

## Abstract

What is the metaphysical status of the fetus relative to the pregnant person's body? This question has profound implications for debates concerning personhood, abortion, and medical care, yet has received surprisingly limited philosophical attention. The existing literature largely presents a binary choice: the containment view and the parthood view. The containment view holds that the fetus is a metaphysically independent individual merely contained within the mother, while the parthood view argues that the fetus is a proper part of the mother's body, analogous to an organ. I argue that both views are inadequate. Containment theory correctly identifies the fetus's genetic and evolutionary distinctness but fails to account for the deep physiological integration characteristic of pregnancy. Conversely, parthood theory correctly recognizes this integration but cannot accommodate the fetus's status as a genetically and evolutionarily distinct organism. I defend a third position—the overlap view—which holds that the fetus (foster) and pregnant person (gravida) are two distinct organisms who share a proper part, the placenta, without either being a proper part of the other. This view is supported by several considerations: the placenta's status as a co-constructed organ; microchimerism (bidirectional cellular exchange); phenomenological evidence from pregnant individuals; and biological precedent in lichen symbiosis. The overlap view reconciles the genuine insights of both containment and parthood theories while better reflecting the metaphysical complexity of pregnancy.

**Beyond Containment and Parthood:  
A Defense of the Overlap View of Pregnancy**

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## Introduction

Is the fetus a part of the mother's body? This seemingly simple question has seen relatively minimal discussion in philosophical writings. Answering this question is not only metaphysically significant but has significant implications for questions of motherhood, fetal personhood, abortion, maternal medical care, and other debates in morality and ethics. In this paper, I will argue that the foster (or fetus) is not a part of the gravida (the pregnant individual), nor is it a wholly distinct individual. Instead, the foster is an individual who shares a part with the gravida for the duration of the pregnancy—a view I call the overlap view.

Here is a plan for what follows. I will first give an overview of the existing literature addressing this question. I will examine arguments for containment theory, primarily Smith and Brogaard (2003), and arguments for parthood from Kingma (2018; 2019), both of which focus on biological criteria. I will then counter these, arguing that following these biological criteria does not necessarily support containment or parthood, and better supports an overlap view. I will then explore and reply to possible objections to an overlap view before concluding with a summary and overview of what was discussed.

Before moving on to the literature and arguments, a few points of clarification are in order. First, I would like to make a note on language. Throughout the rest of this paper, I will use the language established by Kingma (2018) of *foster* and *gravida*: the term *foster* refers to anything an organism is pregnant with, e.g., embryo, zygote, or fetus; the term *gravida* refers to the gestating, pregnant organism. Using this terminology helps to avoid several conceptual and linguistic problems. This language has been widely adopted by those writing on this topic, and its use across papers helps promote clarity and consistency. In regard to *foster*, this term helps

avoid issues of differing labels at different points in pregnancy and avoids assigning personhood. Regarding *gravida*, this term helps to circumvent any issues of gender and parenthood of the pregnant subject. In addition to language, I would like to clarify some points about the scope of this paper. I will be assuming a substance ontology. While there is engaging literature on the application of non-substance ontology to pregnancy, exploring these possibilities is beyond the scope of this paper (Meincke 2021; Sidzinska 2017). Additionally, while the answer to the question of parthood could have important implications on the personhood of the foster, medical ethics, and the morality of abortion, the discussion of these implications is also beyond the scope of this paper.

Although pregnancy is a central biological fact—something that is ubiquitous to our existence as mammals—there is still no clear consensus as to the mereological status of the foster in relation to the *gravida*. Philosophers, biologists, and the general public alike cannot agree on whether the foster is a part of the *gravida*, merely contained within the *gravida*, or a unique entity that is contained within but shares parts with the *gravida*. There are two dominant views regarding whether the foster is part of the *gravida*: the containment view and the parthood view (Kingma 2018).

## Containment

The containment model is a view of pregnancy that states the foster is an independent entity merely contained within the gravida. It suggests a metaphysical separation between the gravida and the foster, both distinct substances independent of one another (Finn 2021). This view is not only widely assumed in everyday discourse but has traditionally served as the default philosophical position on pregnancy—even when philosophers have not consciously examined its foundations (Kingma 2019). The containment model has influenced both biomedical and philosophical understandings of pregnancy, with the foster being automatically treated as a separate patient in clinical practice, sometimes even to the point of neglect or harm to the gravida (Baron 2018). This paradigm has significant impacts and ethical considerations regarding the treatment of pregnant persons, both medically and socially.

Before I can evaluate whether containment correctly captures the metaphysical reality of pregnancy, I must first establish what its strongest philosophical case looks like. In this section, I examine containment as the reigning view by presenting the most rigorous defenses available in the literature. My strategy is to build containment's case systematically: I begin with biological and metaphysical criteria for what counts as a distinct individual organism, then apply these criteria to the foster to determine whether it qualifies as an independent substance merely contained within the gravida. Only after establishing containment's strongest arguments can we properly assess whether they withstand scrutiny when confronted with the biological realities of pregnancy.

Biological criteria of individuality are central to the defense of the containment view because they allow us to biologically distinguish whether the foster is an independent organism

or a part of another organism, the gravida (Grose 2020). What defines an individual biological organism—while perhaps seeming straightforward—is still being debated today. Some common considerations include maximality, coherent identity over time, independent physiological processes, maintenance of homeostasis, immune tolerance, and more—I will say more about these criteria below.

In what follows, I will first provide an overview of the primary argument for the containment view in *Sixteen Days* by Smith and Brogaard (2003), examining their six criteria for biological individuality and how the foster satisfies each. I will then explore how the containment model can be further supported by arguments based on Thomistic proposals of individuality, as well as on an evolutionary definition of individuality. Understanding the logical and philosophical foundations of these arguments is essential for recognizing why, despite their initial plausibility, they ultimately fail to account for the unique biological integration characteristic of pregnancy—a point I will develop in the objections that follow.

### **Biological Individuality**

Understanding biological individuality is central to determining whether, as the containment view claims, the foster is a distinct individual contained within the gravida. In *Sixteen Days*, Smith and Brogaard (2003) develop an ontological framework defining what it means to be a distinct substance, a persisting biological individual. Their account is both biological and metaphysical, asking which substances can be classified as unified organisms rather than aggregates or parts.

In their view, a human organism must satisfy the following criteria:

1. **Substance condition**

The entity must be a substance in an Aristotelian sense: being a persisting continuant that undergoes change while remaining numerically identical over time.

2. **Boundary condition**

The entity must possess its own continuous physical boundary separating its interior from the exterior world.

3. **Connectedness condition**

The entity's parts must form a unified whole rather than a mere aggregate, such as a heap or collection.

4. **Relatively isolated causal system condition**

The entity must have internally coordinated processes and mechanisms that regulate stability.

5. **Non-divisibility condition**

The entity must not be able to naturally divide into two new organisms of the same kind.

6. **Maximality condition**

The entity must not be a proper part of another organism in a part-whole relationship.

(Smith and Brogaard, 2003)

Smith and Brogaard (2003) argue that once these criteria are met, that is the point at which we have not just 'human life,' but a true human individual. When applied to the foster, they argue that each of these criteria is met sixteen days after fertilization when gastrulation occurs (Smith and Brogaard 2003). Let's examine these criteria in detail to demonstrate how Smith and Brogaard (2003) argue the foster satisfies each during pregnancy.

