

The metaphysics of pregnancy

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Abstract

Pregnancy is a one of the most complex phenomena of life and is essential to the life cycle of mammals. Pregnancy is also a crucial aspect of humans' life and experience. But *what is pregnancy?* This question has received little attention in philosophy until recently, when it got picked up by metaphysicians and philosophers of science. However, the philosophical discussion is still in its infancy.

This article provides a survey of the recent debate on the metaphysics of pregnancy. It explores the relation between the pregnant organism and the gestated one, motivating the further study of pregnancy from a philosophical perspective (§1, §2). It summarises the three main models of pregnancy present in the literature, the containment view (§3), the parthood view (§4) and the splitting process view (§5) with their advantages and shortcomings. Then, it explores a recent debate on whether pregnancy is a disease (§6). Lastly, it considers how one can decide between these models, for instance by favouring a given view of biological individuality over another (§7). The article concludes that none of the views is fully satisfactory, and thus inviting to continue the research on pregnancy from a metaphysical and philosophical perspective.

Keywords: Pregnancy; Metaphysics; Containment view; Parthood view; Process ontology; Biological individuality; Disease

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1. Introduction

Pregnancy is a crucial aspect of humans' life and experience and is also a necessary process for every animal that reproduces itself via placental pregnancies. But *what is* pregnancy? This question has remained almost unanswered until recently, thanks to the **ERC BUMP Project**² (Better Understanding of the Metaphysics of Pregnancy) and the work of Elseijn Kingma (2018, 2019, 2020), Suki Finn (2021, 2021b, 2023, 2023b), Teresa Baron (2019), Alexander Geddes (2023), Jonathan Grose (2020) and Anne-Sophie Meinecke (2022). These new substantial developments influenced related topics, such as biological individuality (Grose 2020; Morgan 2022), parthood (Geddes 2023), personhood (Robinson 2023) and the medicalisation of pregnancy and birth (Baron, 2019; Kingma, Finn 2020; Kukla et al. 2024; Smajdor, Räsänen 2024). However, the metaphysical discussion on the nature of pregnancy is still limited and many questions lack attention. Pregnancy is often seen as a mere background to other “more interesting” biological phenomena, as embryogenesis³. Or pregnancy remains relevant only because of its implications and ethical aspects. However, a better account of pregnancy from a metaphysical perspective can improve the philosophical analysis of these topics and should be given more attention (Finn 2021b). While the metaphysics of pregnancy includes different aspects, this article focuses on the most discussed topic in the literature: the relations between the entities and processes involved in pregnancy.

The structure is the following. Section §2 briefly introduces the metaphysics of pregnancy and what it aims at. Then, it discusses the three main models of pregnancy, with their advantages and shortcomings. Section §3 presents the “containment view” (as in Barry, Broogard 2003), section §4 the “parthood view” (Kingma 2018, 2019, 2020) and section §5 the “splitting process view” (Meincke 2021). Section §6 considers an alternative approach for which pregnancy should be understood using the category of disease (Smajador, Räsänen 2024). Section §7 explores how to decide which model is the most satisfactory according to different approaches present in the literature. The article concludes that none of the views is fully satisfactory, and thus invites for more research on pregnancy from a metaphysical and philosophical perspective.

² Members of the BUMP Project are Elseijn Kingma, Suki Finn, Teresa Baron, Alexander Geddes, Jonathan Grose, Fiona Woollard, Sigmund Schilpzand, Anne Sophie Meinecke <https://bump.group/>.

³ For instance, the articles of Barry and Broogard (2003) and Oderberg (2008) consider pregnancy only in relation to these phenomena.

