



Schrödinger's Fetus and Relational Ontology: Reconciling Three Contradictory Intuitions in Abortion Debates

Stephen R. Milford^{1,2} · David Shaw^{2,3}

Accepted: 5 October 2023 / Published online: 17 October 2023
© The Author(s) 2023

Abstract

Pro-life and pro-choice advocates battle for rational dominance in abortion debates. Yet, public polling (and general legal opinion) demonstrates the public's preference for the middle ground: that abortions are acceptable in certain circumstances and during early pregnancy. Implicit in this, are two contradictory intuitions: (1) that we were all early fetuses, and (2) abortion kills no one. To hold these positions together, Harman and Räsänen have argued for the Actual Future Principle (AFP) which distinguishes between fetuses that will develop into persons and those that will never develop into persons. However intellectually ingenious their solutions are, they fail to account for a third intuition: that the death of a wanted fetus – e.g. through termination or miscarriage – is of moral significance. Not only is this practically important, but it is also supported by public opinion. The authors of this paper argue that relational ontology can modify the AFP to better account for all three intuitions. Furthermore, it further emphasizes the pivotal role of the pregnant person who relates to their own fetus in either personal or impersonal ways. Addressing the fundamental challenges of relational ontology, the authors defend the position that human personal identity is ultimately relational.

Keywords Abortion · Conservative vs liberal · Harman Actual Future Principle · Räsänen · Biomedical ethics · Human value and dignity

1 Introduction

Abortion remains a divisive topic. Very recently the US Supreme Court overturned the well-established precedent of *Roe v. Wade*, arguing that abortion is not a US federal constitutional issue, but a matter for states to decide. Consequently, as many as 23 US states are in

✉ Stephen R. Milford
milford.stephen@gmail.com

¹ Department of Theology, North-West University, Potchefstroom, South Africa

² Institute for Biomedical Ethics, Basel University, Basel, Switzerland

³ Maastricht University, Maastricht, Netherlands

the process of banning abortion outright (Sullivan and Gourlay 2022). Recent procedural and juridical changes to abortion laws have generated protest marches and even presidential interventions, highlighting the continued strength of feeling between pro-life and pro-choice advocates.

Vying for dominance, these two elephants rage against each other and, as the Swahili adage goes: When two elephants fight, it is the grass that suffers. In this case, the grass refers to those who hold the middle ground, a position affirmed both in law and ongoing public opinion surveys that have been stable for over three decades (YouGov 2022b; 2022a; Pew Research Centre 2022). This middle ground asserts abortion as morally permissible, but not in all cases.

On the whole, the middle position is not well regarded amongst many philosophers in either pro-life or pro-choice camps. Such philosophers can respect each other's views for their consistency, but berate the middle for its apparent contradiction (Langerak 2014, 84–85). Consequently, the middle requires a normative framework to philosophically defend itself from the elephants on either side. In defense of the middle position, Elizabeth Harman has put forward her *Actual Future Principle* (AFP) model. This has been taken further by Joonas Räsänen's model based on *Schrödinger's Cat*. Harman and Räsänen attempt to make sense of two contradictory intuitions held by the middle: first, that abortion kills no-one and is therefore amoral (neither right nor wrong). Second, that we were all early fetuses and that it would have been wrong to have harmed us. As we will shortly see, while philosophically sophisticated, Harman and Räsänen's fetal models have been subjected to legitimate criticism.

Rather than dismiss these models outright, it may be useful to interpret them through the lens of the literature on pregnancy loss, especially if this literature is itself slightly re-interpreted. The literature on pregnancy loss highlights a third intuition not considered by Harman and Räsänen, but which affects many pregnant people: That the loss of a wanted pregnancy has moral significance. It is our proposition here that reading the AFP model and Schrödinger's Fetus model through the lens of a relational ontological approach to the literature on pregnancy loss can provide further support for the legitimacy of the middle position.

2 The First Model: The Actual Future Principle

The rights of care and protection – which ultimately ground a right to life (Stone 1987, 822) – are not aimless rights. They are directed to a very specific object: a person or group of persons. Accordingly, for there to be a right to life, there must be a person to which it is applicable. This is self-evident and widely accepted (Lockwood 1988, 199; Manninen 2014, 196; Stone 1987, 822). Disagreement arises, however, in regard to what exactly comprises a person and when a person comes into existence.

According to Frias and Struchiner, the U.S. public tend to be essentialist (Frias and Struchiner 2013, 37). That is to say, ordinary people tend to believe that an object has an unchangeable underlying reality that exists from the moment the object exists. This essence may not be observed directly, but it gives the object its enduring identity and is discovered, not acquired, by human beings. In this sense, essentialism is a substantive position that understands personhood to be a substantive, non-divisible part of a being that entails their

personhood and endures throughout their existence (Milford 2018). In this view, human beings – from conception – are persons. Frias and Struhiner's contention that the public holds this view, is, however, questionable. After all, it would support an ultra-pro-life view on abortion (that abortion is always morally reprehensible), and this is not supported by public polling.