## **The Fetus as a Bearer of Change**

Substances persist through qualitative change. Adult human beings can weigh more at one time and less at another, or have long hair at one time and short hair at another, yet still remain numerically the same individual. Similarly, fetuses undergo dramatic developmental changes, going from a small cluster of cells to a large organism with differentiated tissues, yet the bearer of these changes, the fetus, stays the same (Smith and Brogaard 2003). Even though the fetus undergoes significant changes from the first to the third trimester, it remains the same entity. As the fetus goes through stages of growth and development, it is not replaced by a new organism each time; it is the same organism acquiring new properties. Thus, the fetus satisfies the condition of transtemporal identity—it is one and the same through time (Smith and Brogaard 2003).

## **Boundary and Separation**

An individual substance must have its own complete boundary. Smith and Brogaard (2003) distinguish between bona fide boundaries—real physical topological discontinuities—and mere fiat boundaries—conceptually-imposed divisions. They explain that organs such as the kidneys share bona fide boundaries with the whole body and do not have independent boundaries (Smith and Brogaard 2003). After gastrulation, a fetus possesses a connected biological boundary. Smith and Brogaard (2003) argue that this is a bona fide boundary as the fetus is surrounded by the uterine wall, but does not overlap with tissue belonging to the gravida, making it spatially distinct from the gravida.

## **Connectedness**

A substance must be one unified whole rather than a mere collection of parts. Prior to gastrulation, the initial cell mass is not fully integrated, but rather remains totipotent and capable of fission (Smith and Brogaard 2003). After gastrulation, differentiation establishes an organized body axis and an integrated structure (Smith and Brogaard 2003). At this stage, it is argued that the foster is no longer a cluster of cells, but one connected organism. The parts of the body are not just next to each other in a clump; they are functionally integrated into a single developmental system. This organization distinguishes an individual from an aggregate of items or a loosely coordinated biological colony (Smith and Brogaard 2003).

## **The Foster as a Relatively Isolated Causal System**

Smith and Brogaard (2003) emphasize that organisms are not merely bounded together but must be causally integrated. This means they must possess mechanisms that regulate internal processes and restore stability after disturbances, therefore maintaining homeostasis. They argue that the foster shows this internal regulation after gastrulation. The foster's cellular differentiation, protein production, metabolic activity, and growth all follow a coordinated program produced from its own genome (Smith and Brogaard 2003). Smith and Brogaard (2003) argue that while nutrients and oxygen are being supplied by the gravida, the true regulatory mechanisms that govern the growth of the foster originate within itself. In other words, they acknowledge that the gravida is physically supporting the foster's growth process, but it does not organize or control them, making the foster a relatively isolated causal system.

### **Non-Divisibility**

One key feature of Smith and Brogaard's (2003) account is that an organism cannot count as an individual if it can naturally divide into two new organisms of the same type. In early embryonic stages, the embryo remains capable of twinning, indicating that individuality is not yet fixed (Smith and Brogaard 2003). After gastrulation, natural division into two complete organisms is no longer possible (Smith and Brogaard 2003). Under this view, this marks the beginning of a unified individual that can no longer be duplicated, meeting this non-divisibility characteristic of mature organisms.

### **Maximality**

The condition of maximality is the one in which Smith and Brogaard (2003) argue most strongly for containment. An organ such as the heart fully or partially satisfies many of the conditions above, yet we instinctively know it is not a full human organism, but merely a proper part of one. Smith and Brogaard (2003) argue that the foster does not, in fact, stand in relation to the gravida in a part-whole manner as the heart does, but is instead more similar to an organism inhabiting a niche. This is based on the maximality principle, saying that no thing can be a proper part of another thing of its kind. For example, a spoon cannot be a part of a spoon, but the handle or the bowl can be parts of a spoon. Under this view, a human cannot be a proper part of another human. Rather, they argue, the foster is more akin to an individual organism growing and developing within the specialized environment of the gravida (Smith and Brogaard 2003).

Taken together, Smith and Brogaard (2003) assert these examples show how the characteristics of the foster and the relation between the gravida and the foster support a containment view: the foster is not a part of the gravida, but a distinct biological individual merely contained within the gravida. They argue that using these criteria shows that we should

see the foster as a biological individual, not a proper part of the gravida akin to an organ. Smith and Brogaard (2003) argue that this shows that the foster is best understood as an organism developing within, but not ontologically collapsed with, the body of the gravida.

So far, I have examined the containment view through the lens of biological criteria—a framework that identifies individuality by examining substance, boundaries, connectedness, and causal isolation. However, containment’s philosophical foundations extend beyond empirical biology into classical metaphysics. In what follows, I turn to a fundamentally different approach: Thomistic philosophy, which grounds individuality not in biological function but in the metaphysical distinction between form (the organizing principle of a substance) and matter (its physical composition). While Smith and Brogaard (2003) appeal to observable biological features, Thomistic thinkers argue for containment through a different conceptual apparatus—one rooted in substantial form and the unity of living beings. Despite this methodological difference, both approaches reach the same conclusion: the foster qualifies as a distinct individual substance rather than a proper part of the gravida. Examining this alternative metaphysical foundation reveals that containment’s defenders are committed to a more robust philosophical position than biological criteria alone might suggest, grounded in classical substance ontology.

### **Thomistic Individuality**

Another approach to defending the containment view comes from Thomistic arguments of individuality. Thomistic individuality, as interpreted by Saint Thomas Aquinas, defines individuality as the union of form and matter. Matter is the physical substance we are all made of, and form is the organizing principle that determines something’s essence, sometimes thought

of like a soul (Toner 2025). Under this theory, form is the intrinsic principle explaining an organism's unity, identity, and vital operations. Living beings are substances, a unified whole of matter organized by a single form.

It should be noted that this form-matter framework is a substantive metaphysical commitment that, as Toner (2025) himself acknowledges, "will not appeal to everyone." However, its philosophical power lies in solving a problem that plagues alternative accounts: how can an organism remain the same individual while undergoing radical material change? The form-matter distinction avoids treating form as a ghostly, immaterial addition to matter; instead, it grounds identity in an organizing principle that is realized *through* the material substrate. This elegantly explains why you remain yourself despite replacing most of your cells, and why the foster maintains numerical identity through dramatic developmental transformation. While Thomism is admittedly sectarian, it offers considerable philosophical coherence as a unifying account of biological individuality. As we shall see, this framework becomes more credible to modern readers when connected to contemporary neuroscience—which identifies the material conditions: neural development, synaptogenesis, thalamocortical connectivity—that realize the sensitive soul's emergence.

In a contemporary analysis, Toner (2025) applies this theory to the metaphysics of pregnancy. Under this view, Toner (2025) does not define the individuality of the foster by spatial separation, genetic difference, or homeostatic abilities, but by the presence of form, a distinct organizing principle governing the foster's development and activity. Following a Thomistic argument, it is clear that if a substance has its own substantial form, then it is a complete individual in its own right. Toner (2025) focuses on the emergence of sensation as an indication of a sensitive soul, thereby signifying form and individuality. The capacity for

sensation indicates that the being is not merely living, as plants are, but is a unified organism capable of coordinated and self-directed activity. When the foster exhibits sensation, this signals a sensitive soul, satisfying Thomistic criteria for being a substance, rather than merely a part (Toner 2025).

In Thomistic metaphysics:

- A substance possesses its own substantial form, which organizes its matter and grounds its unity throughout time.
- A part does not have its own substantial form; it is organized by and for the whole to which it belongs.