2. What is the metaphysics of pregnancy?

Mammalian placental pregnancy can be defined as the condition of the organism bearing the pregnancy (often the female fertile organism) between fertilisation and the moment the fertilised zygote, embryo, foetus or newborn leaves the uterus and it is characterised by gestation and the presence of the placenta.⁴

The metaphysics of pregnancy is then the part of metaphysics that studies the entities and the relations present during pregnancy, and it has the main purpose of providing conceptual and ontological models to interpret it. It is motivated by the importance that pregnancy has for philosophical inquiry (Kingma 2019, Geddes 2023, Finn 2023b). Firstly, every human, as a mammal, comes from pregnancy: pregnancy is relevant for our identity. This also includes our lived experience, given that pregnancy is object of contrasting emotions and can be seen as a unique event in our lifetime (Finn 2021b, Finn 2023b). Moreover, pregnancy has remained for a long time in the background of other philosophical topics (such as human identity and individuality, personhood, the origin of life), while having crucial implications for them. Pregnancy has a value also because it is a process inherently linked to these phenomena. However, the attention of the literature has been generally directed towards the results of the process rather than the process in itself. The absence or the minor presence of women philosophers in these disciplines surely played a role in leaving a hole in the philosophical reflection (Finn 2023b).⁵ This hole has instead been filled with a *prescriptive* reflection, on what the pregnant woman has to do – at least accordingly to the given and various standards of the time (Finn 2023b, Jones 2023). This left aside the *descriptive* philosophical reflection on what pregnancy is. Accordingly, a more precise and refined view of pregnancy can give us better tools to deal with ethical and political questions regarding gestation.

One of the most discussed issues in the metaphysics of pregnancy is the relation between the entities and processes involved during pregnancy. Specifically, if pregnancy is the condition of the pregnant organism between conception and birth, then it is important to inquire into the relationship between the gestating organism and the gestated one and how we can interpret it (Kingma 2018, Geddes 2023, Finn 2023a). The current literature draws on mereology and discussions on biological individuality and suggests three main models to answer this question.

⁴ Providing an overarching definition of pregnancy is not an easy task as it includes viviparous organisms and mammals, and it has to take into account that there are various forms of pregnancy and that both male and female animals can be pregnant in different species. Accordingly, the definition suggested is just a working definition provided to start the discussion rather than the presentation of necessary and sufficient conditions.

⁵ See Finn 2023b for an extensive review of the impact and influence of the absence of women philosophers on the reflection of pregnancy and the distinction between descriptive representational presence of women philosophers and the substantive one.

This article will assess each view with its benefits and shortcomings based on three criteria **a)** commonsense, **b)** relations between foster and grávida and notions of biological individuality, **c)** the implied view of birth. These evaluations are in line with Finn (2021) who suggests the application of a reflective equilibrium principle and balance what we say about pregnancy with theoretically informed content.

Moreover, the article will discuss the views identifying a *relation thesis*, which concerns the relation between foster and grávida, and *an individuation thesis*, which considers the number of individuals during pregnancy. The text follows the terminology of Kingma referring to the *grávida* for the gestating organism and to the *foster* to indicate each state of the development that goes from conception to birth (as also in Barry, Brogaard 2003). This choice is made to include all members of the species that present pregnancy⁶, and to avoid ethically or emotionally loaded terms.

3. The “containment view”

The containment view, as coined by Kingma, argues that the foster is *merely contained* in a specific environment, the grávida, until the end of pregnancy or until it is not contained by them anymore (Kingma 2018, Geddes 2023). This view is often taken for granted in everyday talk, medical contexts and philosophical discussions and can be ascribed to the one presented by Barry, Brogaard (2003) and in the background of other analysis such as Oderberg (2008) and Howsepian (2008).

This view can be unpacked into two linked but independent theses, the *relation thesis* and the *individuation thesis*. The *relation thesis* tells us that the relation between foster and grávida is a containment relation, for which the foster is *contained* in the grávida. This relationship is understood as one of *mere containment*, which implies the absence of any direct and proper mereological relation and thus the grávida and the foster can be considered disjoint (Geddes 2023).⁷ The grávida is simply an environmental container suitable for the development of the foster. This relation is also defined as the “tenant–niche relation”, in which the foster is the tenant occupying a niche (Barry, Brogaard 2003; Kingma 2018). Barry, Brogaard (2003) write that the foetus is **inside**, but **not a part** of the grávida the same way as “a tub of yogurt is inside your refrigerator” (2003, 74). In this regard, the idiom expression “to have a bun in the oven”

⁶ These views are applied to placental pregnancies, a subgroup of pregnancies within mammals, which differ from marsupials and monotremes.

