinfo/statistics/indmaternalmortality/en/> [Accessed 4 Sep 2019].
- 3 Romanis EC. Artificial womb technology and the frontiers of human reproduction: conceptual differences and potential implications. *J Med Ethics* 2018;44(11):751–5.
- 4 Romanis EC. Artificial womb technology and the significance of birth: why gestatelings are not newborns (or fetuses). *J Med Ethics* 2019.
- 5 Greasley K. *Arguments about abortion: personhood, morality and law*. 1st edn. Oxford: Oxford University Press, 2017.
- 6 Romanis EC. Challenging the 'born alive' threshold: fetal surgery, artificial wombs, and the english approach to legal personhood. *Med Law Rev* 2019 (Epub ahead of print: 01 Jun 2019).
- 7 Tadanori T, Ogiwara H. Anencephaly. UpToDate, 2019. Available: <https://www.uptodate.com/contents/anencephaly> [Accessed 05 Sep 2019].