(Toner 2025)

Take for example a liver, which under this theory, does not have an independent form; it is organized for the sake of the organism whose life it maintains. If the foster were to be a part of the gravida in this same way, it would have to be organized for the sake of the gravida. Toner (2025) argues that this is not the case. The foster exhibits growth, development, and activity that are not helpful toward the gravida, indicating that it is being guided by its own form (Toner 2025).

From both of these key points, we can see that a Thomistic view of individuality supports a containment view. The foster shows both sensation and self-interested development, indicating a sensitive form and suggesting the foster is an individual (Toner 2025). Toner (2025) argues that pregnancy is not a case of one substance incorporating a part, but one substance containing another substance. This metaphysical view can explain why the foster can be considered its own,

contained, individual, despite the physiological integration with the gravida and the marked changes throughout gestation.

### **Evolutionary Individuality**

I now turn to a third approach to support containment: evolutionary theory. Rather than asking what possesses independent form or satisfies biological criteria, evolutionary individuality asks what entities function as coherent units of natural selection. Through this view, an individual is something that can participate in a Darwinian process of variation, differentiation, and heritable transmission of traits. This framework is particularly suited for pregnancy as it directly addresses the foster's and gravida's distinct genetic interests and independent evolutionary trajectories. I will outline how Grose (2020) applies this evolutionary lens to pregnancy to argue that both the foster and gravida satisfy the conditions for evolutionary individuality—a finding that supports an overlap view.

Drawing on evolutionary theory, Grose (2020) argues that an entity qualifies as an individual if it satisfies the following two conditions:

- Policing mechanisms: mechanisms that suppress internal competition and align fitness within the entity.
- Demarcation mechanisms: mechanisms that generate heritable fitness variation between entities.

(Grose, 2020)

These two mechanisms ensure that an entity can function as a coherent unit of natural selection within an ecosystem. Grose (2020) argues that during pregnancy, both the gravida and the foster satisfy these two conditions.

Upon satisfying the policing mechanism, foster and grávida each stand on their own side of a single-cell reproductive bottleneck (Grose 2020). Bottlenecking occurs when an organism passes through a narrow stage in which all future lineages derive from a small number of cells. For mammals, the bottleneck is the zygote. After the zygote forms, all future cells arise from repeated divisions of this one cell. This happens for both the grávida and the foster. This functions as a policing mechanism by suppressing ‘within-organism’ evolutionary competition; all cells are aligned toward the same evolutionary interest (Grose 2020). The second policing mechanism that both the grávida and foster exhibit is germ-soma separation. In both, only specialized germ cells transmit genetic information to the next generation, while somatic cells are evolutionary dead ends. This separation acts as a policing mechanism, preventing internal cellular competition that could destabilize the organism (Grose 2020). Both the grávida and foster exhibit this separation, reinforcing their evolutionary individualism through policing mechanisms (Grose 2020).

As for demarcation mechanisms, the foster and grávida are separated by sexual recombination, which produces genetic variation between them. The foster does not have the same genome as the grávida; it inherits half of its genetic material from the sperm that fertilized the egg. This genetic difference allows the grávida and foster to have different adaptive skills and fitnesses, forming distinct evolutionary trajectories (Grose 2020).

These evolutionary differences are not simply theoretical. In the case of grávida-foster conflict, the evolutionary interests of the grávida and foster can diverge in real time. Adaptations of the foster may result in considerable resource extraction from the grávida to maximize the foster’s growth, and the physiology of the grávida can regulate resource allocation to preserve long-term reproductive fitness (Grose 2020). If the two were not their own individual

evolutionary targets, these conflicts would not be possible, but we see them often in real life (Grose 2020).

However, this evolutionary evidence cuts both ways. On one hand, the presence of distinct fitness interests and evolutionary conflict seems to undermine the containment view: a container and its contents do not typically have divergent evolutionary trajectories or engage in resource competition. Containers and contents are not units of natural selection in opposition to one another. On the other hand, the evolutionary distinctness also challenges the parthood view: if the foster and grávida are separate targets of natural selection with independent policing and demarcation mechanisms, they do not function as a unified evolutionary unit. Parts of an organism do not maintain their own separate evolutionary bottlenecks or compete with the whole for resources.

This bidirectional problem suggests that the evolutionary facts do not neatly support either the containment or parthood model. Rather, they reveal the inadequacy of the binary itself. The grávida and foster exhibit characteristics that fit neither model cleanly—they are neither a simple container-contents relationship nor a unified part-whole relationship. This evolutionary tension points toward the need for a third metaphysical account that can accommodate two distinct evolutionary individuals who are nonetheless deeply integrated within a shared biological space.

## **Objections to Containment**

The containment model, despite historical prominence, rests on specific criteria that do not withstand scrutiny when applied to the true physiology of pregnancy. In what follows I examine three pillars of the argument for containment, causal isolation, clear boundaries, and the appeal to maximality. Each of these arguments, I will show, either overstate the evidence or beg the question against alternative accounts.

### **Overstatement of Causal Isolation**

A key argument in support of the containment model is the claim that the foster constitutes a ‘relatively isolated causal system’. This means an organism counts as an individual when its internal processes are coordinated and regulated in ways that uphold stability and homeostasis (Smith and Brogaard 2003). Proponents of the containment view argue that the foster does satisfy these requirements because it follows a genetically coded developmental program. Once fertilization occurs, the embryo undergoes cellular differentiation, growth, and organ formation, all according to encoded genome instructions. However, these processes are not entirely self-regulated.

While the foster does possess its own developmental programming, it is entirely unable to regulate the conditions necessary for that development to occur independent of the gravida. During gestation, the essential processes required for the foster’s survival are only maintained through the physiological systems of the gravida. Oxygenation, nutrient transfer, waste removal, and thermal regulation are all mediated through the physiological processes of the gravida (Kingma 2019). Because of this high dependence on the gravida to carry out these developmental processes, we cannot say that the foster is fully causally isolated.

Given that we cannot say the foster is fully causally isolated, we can see that the level of causal isolation argued by those defending the containment view is significantly overstated. Although the foster possesses a distinct genome and follows its own developmental trajectory, this development is only possible due to the support of the gravida. We cannot argue that the foster is merely contained due to this self-caused development when it is highly scaffolded by the physiology of the gravida.

### **Biological Boundaries**

Another, somewhat intuitive, argument for containment is the claim that the foster has a clear biological boundary separation from the gravida. It is argued that there is a divide between the foster and the gravida, a bona fide boundary clearly showing a discontinuity between two organisms (Smith and Brogaard 2003). Generally, this separation is defined by the cell membrane, which physically separates the internal processes of an organism from the external world. While it may seem clear that a foster would have a bona fide boundary between itself and the gravida, on closer examination, this is not the case.

The foster has its own cellular membrane and developing skin. It resides inside the uterine environment rather than being inside the gravida's body cavity. These factors might lead us to think it has bona fide boundaries of its own. However, when we look at the placenta, these boundaries start to blur. The placenta is not merely an interface between two entirely separate organisms, but is a highly complex organ formed from tissue of both the foster and the gravida (Herrick and Bordoni 2023). In early pregnancy, the foster's trophoblasts embed in the uterine lining of the gravida and actively remodel and dilate spiral arteries that connect to the placenta. This fusion of tissue belonging to the gravida and tissue belonging to the foster allows blood

from the gravida to flow into the placenta, enabling circulatory exchange for the development of the foster. This means we cannot neatly say that the placenta belongs to the foster or the gravida, as it contains tissue from both (Herrick and Bordoni 2023).