⁷ In most of these debates, parthood is assumed to be anti-symmetric, and we say that x and y are disjoint iff nothing is part of both x and y and neither x nor y is part of the other (Geddes 2023).

to indicate pregnancy is illustrative of the containment view: the foster is a bun getting properly baked in the oven, the gravida. The *individuation thesis* tells us that there are two biological individuals during pregnancy: the gravida and foster are two distinct individuals. They are both identified as substances and as “relatively isolated causal systems” (Barry, Brogaard 2003), and the foster is recognised as an “organisational unity” that it is not a part of the host (Oderberg 2008, 266).

Because of these two theses, *birth* is a simple relocation or change of environment – exactly as the bun is moved from the oven to the kitchen, or the yogurt tub out from the fridge. This also implies that both the “container and the contained” are left unchanged in their ontological status, given the reciprocal causal isolation assumed by this view.

3.1 Advantages

This position has the first advantage of being “the received view” of pregnancy (Kingma 2019) as it is intuitive and respecting common-sense interpretations of the relations between gravida and foster. For example, the expressions “carrying a child” or “being with child” suggest pregnancy as an act of carrying, like holding a bag or a basket, and a duality of individuals. Similarly, ultrasound images taken during pregnancy are often described as “pictures of the foster” and pregnancy figures present a sharp divide between the gravida and the foster (Kingma 2020). These representations are in line with the containment view. Moreover, the divide between foster and gravida allows for the identification of relations between the foster and other relatives, such as siblings or other parents, who are relating to a well-identifiable distinct individual.

This view is also consistent with scientific evidence supporting the differences between foster and gravida, as extensively reviewed by Barry, Brogaard (2003), Oderberg (2008), Howsepian (2008), Grose (2020). Gravida and foster are different in relation to sexual recombination, for which the genetic overall between the two is only around 50%. Moreover, the foster possesses a differentiation between somatic and germ cells or a development that would lead to such division. At last, gravida and foster have distinct reproductive roles, as one is reproduced and the other is reproducing. The autonomy of the foster in relation to the gravida is also in line with inputs coming from IVF (in-vitro-fertilisation) technologies and assisted reproductions, for which the embryo has a level of autonomy independent from pregnancy. These features can support the individuation thesis or at least be consistent with some of its assumptions.

Lastly, this view sees birth as a simple change of environment in which the foster does not change its ontological status, being the foster and the gravida two distinct biological individuals characterised by a containment relation.

3.2 Limitations

This position has also some severe limitations, summarised in the fact that the relations between gravida and foster are much closer than the ones between mere “container and contained” (Kingma 2018, 2019).

Firstly, this view tends to reduce the role of the gravida to a mere container or environment. This has two implications, the first is “theoretical”, as it is a conceptualisation of gestation that tends to minimise the active role of the gestating organism. This can lead to biased research and medical treatment, for instance by focusing on foster development only and not considering the impact that pregnancy has on the gravida. The second is “ethical”, as seeing the gestating organism as a container can affect the ethical and practical evaluation of the status of the gravida (Baron 2019).⁸

Secondly, differently from a “bun in the oven”, pregnancy is characterised by a strong interaction between gravida and foster. Specifically, the foster and the gravida are in a state of homeostatic, physiological, functional and metabolic integration (Kingma 2018). The two presents a topological continuity for which they are linked not only by the umbilical cord (often the only represented link between the two), but also by the amniotic liquid and the placenta (Kingma 2018). This latter organ has an important regulatory function during pregnancy for both gravida and foster, grounding a strong integration. This continuity, physical and physiological, makes most representations of containment-oriented pregnancy inaccurate as the relations between the two are closer than what it is assumed by this view (Kingma 2018, 2019). Moreover, the foster’s levels of autonomy change throughout pregnancy and development and thus it is not straightforward to identify the exact stage in which definitive marks for individuality and “causal isolation” happen (Kingma 2022, Morgan 2022).

Further problems regard birth as relocation or change of environment. Birth is a more complex phenomenon than relocation, having effects both on the gravida and the foster. For instance, they both stop relying on the placenta as an organ regulating hormones and interactions, on the umbilical cord and on the amniotic liquid, which affects nutrition and metabolism. The foster

⁸ For an extensive overview on some of these issues, see Baron (2019) where the author explores the implication of the container model on surrogacy and how this view of pregnancy has been damaging women's liberty and reproductive autonomy.

starts breathing autonomously after birth, and new-borns can oxygenate their blood directly, affecting the oxygen tension which reaches a much higher rate after birth (Kingma 2018). Changes that occur during birth are important for the gravida, whose body must re-regulate its system after pregnancy and can also undergo permanent changes, varying from tissue damage to the persistence of chimeric-foetus cells.

4. The parthood view

Reflecting on the limits of the containment view, Elselijn Kingma has proposed the parthood view of pregnancy, arguing that the foster should be seen *as a part* of the gravida (Kingma 2018, 2019, 2022). It is possible to identify a *relation thesis* and an *individuation thesis*. The *relation thesis* says that between foster and gravida there is a part-whole relation, for which the foster is an organic part of the gravida, like an organ that plays a role in reproduction until birth (or the termination of pregnancy) (Kingma 2018).⁹ This relation is interpreted as “our common-sense understanding of part-whole relations, an understanding according to which kidneys are parts of dogs” (Kingma 2018, 611). The *individuation thesis* tells us that during pregnancy there is one biological individual (the gravida) with a special part (the foster) (Kingma 2022). While the mereological relation of parthood generally goes hand in hand with individuating only one organism, Kingma herself accepts the possibility of separating the two. Specifically, she accepts that it is possible to account for the presence of two organisms, one which is part of the other, in a way that satisfies the foster-gravida relation of parthood (2019). Because of these two theses, *birth* is seen as a substantial change of status, in which the foster undergoes a radical change from a part of another organism to a self-standing organism. This change, while does not undermine the existence of the gravida (even if chances of death during birth are real), has an impact on the gravida as there is a loss of one of the parts and this can affect the constitution of the organism after pregnancy.

4.1 Advantages

The main advantages of this view rectify the shortcomings of the previous one. Firstly, the parthood view brings back the core active role of the gravida (different from being a niche or a container) together with the high level of interactivity and unity characterising the pregnancy process.

⁹ Kingma assumes that despite the changes that are present during the various stages of pregnancy, the mereological relation between foster and gravida remains the same (2018), (Geddes 2023).

Secondly, following closely the arguments in Kingma (2019, 622- 630), the foster seems to be an integrated part of the gravida because there is biological continuity between the two. Specifically, there are **(i)** homeostasis and physiological integration, **(ii)** metabolic and functional integration, **(iii)** topological continuity and **(iv)** immunological toleration. On homeostatic and physiological grounds **(i)**, the foster is regulated and maintained within the parameter of life by the gravida in an integrated way. Organisms maintain a level of internal equilibrium, defined homeostasis, and this is regulated for both by the gravida, given that after implantation the foster is implanted in the uterine wall, a tissue part of the gravida. A similar scenario regards functional and metabolic integration **(ii)**. The foster depends on the gravida for many of its metabolic activities, including intake of nutrients, temperature regulation and waste disposal. Moreover, such integration is reflected on the behalf of the gravida as the organism makes substantive adjustments and changes during pregnancy, including hormonal regulation via the placenta, organs adjustments, increased cardiac outputs. Lastly, the two are functionally integrated as their interaction has been evolutionary selected to lead to successful reproduction on population scale. The foster then can be seen to play a selected function in the reproduction of the gravida, not too distant from the function of organs as the ovaries or the uterus. The third criterion is topological continuity **(iii)**, often accepted to determine what is part of a single organism. The foster is topologically continuous with the gravida as the placenta and umbilical cord grow out of the maternal uterine tissue and into/out their abdomen, without any spatial discontinuity. This view is also compatible with an immunological view biological individuality, for which an individual is identified by its immune system **(iv)** (Pradeau, 2010). Generally, even if not always, the foster is immunologically tolerated by the gravida, and this supports the thesis there is only one individual protected by one immune system.