Due to this integration through the shared organ of the placenta, the spatial relationship between the foster and the gravida is far more complex than the containment model proposes. The foster is not simply sitting inside the uterus like an object in a container; it is physically connected through a complex network of shared tissue that blurs the boundaries between the organisms (Kingma 2019). For this reason, we can see that the topological separation argument for containment relies on an oversimplified picture of pregnancy that does not exist in reality. The biological relationship between the gravida and the foster does not resemble a clear boundary line, but rather a deeply integrated physiological blend of tissue from both organisms.

### **The Problem of Maximality**

Further defense of containment relies on the metaphysical principle of maximality. According to maximality, an entity of a given kind cannot be a proper part of the same kind (Finn 2023). A cat cannot be a proper part of another cat, a human cannot be a proper part of another human. If we accept this principle, parthood is ruled out immediately, given that we see both the foster and the gravida as human organisms.

Maximality is rarely independently defended in the discussion of pregnancy and is instead treated as a background assumption about the structure of biological individuals (Finn 2023). Maximality was not created with, or argued for, pregnancy in mind; it directly challenges the realities of pregnancy. When we assume maximality from the outset, concluding in the

containment view is built into the argument from the beginning. Any theory suggesting the foster is a proper part of the gravida is dismissed before any other facts are even considered.

In this way, reliance on maximality as grounds for rejecting parthood risks begging the question. Rather than independently demonstrating that the foster cannot be a part of the gravida, the argument immediately assumes such a relationship is metaphysically impossible. The conclusion is assumed from the start. However, pregnancy may be the exact biological case that contests this assumption. There is a unique physiological integration between foster and gravida that suggests our ordinary intuitions about part-whole relationships may not be as straightforward in this context. For this reason, we should not treat maximality as an unquestionable metaphysical rule, but rather a hypothesis that should be evaluated for each new biological case (Finn 2023).

## Parthood

Opposing the containment view is the view of parthood. The parthood view states that the foster is not merely located within the gravida, but is a proper part of it. (This notion of a ‘proper part’ is a technical notion in metaphysics, which I will explain in more detail below.) While containment is the historically received view and has been touted as ‘intuitive’, the parthood view has more recently gained traction. As biological knowledge has deepened, parthood has come to light in contemporary feminist metaphysical writings (Takeshita 2017). A prominent recent defense of parthood is found in Kingma’s work (2018; 2019). Kingma (2018; 2019) takes a two-step approach to argue for parthood: first, that containment relies on many unexamined assumptions; and second, that parthood is positively established by applying criteria of biological individuality to the case of pregnancy. I will give an overview of both her critiques of containment and her argument that parthood is the most defensible metaphysical view of pregnancy.

### **Against Containment**

Kingma (2019) argues that containment, while perceived as the default, is a less secure argument than is commonly assumed. The idea that the foster is a distinct being merely contained within the gravida is presupposed throughout debates of abortion, animalism, and identity, but is severely under defended (Kingma 2019). Kingma (2019) argues that the ‘intuitiveness’ of the containment view is likely culturally manufactured, rather than something that reflects metaphysical reality. Linguistic framing, such as ‘pea in a pod’ or ‘bun in the oven’, as well as imagery that depicts the foster as free floating in the womb with no tissue belonging to the gravida in sight, unconsciously create and reinforce the idea that the foster is its own entity

entirely separate from the gravida. The practice of and talk around surrogacy reinforce this as well, with the surrogate often described as entirely separate from and often even secondary to the distinct foster that they are ‘merely carrying’ (Baron 2018). These representations obscure and confuse the biological reality of deep integration between the gravida and the foster. The foster is not separate or free-floating, but embedded in uterine tissue via the placenta and metabolically connected to the gravida (Kingma 2019). If our intuitions are a result of distorted imagery and language, we cannot use them as evidence of metaphysical truth.

Kingma (2019) also challenges arguments for containment that are based on the principle of maximality. Maximality is the principle that a proper part of X cannot itself be an X; a cat cannot be a part of a cat, a human cannot be a part of a human. Therefore, from this assumption, since both fosters and gravida are human, fosters cannot be proper parts of gravida. Kingma (2019) argues that this principle is not adequately supported and was never intended for pregnancy. If we assume maximality, parthood can never be correct, and containment is presupposed. Therefore, using maximality as a key defense of containment risks begging the question (Kingma 2019). While maximality, like containment, is often assumed, it is rarely challenged or defended, and pregnancy may be exactly the biological phenomenon to challenge it.

Another key argument used in many cases for containment is grounded in topology. Smith and Brogaard (2003) use this as a key point of their argument for containment, arguing that the foster develops a complete external boundary, qualifying it as a distinct organism merely contained within another. While the foster may seem topologically distinct, during development, this may not actually be true. The umbilical cord of the foster connects to the placenta, which is embedded within the uterine tissue of the gravida. There is no clean and clear physical

discontinuity between the foster and the gravida. This idea of a topologically distinct foster is misleading, as the foster is structurally continuous with the gravida via uterine and placental tissue (Kingma 2019).

Having now examined Kingma's (2019) critique of containment's foundational assumptions—showing that maximality is question-begging and topological separation is illusory—we have established that containment's defenses are weaker than they initially appear. However, demonstrating containment's weaknesses does not yet establish that parthood is correct. To make the affirmative case for parthood, Kingma (2019) shifts strategy: rather than continuing to critique containment, she now applies a different set of biological criteria—ones specifically designed to identify what makes something a proper part of an organism. By systematically examining whether the foster meets the criteria of homeostasis and physiological regulation, metabolic and functional integration, topological continuity, and immunological tolerance, Kingma (2019) argues that the foster satisfies the same biological conditions that establish organs as proper parts of organisms. This positive argument, grounded in biological integration rather than metaphysical principles, forms the foundation of the parthood view.

### **A positive case for parthood**

Similar to Smith and Brogaard's (2003) approach to argue for containment, Kingma (2019) also appeals to criteria of biological individuality, but instead looks at what makes something a biological part of an organism. The four criteria evaluated are: homeostasis and physiological autonomy; metabolic and functional integration; topological continuity; and immunological tolerance (Kingma 2019).

Kingma (2019) does not claim that these four criteria provide necessary and sufficient conditions for parthood—that is, she does not argue that anything meeting these criteria must be a part, nor that anything failing them cannot be a part. Rather, her argument is comparative and abductive: given two competing metaphysical interpretations of pregnancy (containment versus parthood), the biological facts of integration provide stronger evidential support for parthood than for containment. If the foster meets the same biological criteria that organs meet to qualify as proper parts of organisms, then parthood offers a better explanation of pregnancy’s biological reality than containment does (Kingma 2019). This is an inference to the best explanation rather than a deductive proof. The strength of Kingma’s (2019) case depends on whether these integration criteria genuinely distinguish parts from non-parts, and whether parthood can accommodate all the relevant biological facts better than its competitor. As we will see, this comparative framing becomes crucial when evaluating whether either view fully captures pregnancy’s metaphysical complexity. I will outline Kingma’s (2018; 2019) argument as to how the foster meets each criterion to support her conclusion of parthood.