Lastly, this view can account for the changes that the gravida and the foster experience during and after birth, in which the first has to re-regulate its system and the second becomes a self-standing organism.

4.2 Limitations

The limitations correspond, in a nutshell, to the advantages of the containment view. Specifically, the issue of individuating the number of organisms during pregnancy and the mereological understandings of parthood are complex (Finn 2023, Geddes 2023). Firstly, this comes as a challenge to the *individuation thesis* of the parthood view, which underlines the presence of one main biological organism, the gravida, with a special part, the foster. However this encounters the so-called “counting-problem” (Meincke 2021). Specifically, the “one

organism interpretation” of parthood goes against the commonsense understanding of the presence of two organisms, the genetic differences due to sexual recombination and an evolutionary perspective on biological individuality (more in §6, Grose 2020, Morgan 2022b). Similarly, the possibility of foetus-maternal immunological conflict challenges the immunological criterion of individuality. A more detailed understanding of immunology during pregnancy also opens the possibility that some foster’s cells do not display the right levels of biochemical immunological reactions required for them to be considered part of the gravida (Geddes 2023). Kingma acknowledges that it is not essential for the parthood view to claim that there is only one organism during pregnancy. However, these challenges still support the need to specify *which kind of part* the foster is (explored extensively by Meincke 2021, Finn 2023, Geddes 2023). This problem is even more relevant as it is not conceptually easy to separate the issue of counting organisms from the mereological issues of a parthood view of pregnancy.¹⁰

Secondly, this challenges also *relation thesis* and the characterisation of parthood. Geddes (2023), re-elaborating a proposal in Finn (2021), suggests that instead of standard parthood we should consider the possible mereological overlap between organisms during pregnancy. On this account, pregnancy could be a case of *proper overlap* between gravida and foster rather than parthood. This proposal is based on detailed criticisms of the view of parthood and argues that there is a middle position between the parthood view and the containment view, that is that the gravida and the foster properly overlap. Proper overlap is taken to be “x (the foster) and y (the gravida) *properly overlap* iff something is part of both x and y and neither x nor y is part of the other”. In this case the placenta and the umbilical cord could be seen as part of both organisms, while the gravida and the foster are not part of each other, thus supporting a case of proper overlap.¹¹

Lastly, the characterisation of birth as a radical change of the foster’s metaphysical can be a limitation. While birth is not a mere change of environment, it remains true that a newborn and a foster close to full term (e.g. 37 instead of 40 weeks) are not that different. A view of birth should then be able to account for the fact that, if we move in a counterfactual space, birth

¹⁰ As explored by Finn (2023), this problem can also be unpacked by distinguishing the questions of i) when does a new organism of a given kind start to exist? and ii) What are the mereological and topological relationships between foster and gravida? The paper explores how these questions should be given different answers to deal with these issues.

¹¹ This view is mostly developed in relation to Kingma’s parameter and represents an interesting starting point for future discussion.

within a window of 37 to 42 weeks does not affect the ontological status of the newborn organism.

Summarising, while the parthood view has the main advantage of underlying the levels of dependency between foster and grávida, this strong interdependence can also become a limitation. During pregnancy the levels of dependency and autonomy are constantly changing and so the relations throughout it.

5. The splitting process view

The containment view is problematic as it lacks an understanding of the levels of mutual dependency that characterise pregnancy; on the opposite, the parthood is challenged by the assumed strict levels of dependency contrasting the graduality of the process. To deal with these issues, Anne-Sophie Meincke suggests a third option: we should see pregnancy as a splitting process (2021).

The metaphysics of biological entities in this theory is different from the previous ones. The containment view and the parthood view are based on substance metaphysics, for which organisms are characterised as substances defined by stable essential properties and clear boundaries. On the opposite, the splitting process view is based on process-metaphysics, for which biological organisms are dynamic processes defined by metabolic continuity and the development through the full life cycle (Meincke, 2019; Nicholson, Duprè, 2018).

Within this framework, Meincke defines a pregnant organism “a ‘hypercomplex’ higher-level autopoietic process that incorporates and actively maintains, through processes of both mutual stabilisation and successive disentanglement, an internal, dynamical and asymmetrical relation with an organised complex of lower-level processes that is potentially or rudimentarily a higher-level autopoietic process of the same kind of realisation” (2021, 1509). In pregnancy, the foster-process is splitting gradually from the grávida-process, which is a higher-level process from which the first is bifurcating. The image used by Meincke to characterise this process is the one of a bifurcating river, in which a smaller river starts bifurcating from a main one while gaining autonomy through time. Also in this case, it is possible to identify a *relation thesis* and an *individuation thesis*.

The *relation thesis* tells us that there is a dynamic, asymmetric relation of mutual stabilisation and then disentanglement between the process-grávida and the process-foster. This relation starts with a strong level of dependency between the organised complex of lower-level processes (process-foster) and the gestating process, and it gains a gradual autonomy throughout pregnancy and development. Following Meincke’s analysis, it is important to

underline that pregnancy is characterised by three main properties: asymmetry; bifurcation; complexity. The process is *asymmetric* as there is a form of non-rigid ontological dependence for which the foster exists only if a gestating organism exists, and it is not the case that, necessarily, the gestating organism exists only if a foster exists (Meincke 2021, 1511). Then the process is a *bifurcating*, as there is a gradual separation between the two based on mutual stabilisation and gradual disentanglement. Lastly, this is a *hyper-complex* process, characterised multiple interaction levels defined by specific diachronic relations given by bifurcation and asymmetry.

This also illustrates the *individuation thesis* as there are two complex processes, one higher-level hypercomplex organism-process (the process-gravida) and one “rudimentary or potentially” organised complex of lower-level processes (the process-foster), which is going to gradually become an autonomous organism-process. Specifically, while during pregnancy there is “unilateral ontological dependence” this “does not entail numerical oneness” (Meincke 2021, 1513). Lastly, *birth* is viewed as a process that does not end pregnancy nor determines the final level of autonomy of the process-foster. The bifurcation of pregnancy can continue after birth in case there are other processes continuing the asymmetric relation, allowing for the newborn organism to become more independent from the gravida. This allows the splitting to vary in each instance, as the bifurcation can be more direct in cases of after birth adoption or slower in cases of prolonged breast-feeding.

5.1 Advantages

This view has the advantage of being “the best of both worlds” as it maintains the (developing) level of autonomy of the foster, accepting that it constitutes an organised group of processes even if dependent on the gravida. It is consistent with a commonsense understanding of pregnancy as a dynamic process and can allow for medical intervention and research that acknowledges the mutual dependencies. It has the advantages of the containment view allowing for pregnancy to involve two organisms, given the genetic difference and reproductive differentiation. It keeps the benefits of the parthood view by maintaining the strong level of integration with the gravida and the consequent asymmetric dependency. It also considers the four level of integrations mentioned earlier, as the asymmetry of the bifurcating relation is consistent with such evidence. Moreover, this view allows for a dynamic and flexible view of pregnancy, in which relations are particularly strong and entangled in the initial phases of pregnancy and gradually change through time allowing for mutual stabilisation. This flexibility allows for the specificity of each pregnancy while allowing for a dynamic view, consistent with

the scientific evidence regarding both pregnancy and development (Meincke 2021). Lastly, this view understands birth as a possible but not unique moment of bifurcation, allowing for a change in status of the foster and an impact on the gravida, while at the same time permitting a graduality in the separation.