### **Homeostasis and Physiological Regulation**

Homeostasis is a central aspect of biological individuality. Mammals must sustain themselves by maintaining a regulated and unified internal environment, controlling temperature, oxygen level, glucose levels, pH, hormone concentration, and many other variables within a narrow range. Kingma (2019) argues that during pregnancy, the foster is within the gravida’s regulated internal environment. The placenta is continuous with the foster, which is embedded in the uterine wall, and mediates metabolic exchange between the foster and the gravida. The gravida’s physiology undergoes major systemic modifications in order to deliver oxygen,

nutrients, and balance hormone levels to maintain homeostasis while sustaining the foster throughout gestation (Kingma 2019).

The crucial point of this criterion is not merely that the foster is dependent upon the gravida, but that the foster's metabolism is regulated only through the integration into the metabolic system of the gravida. Within the gravida, cardiac output and blood volume increase, the endocrine system is modified, and the immune system is modulated; all to maintain pregnancy as a stable physiological state (Kingma 2019). While the foster is accommodated and homeostasis is maintained, it is only secondary to the changes in homeostasis done by the gravida.

Kingma (2019) argues that organs such as kidneys have similar localized regulatory processes, but this does not make them distinct individuals; they are parts of a whole because they are integrated into the organism's larger homeostatic system. In this same way, the foster is not only within, but is governed by the physiological control of the gravida. Kingma (2019) concludes that under these criteria, the foster more closely resembles an integrated biological part than a distinct contained individual.

### **Metabolic and Functional Integration**

Functional integration refers to the coordinated contribution toward an organism's biological ends, mainly survival and reproduction. Biological parts must not merely be connected by space; they must participate in shared function. Pregnancy is one of the main functions for successful reproduction in mammals. All of the changes to the gravida—altered glucose metabolism, remodeling of the uterus and pelvis, and immune modulation—are moving toward the end of successful reproduction. Kingma (2019) argues that these changes, and the dynamic

signaling between tissue of the gravida and foster, are not reactions to conflict but adaptations that work towards shared reproductive success.

Kingma (2019) acknowledges that there are cases of gravida-foster conflict that can be at the cost of either the foster or the gravida, but these do not automatically rule out parthood. These cases are exceptions, not the rule, and can be seen in many organisms. Situations such as cancers or autoimmune diseases are examples of organisms not fully working in harmony toward shared functional goals, but we recognize that these are pathologies, not the default healthy biological function. Kingma (2019) argues that, despite these cases, the foster participates in the gravida's joint goals, akin to a proper biological part.

### **Topological Continuity**

As mentioned previously, the foster is frequently depicted as being topologically disconnected from the gravida, like an object floating around inside the uterus. Kingma (2019) argues that this is anatomically inaccurate. The umbilical cord arises from the foster's tissue and connects the foster to the placenta, which is embedded in the uterine lining and itself composed of tissue from both the gravida and foster (Kingma 2019). The result is a complex structure that is deeply interconnected, not a cleanly topologically distinct individual inside a separate topologically distinct individual; there is no clean separation. Given this physical continuity between the gravida and the foster through placental connection, Kingma (2019) argues that the foster meets this same topological role of a proper part during gestation.

### **Immunological Tolerance**

The immune system is often regarded as a clear marker of biological individuality; the system attacks foreign, non-self bodies while tolerating the self. Kingma (2019) notes that,

following this, if the foster were a distinct individual, the immune system would likely reject it. Instead, the immune system undergoes major modifications to accommodate pregnancy, with specialized immune cells and placental signaling regulating the immune response throughout gestation (Kingma 2019). This is not merely non-recognition of a foreign body, but active structured accommodation of the pregnancy.

We don't see immune tolerance only during pregnancy; it also occurs in other parts of the body. The immune system actively tolerates beneficial gut microbiota and erects barriers to prevent attacks on neural tissue (Grose 2020). Kingma (2019) concludes that this relationship is an example of protective regulation towards parts of the organism, rather than the attack we would expect when a foreign body has invaded.

Together, these criteria show that the foster qualifies as a biological part of the gravida. If organs are part of organisms because they are homeostatically regulated, metabolically integrated, topologically continuous, and immunologically tolerated, then the foster should be considered part of the organism as well. Kingma (2019) acknowledges that these criteria cannot concretely prove parthood, but rather that of the two options, containment and parthood, these facts ground parthood as the strongest explanation of the metaphysical state of pregnancy.

Having now examined parthood's strongest case through Kingma's (2019) four biological criteria—demonstrating that the foster meets the same integration standards we use to identify organs as proper parts—we must subject parthood's arguments to the same rigorous scrutiny we applied to containment. Just as containment's defenses proved vulnerable when confronted with the biological realities of pregnancy, parthood too faces serious philosophical objections that challenge whether biological integration alone is sufficient to establish metaphysical parthood. By testing both views against their respective objections, we will discover that each captures

something genuinely true about pregnancy—containment correctly identifies the foster’s genetic and evolutionary independence, while parthood correctly identifies deep physiological integration—yet each simultaneously misses something crucial that the other recognizes. This parallel inadequacy of both views will reveal the false dichotomy underlying the entire containment-parthood debate and necessitate a third metaphysical account.

## Objections to Parthood

### Integration and Identity

One of the central defenses of parthood is that the foster exhibits biological integration similar to that of organs. According to the parthood view, the foster is a proper part of the gravida in the same way organs are, such as the gravida's kidneys or heart (Kingma 2019). The foster participates in the gravida's homeostatic system, engages in metabolic exchange with the gravida's body, and is tolerated by the gravida's immune system. In these ways, the foster does seem to meet the same criteria as organs. However, biological integration is not enough to imply metaphysical parthood (Geddes 2022). By "biological integration," Kingma (2019) identifies four specific criteria: homeostatic regulation of the foster's physiology through the gravida's systems; metabolic and functional exchange between them; topological continuity via placental connection; and immunological tolerance rather than rejection by the gravida's immune system.

Many entities interact with and integrate into biological systems without becoming part of the organism (Baptiste and Dupré 2013). The microorganisms that make up the gut microbiome are deeply integrated into human metabolism and serve vital roles in immune function. Parasites can embed within human systems and work with the host's metabolism to survive undetected by the immune system. Despite these beings' integration, they are not considered proper parts (Geddes 2022).

Similarly, organ transplants integrate highly into the recipient's body. They connect to the circulatory system, are regulated by it, and participate in the body's homeostatic processes. Despite this, we do not take this to conclude that the donor and recipient have become one organism. These examples show that integration alone is insufficient to establish parthood.

However, the logical relationship between integration and parthood in Kingma's (2019) argument requires closer examination. Kingma (2019) does not explicitly claim that her four biological criteria are either necessary or sufficient conditions for parthood. Rather, she argues that when an entity meets these criteria, parthood becomes the most supported explanation (Kingma 2019). This formulation leaves the precise logical status of integration ambiguous. Is integration merely one evidential factor among several that collectively support parthood? Or is it a necessary but not sufficient condition—meaning that while all proper parts must be integrated, integration alone cannot guarantee parthood status?

This ambiguity weakens the parthood case considerably. If integration is neither necessary nor sufficient for parthood, then the biological criteria Kingma (2019) identifies may be doing less argumentative work than they initially appear to do. The objection becomes stronger if we can demonstrate that integration is neither necessary (there could be proper parts without integration) nor sufficient (there can be integration without parthood). The examples of gut microbiota, parasites, and transplanted organs suggest the latter: entities can be deeply integrated without being proper parts. Furthermore, consider cases of dead tissue or necrotic bone, which remain proper parts of organisms without participating in active homeostatic integration, suggesting integration is not necessary for parthood either. If integration can occur without parthood, and integration is not necessary for parthood, then the biological criteria fail to provide a decisive argument for the parthood view. The foster's integration with the gravida may be genuine and profound, yet this fact alone does not settle the metaphysical question of whether the foster is a proper part.