5.2 Limitations

Given the relative novelty of the view, the literature still has not proposed definite criticisms. However, we can gesture towards the main areas of improvement for this view. Firstly, it is very complex view. A detailed characterisation of how pregnancy can be seen as a bifurcating phenomenon requires precision in the identification of the relevant parameters. This, while being mostly an epistemic problem, represents something the theory needs to specify. Moreover, this view, as also acknowledged by Meincke, is more difficult to apply to cases in which pregnancy has an in-vitro component (2021, 1511). The account focuses on the bifurcating process during gestation, but interesting work could be done in identifying the processes and the levels of asymmetric dependence in cases of medically assisted pregnancies. This also affects the understanding of birth in cases of gestation for others and the identification of the bifurcating relations and the different processes in more complex cases. Lastly, this view suffers from the criticisms of those that find the process view of organism unsatisfactory and support instead a substance view. While the process view is quite successful, it is still not sustained by those that find processes just a special kind of substance and thus not in contrast with substance ontology (more on this for instance in Steward 2020, Morgan 2022).

6. Is pregnancy a disease?

What if pregnancy should instead be interpreted within the framework of medicine? In a recent paper, Anna Smajador and Joonas Räsänen (2024) have argued that pregnancy should be understood as a disease. The argument is based on medicalisation, *pregnancy is a disease because it is treated like one*, and phenomenology, *pregnancy is a disease because it feels like one*. This disease should be seen in two stages, the first involves gestation and the symptoms experienced during the trimesters, the second is labour, whose risks are associated to the possibility of death and/or permanent damages. This follows a definition of disease based on harmfulness, painful or unwanted symptoms and medical intervention.

From these ideas, it is possible to identify *a relation thesis* and an *individuation thesis*. The authors suggest that pregnancy can be assimilated to a disease like measles, in which the introduction of a foreign biological body (in this case the sperm) causes a form of disease (the

pregnancy) due to inducing the growth of a body and then an organism which causes a disease to the gravida. The *relation thesis* states that the relation between foster and gravida is the one of disease, in which the foster is causing a disease condition to the gravida by provoking gestation and then labour, which brings in a risk of death. According to the *individuation thesis* instead, we have two main individuals: the gravida and the foster, whose presence is caused by the sperm and leads to the disease relation.

This view, although possibly provoking to some, has the advantage of capturing the medicalisation of pregnancy, its symptoms and how it feels to some gravidas. While it remains true that this view is not a metaphysical rival to the others, this is a metaphysically stimulating suggestion. In particular, the argument that pregnancy is a disease needs further developments regarding the notion of (dys)-functionality implied and its metaphysical characterisation, and some noteworthy problems are pointed out by, e.g., Nicholas Colgrove and Daniel Rodger (2024).

7. How to decide?

All these views have advantages and limits, and the debate is still open. How can we assess which view is “the best”? Together with comparing the philosophical arguments and applying a form of reflecting equilibrium that balances the various parameters (Finn 2021), there are at least two other approaches available. These are: i) having a pragmatic approach and choosing which view is more useful according to the different epistemic and scientific needs; ii) use a more general notion, such as the one of biological individual, and see which view is more consistent with it.

According to a pragmatic and pluralistic approach, the different views can be seen as equally useful according to the medical or scientific context to which they are applied, and each evaluation should be given contextually and within pragmatic goals (following the methodology delineated by Andersen, Mitchel 2023). This allows for contrasting results according to the pragmatic goals considered. For instance, the containment view can be particularly apt for medical contexts of medically assisted pregnancies, such as IVF or gestation for others (Barton 2019). Differently, the parthood view is useful to assess the levels of interaction during pregnancy, especially in terms of body autonomy and early stages of pregnancy. The splitting process view can be instead useful to assess the general overall interactions between gravida and foster in contexts in which both pregnancy and development are kept together. A disease approach to pregnancy can become helpful and apt to discuss the medicalisation of pregnancy and its symptoms. This way of deciding the favoured view takes

away some metaphysical weight while maintaining the conceptual utility of the metaphysics of pregnancy.

The second approach is the one mostly discussed in the literature, as Grose (2019), Morgan (2022b) and Finn (2023) explored how the metaphysics of pregnancy can be informed by different accounts of biological individuality. While the issue of mereological parthood and the relationship between foster and grávida is different from the beginning of existence of a given organism and its individual status, the issue of biological individuality can inform the metaphysics of pregnancy (Finn 2023). Broadly, it is possible to identify two approaches to individuality, the evolutionary approach and the physiological approach. The evolutionary approach defines a biological individual organism as a selected evolved unit: something able to take part in natural selection. The physiological approach, instead, defines a biological individual organism as a system that can self-maintain itself and whose parts are in a constant exchange of energy allowing for its growth, development and sustenance.

According to the evolutionary approach, the foster has the mechanisms needed to be an active part of natural selection, such as a genome due to recombination, a line of germ and soma cells and a diverse reproductive role compared to the grávida. In this case, the views that allow for two organisms during pregnancy seem to be in a better position, such as the containment view, the splitting process view and the disease view. However, this does not exclude the parthood view as it is still possible to propose an account for which an organism can be a part of another one (thus counting *two organisms*), while maintaining the relation of parthood. Similarly, we could use proper overlap as a middle ground and maintain some divisions between the two organisms (Finn 2021, Geddes 2023).¹²

The physiological approach is less straightforward as it is difficult to identify when the foster becomes a proper organism of the considered species given the dynamicity of development and the strong and dynamic interactions with the grávida. In this framework the parthood view is easy to accept especially for the earlier stages of pregnancy, while the containment view could work with the later stages of the process as the two views allow for different levels of autonomy of the foster. In this case, the view that seems to be better off is the splitting process view, as it is the one that allows for a gradual and dynamic process of autonomy. The disease view instead would need to specify the nature the pregnancy-disease to be assessed considering the physiological approach.

¹² Similar considerations are made in the literature regarding the microbiome, see Morgan 2022b on this.

Conclusion

In her non-fiction memoir *Matrescence*, the writer Lucy Jones describes pregnancy with these words: “*I was me, but not me. I was two*”. This sentence expresses the philosophical richness of pregnancy. The metaphysics of pregnancy summarised here offers theoretical and ontological models to explore the relations between foster and gravida. The article presented three main models present in the literature: the containment view, the parthood view and the splitting process view, with their advantages and shortcomings. It has also summarised briefly the recent proposal that pregnancy should be seen as a disease. It concluded by exploring how to decide which of these models should be chosen. By overviewing these positions, this article wants to motivate the need for more philosophy and metaphysics of pregnancy.

Acknowledgments

This article was supported by the European Research Council Project ‘Assembling-Life’, grant no. 101089326. I would like to thank Gry Oftedal and Jietong Xu for their in-depth comments on this draft. My most sincere gratitude goes also to Maurizio Zuccotti, Silvia Garagna, Danilo Cimadomo, Paola Rebuzzini and the organisers of the Symposium “Talking infertility” organised by University of Pavia and GeneraLife (June 2024), and of the Master Program in “Reproductive Biology and Biotechnology: from research to clinical practice” (InnovART) at University of Pavia (2022, 2023) for encouraging and supporting this project. I am sincerely grateful to all the students and colleagues at the University of Pavia, University of Bristol and University of Birmingham with whom I have discussed the metaphysics of pregnancy. Thanks also to the editors and reviewers for their help in improving the article.

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