## **Evolutionary and Genetic Individuality**

From an evolutionary perspective, the foster and grávida function as distinct units of selection. They each originate from a distinct single-cell reproductive bottleneck and possess separate genetic identities (Grose 2020). Because of these differences, they will both have separate evolutionary fitness and interests. According to evolutionary theory, an individual is a being that can participate independently in variation, inheritance, and natural selection (Grose 2020). The foster and the grávida each meet these criteria independently.

Both the foster and the grávida develop from their own zygotes, carry their own genomes, and can reproduce as distinct organisms. This suggests that the foster occupies its own evolutionary trajectory rather than merely being a part of the grávida (Grose 2020). If the foster were truly part of the grávida, we would expect evolutionary interests to entirely align, but they do not. The existence of distinct genetic identities and potential fitness conflicts suggests the foster cannot be part of the grávida.

## Overlap

### A False Dichotomy

The most significant weakness in most current arguments in this debate is the assumption that there are only two metaphysical options: containment or parthood (Bellazzi 2025). Much of the literature treats it as if there are only two mutually exclusive options. When framed this way, the debate becomes not one of finding the correct metaphysics, but merely which one is better. However, this framing itself seems to be mistaken.

Given the objections examined above, containment emerges as the stronger position within the binary frame. The parthood view's difficulties—particularly its struggle to account for genetic distinctness and independent evolutionary interests—are formidable. If forced to choose between containment and parthood, containment appears to win. But this apparent victory is illusory. It only looks decisive because we are trapped within a false dichotomy that permits no third option. The moment we escape this binary frame and ask what pregnancy actually is, rather than which of two inadequate categories fits it better, a third possibility emerges: the overlap view. This view resolves what the binary debate could not, by acknowledging that the foster and grávida are distinct biological individuals who nonetheless share a proper part—the placenta—without either being entirely part of the other.

Geddes (2022) identifies proper overlap as a formal mereological possibility that the pregnancy literature has overlooked. While Kingma (2019) argues that the foster meets her four biological criteria and concludes parthood, Geddes (2022) demonstrates that those same criteria in fact better support proper overlap—a point Kingma herself never considers. However, Geddes's (2022) paper is primarily negative: it shows that parthood fails to account for the

biological facts and that overlap has been unjustifiably excluded from consideration. The present paper accepts Geddes's (2022) mereological framework and his critique of parthood but builds a constructive argument that overlap is not merely a logical possibility nor simply a better reading of Kingma's (2019) evidence—it is the correct metaphysical account of pregnancy because it resolves the false dichotomy that traps the entire containment-parthood debate.

In mereology, overlap occurs when two distinct entities share at least one proper part without either being entirely part of the other. To use the definition provided by Geddes (2022), entity A and entity B overlap if there exists a part Z such that Z is a part of A and Z is a part of B, yet A is not a part of B and B is not a part of A. In the context of pregnancy, A is the gravida, B is the foster, and Z is the part or parts they share. This model allows us to reject the 'one or two' binary. It acknowledges that the foster and gravida are distinct biological individuals with separate genetic identities and evolutionary paths, but are not spatially cut off from one another; instead, they exist in a mereological intersection.

### **The placenta as a Shared Part**

The physical evidence for this physiological overlap is found in the placenta's unique biological status. The placenta is a chimeric organ co-constructed through bidirectional transformation of tissue from both foster and gravida—a structure that cannot be reduced to either organism's possession.

The placenta's formation involves active remodeling of both foster and gravida tissue, not the incorporation of foster's tissue into an organ belonging to the gravida. Trophoblasts from the foster initiate what is called "deep trophoblast invasion," embedding in the gravida's uterine lining and remodeling spiral arteries (Burton and Fowden 2015). But crucially, the gravida's

endometrium does not passively host these invading cells. Instead, it undergoes dramatic transformation through a process called decidualization—stromal cells differentiate, the extracellular matrix is restructured, and the tissue becomes biochemically and functionally distinct from non-pregnant endometrium (Herrick and Bordoni 2023). Both tissues are equally transformed to create the placenta. This is co-construction of a new structure, not unidirectional invasion or incorporation of foster's tissue into the gravida's body. Rather, both tissues are equally transformed through reciprocal remodeling. Unlike organs that become permanent parts of organisms, the placenta is explicitly designed to be expelled after birth. It has a preprogrammed finite lifespan encoded in both the foster's and gravida's genetic programs. This temporal structure breaks the permanence assumption built into part-whole models: an organ becomes a part of an organism and remains so; the placenta is jointly created to be temporary. Its expulsion is not pathological loss but the completion of its intended function. A parthood theorist cannot accommodate this: if the placenta were truly a part of the gravida (as parthood claims), its expulsion would constitute the loss of an organ, not the natural conclusion of a shared developmental program.

The placenta cannot be reduced to 'foster's tissue plus gravida support' or vice versa. Neither the gravida's nor the foster's tissue alone could constitute a functional placenta. The gravida's decidualized endometrium actively secretes growth factors, cytokines, and hormones; the foster's trophoblasts respond by differentiating into specialized cell types and secreting their own hormonal signals like HCG and progesterone (Burton and Fowden 2015). The resulting organ serves both organisms' ends: it functions as the foster's external lungs, kidneys, and nutrient source while simultaneously regulating the gravida's hormonal environment to maintain pregnancy. Because this organ requires structured cooperation of both genetic programs and

serves both organisms' physiological needs, neither can be said to "own" it. More fundamentally, the genetic distinctness of the gravida and foster means their genetic programs independently shape placental development. The foster and gravida both direct different aspects of placental development, neither organism's genetic program subsumes the other. Instead, two autonomous genetic systems cooperatively construct a single structure. This is what distinguishes overlap from parthood. The placenta is not a part organized by the gravida's genetic program merely absorbing the foster's but instead a part co-constructed by two distinct genetic programs toward their own evolutionary interests. A parthood theorist must either deny this genetic distinctness or explain how two genetically distinct programs can jointly construct something that then only counts as a part of the gravida. Under the overlap view, the placenta is shared territory—a proper part of both the foster and the gravida, where individual boundaries give way to co-constructed functional unity.

### **Microchimerism**

While the placenta serves as a macro-level shared part, there is further evidence of physical integration and boundary blurring at the cellular level. Recent immunology has revealed the everyday phenomenon of microchimerism between the foster and the gravida, directly challenging the 'containment' view of the foster as wholly separated from the gravida.

Microchimerism refers to the presence in one's body of a small number of cells originating from a genetically distinct individual (Grose 2020). During the course of a normal pregnancy, the foster's cells migrate across the placenta and into the gravida's circulation. These cells are tolerated by and persist in the gravida's system even many years after birth, with cells from the gravida doing the same in the foster's body (Grose 2020). This bidirectional exchange

is crucial. While a parthood theorist may explain unidirectional cell migration from the foster into the gravida as part of the foster being incorporated into the gravida's body, the reciprocal persistence of the gravida's cells in the foster's tissue poses a problem for parthood. If the foster were merely a proper part of the gravida we would not expect to see the gravida's cells be incorporated into the foster's tissue in this bidirectional manner. Bidirectional microchimerism fits the overlap structure demonstrating two distinct individuals whose cells interpenetrate and persist in each other's bodies. This further evidence shows that we can recognize the gravida and the foster as distinct individuals, while also recognizing that pregnancy does not offer clear boundaries and that overlap provides the best explanation for this phenomenon.

As Takeshita (2017) argues, this biological reality of microchimerism supports a new ontology that collapses the Cartesian dualism of a clear gravida-foster divide. If the cells of two beings have intermingled and interacted such that they physically change the tissue of one another, they are not merely touching; they have interpenetrated. The foster does not wholly belong to the gravida nor is it merely contained within the gravida; it is partially of the gravida, interpenetrating and sharing a piece, even while remaining its own distinct biological agent.

### **Maximality in Overlap**

The overlap view provides a solution to the problem of maximality that hinders the parthood debate. The principle of maximality states that no organism of a certain kind can be a proper part of another organism of the same kind (Finn 2023). Because both the foster and the gravida are human organisms, the containment view can posit that parthood is metaphysically impossible on the grounds of maximality.

Overlap, on the other hand, sidesteps this problem by holding that the foster is indeed a maximal organism in its own right—not merely a part of the grávida. Yet, unlike the containment view, overlap does not require the foster to be topologically separate or isolated to be maximal. It allows us to see the foster and the grávida as two genetically distinct units of evolutionary selection, granting the foster an independent trajectory, while also acknowledging evidence of deep physical integration (Grose 2020; Kingma 2019).

### **Lichen Symbiosis: A Biological Precedent for Overlap**

The overlap view can be strengthened by pointing to analogous cases in nature where two distinct organisms maintain separate identities while deeply physiologically integrated through shared structures. Lichens provide a paradigmatic example. As Spribille et al. (2022) explain, lichens are “symbiotic outcomes of open, interspecies relationships” between a fungus (mycobiont) and a photosynthetic alga or cyanobacterium (photobiont). This relationship exhibits the same structural features as pregnancy’s overlap.

First, both involve deep physiological integration creating unified functional structures. The photobiont exports carbohydrates in the form of polyols to the fungus, while the fungus provides protection and shelter (Spribille et al. 2022). Together, they form the lichen thallus—a phenotypic structure that exists only in symbiosis and that neither organism can achieve independently. Second, and most crucially, both maintain genetic and evolutionary independence. Each lichen symbiont retains its own genome, capacity for sexual reproduction, and ability to occur free-living. As Spribille et al. (2022) note, each symbiont species maintains a “portfolio” of symbiosis trading partners, with fungal and algal symbionts capable of dissociating and joining different partners despite their deep metabolic integration.

This capacity for dissociation and reassociation distinguishes overlap relationships from part-whole relationships. An organ cannot dissociate from its organism and join another; it depends entirely on the whole for its existence and function. But in overlap relationships, deep integration does not collapse the distinction between individuals. Lichens thus demonstrate that the overlap view is neither metaphysically impossible nor biologically incoherent. Of course, this analogy has important limits. Unlike lichen symbionts, the placenta cannot dissociate and rejoin another organism—it is time-indexed and expires by design. But this limitation does not take away from this point this analogy serves. Lichen serves as an example that deep physiological integration does not entail permanent mereological incorporation or metaphysical fusion. Pregnancy achieves this through temporal structure and genetic distinctiveness rather than reversibility, but both cases serve to show that overlap is biologically coherent.

### **Phenomenological and societal advantages**

Beyond the biological and mereological arguments presented thus far, the overlap view gains independent support from the phenomenological experience of pregnancy itself. Pregnant individuals widely report an experience of ambiguous identity captured in the phrase “not one, but not two” (Sidzinska 2017). This is not merely poetic language but a description of lived embodiment that resists the binary categories of containment and parthood. The pregnant subject does not typically experience the foster as a wholly foreign object contained within their body, nor do they experience it as simply another organ or body part. Instead, pregnancy involves a distinctive splitting or doubling of subjectivity—a sense of being simultaneously unified with and distinct from the foster.

Sidzinska (2017) identifies this as a core phenomenological paradox that challenges traditional metaphysical frameworks. Drawing on Imogen Tyler's (2000) testimony, she notes that the pregnant individual experiences themselves as "both one and the other. And I am equally neither one nor the other." This is a logical impossibility within the subject-object dichotomy that structures Western metaphysics. Sidzinska (2017) emphasizes the pregnant subject's unique epistemic authority: only the pregnant person can testify to this splitting of subjectivity from the inside. No external observer, regardless of biological instruments or medical imaging, can access this first-person dimension. While processual ontologies that emphasize becoming over being can help address the paradox, Sidzinska (2017) argues they remain insufficient. Pregnancy demands an ontology that includes subjectivity and can account for the paradoxical co-constitution of self and other—not a temporal sequence of first one, then two, but a sustained ambiguity persisting throughout gestation.

Lee (2023) provides a detailed phenomenological analysis specifying the factors that generate this "not one, not two" experience. First, there is the lack of spatial difference: the foster exists within the gravida in a way no other "other" does, creating a unique intimacy that blurs boundaries between self and other. Second, the gravida's direct and immediate impact on the foster—their choices about food, rest, and emotional states affect foster development profoundly, creating a sense of responsibility and connection beyond caring for an external dependent. Third, and perhaps most strikingly, there is the ambiguity of ownership in felt movements. The pregnant individual experiences foster's movements as "wholly mine, completely within me"—occurring in their body, felt from the inside—yet simultaneously recognizes them as the foster's movements, not their own voluntary actions. Whose movements are these? The answer cannot be simply "mine" or "the foster's" but must somehow be both. Fourth, Lee (2023) describes the

pregnant subject as “de-centered, split, or doubled,” experiencing a redoubling of the body and a separation and coexistence of self and other that is constitutive of pregnant embodiment rather than pathological.

The overlap view captures this phenomenological structure in a way that containment and parthood cannot. Containment, by insisting on the foster as wholly separate, denies the deep integration and co-constitution that pregnant individuals report. It cannot account for why the foster’s movements feel “wholly mine, completely within me” or why boundaries feel permeable rather than fixed. Parthood, conversely, captures integration but fails to honor the foster’s distinctness and the continued sense of the gravida’s individual identity. If the foster were truly a proper part like an organ, one would not experience the splitting or doubling that Sidzinska (2017) and Lee (2023) describe. The overlap view provides a mereological structure that mirrors the phenomenological structure: two distinct maximal organisms sharing physical structures through the placenta. This is precisely what it feels like to be “not one, not two” simultaneously unified and distinct, with boundaries that are real but permeable, experiencing both self and other.

However, we must acknowledge complications. Baron (2018) has argued that the “public fetus”—constructed through medical imaging, legal discourse, and cultural narratives—can distort the pregnant person’s authentic experience. Patriarchal medicine has historically framed pregnancy in ways that prioritize the foster’s interests over the gravida’s autonomy, potentially shaping how pregnant individuals interpret their embodied experience. We must therefore distinguish between culturally mediated representations and phenomenologically lived reality. Additionally, not all pregnant people report the “splitting” experience uniformly; some describe fusion, others distance or alienation, particularly in unwanted pregnancies or complications.

Nevertheless, the recurrence of the attested “not one, not two” experience suggests it reflects genuine ontological features rather than mere cultural construction. The overlap view, by honoring both biological facts and phenomenological reality, provides legitimacy at the level of lived experience—respecting the epistemic authority of those who alone have access to pregnancy’s first-person dimension.

### **A Note on Substantial Form**

A Thomistic reader might worry that if the foster possesses its own substantial form (marking it as a complete individual, not a mere part), the overlap view does not change the metaphysical picture. The answer is straightforward: overlap is orthogonal to the form-matter debate. Sharing a proper part is compatible with both entities possessing independent substantial forms. One might object: if the gravida’s substantial form organizes their body, how can the foster’s form also organize the same placental matter? The answer lies in examining what substantial form does—it directs matter toward an organism’s characteristic operation and goals. The placenta is precisely a structure that serves both the gravida’s and foster’s operations by supporting the gravida’s hormonal regulation and the foster’s development. Both forms can organize the same matter of the placenta due to the fact that the placenta is genuinely oriented toward both organisms’ ends.

## Objections and Replies

In this section, I explain and address several possible critical objections to the overlap view. These challenges seek to expose any potential metaphysical instabilities in a model that allows two maximal organisms to overlap and share a proper part, questioning whether this framework can maintain distinct identities or collapse under inspection. By engaging with these objections, I intend to show that overlap is not a messy compromise between containment and parthood, but a thorough reflection of the unique biological reality of pregnancy.

### **The ‘Parasite’ Objection**

One objection that can be applied to an overlap view is the ‘parasite’ objection, which also applies to parthood. One may object that if we define two entities as overlapping because they share physical tissue or exchange genetic material, then we would be forced into an absurd mereological expansion. If the criteria for overlap are merely physical interpenetration or integration, then parasites or even pathogenic viruses could be considered to overlap with or share parts of their host. This objection suggests that the overlap view would fail to distinguish between pregnancy, a fundamental species-sustaining reproductive process, and parasitic interactions, a destructive external pathology.

The counter to this objection lies in the distinction between the intrusive, one-sided overlap of parasitism and the constitutive, developmental overlap of pregnancy. In parasitism, an external agent enters the host to exploit its resources, with no benefit to the host as an individual or to its species. In pregnancy, the shared part of the placenta is co-constructed by both the gravida and the foster (Herrick and Bordoni 2023). The chimeric identity does not arise from exploitation but from the intentional, species-typical developmental program of both individuals

involved (Takeshita 2017). Furthermore, the integration process of parasites is fundamentally different from that of the foster. While the presence of a parasite is typically met with an antagonistic immune response aimed at expelling the intruder, in pregnancy, the gravida's immune system undergoes a structured, active reconfiguration to facilitate the foster's presence (Grose 2020; Takeshita 2017). This immunological tolerance illustrates the difference between the two types of integration. We can distinguish the shared part of the placenta from pathogens by examining their origins and host responses: the placenta is a cooperative reproductive investment central to the life cycles of both individuals involved, while a parasite is a different species acting only in its own interest against the functional unity of the host.

### **The 'Missing Piece' Objection**

Another possible objection concerns the transition at birth, when the placenta is separated from both the gravida and the foster. If the placenta is a proper shared part (*Z*) of both the gravida and the foster, then a standard mereological analysis would suggest that upon delivery of the placenta, both individuals should be considered 'incomplete' or 'missing a piece'. Some critics may argue that, since we do not consider humans to be incomplete after the umbilical cord is severed and the placenta is delivered, the overlap theory is incorrect, and that the placenta must never have been a proper part of either.

This objection misunderstands how substance metaphysics handles temporary parts. In classical substance ontology, mereological composition is time-indexed: a substance can have different proper parts at different times without threatening its wholeness or identity. At *T*<sub>1</sub> (during pregnancy), the gravida's mereological composition includes the placenta as a proper part. At *T*<sub>2</sub> (postpartum), the gravida's composition no longer includes it. This is not

‘incompleteness’ but simply a change in mereological constitution over time—a phenomenon perfectly coherent within substance metaphysics.

The placenta’s separation is not an arbitrary loss but follows from its biological design. Natural selection has engineered the placenta as a structure with a genetically programmed finite lifespan, designed to bifurcate at birth. Unlike permanent organs such as the heart or liver, which are structured to persist throughout an organism’s life, the placenta’s functional architecture includes its own dissolution as a constitutive feature—coming away according to its developmental program.

Substance metaphysics already accommodates temporary parts without difficulty. A deciduous tree has leaves as proper parts in summer but not in winter; a crab regenerates lost limbs that were once proper parts but are no longer present. In neither case do we consider the organism ‘incomplete’ when the temporary part is absent—we simply recognize that parthood relations can change over time while the substance maintains its integrity. The placenta is a temporary shared part whose presence during gestation and absence after birth pose no novel metaphysical problem for the overlap view.

### **The ‘Mereological Clarity’ Objection**

A final objection targets a possible metaphysical ambiguity of an overlap model. It could be argued that, if biological boundaries are blurred by the migration of cells from the foster into the gravida’s body and the fusion of tissue from the gravida and foster at the placenta, we lose the capacity to precisely define where one individual ends and another begins. This perceived mereological vagueness could be portrayed as a fatal flaw, rendering the model useless for application in fields such as medicine or law that rely on the clean demarcation of individuals

(Baron 2018). It may arise that without a clear bona fide boundary, we end up lost in vague metaphysics that complicates the status of both parties.

However, this critique presupposes that preconceived metaphysics must guide our reality, rather than the other way around. Instead of forcing biological and phenomenological experience into an artificial model for the sake of simplicity, our metaphysical model should be guided by and rooted in phenomenological and biological accuracy (Tyler 2000). Pregnancy is characterized precisely by this ambiguity, a state of being “not one, but not two” (Sidzinska 2017). To insist on either mere containment or mere parthood simply to provide a cleaner and easier boundary is to ignore the actual reality of the pregnant body. The ‘messiness’ of overlap is not a failure of theory but a reflection of biological and experiential truth, of physical, functional, and metabolic integration. By acknowledging this complexity, we can move toward practices that uphold the gravida’s autonomy as more than a mere container and the foster’s presence as more than a mere part, but both as active participants in a complex interconnected process. Our metaphysics must accommodate the unique reality of gestation rather than requiring it to conform to our conceptual

## Conclusion

In this paper I have explored the relatively under-discussed mereological status of the pregnant body, considering the established perceived binary of the containment and parthood views. By reconstructing the biological and metaphysical arguments for containment—grounded in Aristotelian substance ontology, Thomistic form, and evolutionary theory—I have shown this model successfully identifies the foster’s status as a distinct organism, but does not account for the deep physiological integration that characterizes gestation (Smith and Brogaard 2003; Toner 2025; Grose 2020). Conversely, while parthood correctly acknowledges this integration through biological evidence, it struggles to maintain the foster’s independent evolutionary trajectory and genetic identity (Kingma 2018; 2019).

I have argued that this perceived binary represents a false dichotomy and that an overlap view grants a more comprehensive metaphysical framework. By identifying the placenta as a shared part of both the gravida and foster, we can reconcile the biological reality of two individuals with the fact of their physical and functional fusion (Geddes 2022; Burton and Fowden 2015). Through the lens of partial overlap, we can see pregnancy not as a state of containment or parthood, but a unique phenomenon of joint growth and co-constitution. Our metaphysics must shift to accommodate this reality, recognizing that the boundaries of individuality during pregnancy are not rigid barriers, but dynamic spaces of interconnection. By establishing the overlap view’s metaphysical coherence through biological, mereological, and phenomenological evidence, we create a foundation for future work addressing the practical implications this framework holds for medical ethics, the moral status of the foster, and debates surrounding reproductive autonomy and the ethics of elective abortion.

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