For those who hold to a non-essentialist view, the 'Standard View' (Olson 1997, 95) asserts that personhood is associated with certain psychological characteristics (Feinberg 1981, 145; Lockwood 1988, 199; Manninen 2014, 191–93; Stone 1987, 823–28; Harman 1999, 313 fn. 3). Consider Locke:

...to find wherein personal identity consists, we must consider what PERSON stands for; which, I think, is a thinking intelligent being, that has reason and reflection, and can consider itself as itself, the same thinking thing, in different times and places; which it does only by that consciousness which is inseparable from thinking... and as far as this consciousness can be extended backwards to any past action or thought, so far reaches the identity of that person [original emphasis]. (Locke 2004)

Here the major psychological characteristics associated with personhood are rationality and self-reflective consciousness. Note how Locke ends his description of personal identity by referring to the backward most reach of individual consciousness as the starting point for personal identity. Prior to this point, so Locke contends, no actual person exists, only a potential person. The perennial debates surrounding abortion have often focused on the moral status of potentialities versus actualities. There is no need to engage these extensively here. Some argue that early fetuses have an identity preserving potentiality (Hare 1988, 217–18; Lockwood 1988, 205; Manninen 2014; Stone 1987), while others argue that potentiality has little or no moral status (Singer 1993; Boonin 2003; Feinberg 1981). The debates are often fierce and uncompromising. The attempt to recognize the middle position in the face of these two mutually exclusive views drives the work of Harman, and that of Räsänen.

Their work is a continuation of Feinberg's propositions. Feinberg famously stated: 'Without awareness, expectation, belief, desire, aim, and purpose, a being can have no interests; without interests he cannot be benefited; without the capacity to be a beneficiary, he can have no rights' (Feinberg 1981, 145). The consequence of Feinberg's position is that without the actual possession of certain psychological characteristics, a being cannot be a person and cannot have certain rights.

Feinberg shifts the focus away from essentialist constructions and the moral status of pure potentialism, to the interests of actual individual beings. It is, in Lockwood's words, an 'obvious' (Lockwood 1988, 199) solution. For rights to exist, they must be grounded in the interests of actual persons, even if these persons are to exist in the future. Where there is no person (now or in the future) to benefit from the right to life, there is no right to life.

Consequently, the question: 'When does the potentiality of developing X (say, personhood) matter morally?' Is answered with: 'Only where there is some individual for whom the development of the potential for X constitutes a benefit' (Hare 1988, 199). Since abortion guarantees that no such person will ever exist, it also guarantees that no right to life ever existed. The termination of a pregnancy has done no harm to a human person because there was no human person who could either be benefited from the continuation of the pregnancy, nor harmed by its cessation.

This approach is not without criticism. For one thing, it leads to the strange counter-intuitive consequence that one can harm a fetus through poor care but not through termination (Stone 1987, 820–23). More seriously, taken to its extreme, it is the basis upon which authors such as Tooley are ultimately able to justify infanticide (Tooley 1972 cf. Glover 1990, Chap. 12; Hare 1975, 216–17; Kuhse and Singer 1985; Singer 1979), a position that is widely criticized.¹

A modification of Fienberg's approach is presented in Elizabeth Harman's Actual Future Principle (AFP) theory (Harman 1999). Harman, like many, considers fetuses to be potential persons and not actual persons. She considers personhood to be the procession of certain psychological properties (Harman 1999, 312 fn. 3). However, unlike authors such as Fienberg or Tooley – who ascribe moral status purely on the base of actuality – Harman seeks to coherently affirm that some fetuses are the legitimate object of rights to care and protection; that they are the kinds of things it would be morally wrong to kill; and that it is understandable that a women would find abortion difficult (and possibly regrettable) even though they do not regret the decision to abort. At the same time, Harman would like to affirm what she calls the very liberal view: that there is nothing morally significant about abortion, and that a terminated fetus has/had no moral status. These two affirmations appear contradictory.

Harman believes a reconciliation can be achieved through a timeless notion of personhood. She argues that one intuitively assumes: 'For any two early fetuses at the same stage of development and in the same health, either both have the same moral status [as a person] or neither does' (Harman 1999, 311). Harman categorically rejects this assumption. To her, only a fetus that will actually develop into a person has moral status. An 'early fetus that will die while it is still an early fetus has no moral status' (Harman 1999, 311). It is the actual future of the fetus – as opposed to its potential future – that determines its moral status here and now.

Consequently, two early fetuses in the same stage of development do not have congruent moral status. One is legitimately the subject of rights, while the other will never develop into a person and therefore has no rights. Of course, this begs the question: How do we know which one is which?

Harman deals with this question head on. She argues that once the decision to terminate or not terminate a pregnancy has taken place, the actual future – or non-future – of the early fetus is assured. The very act of deciding for an abortion or not reveals the future or non-future of the fetus, and thereby its moral status.

As one can imagine, Harman's position has not gone unchallenged.² On the whole, however, Harman's critics hold strict pro-life stances. To be fair, some of the criticism is not entirely unjustified in that there appears *prima facie* a disconnect between what Harman sets out to do and what she ultimately affirms. In the introduction of her work, she set out to establish a middle position that affirms both the legitimacy of abortion and the value of

¹ For an example of a heated debate on this topic consider the paper written by Giubilini and Minerva effectively advocating 'after-birth abortion' leading to a symposium in the journal *Monash bioethics Review*, and a number of defence and responses (Giubilini and Minerva, 2013). It is noteworthy that Räsänen defends the position of Giubilini and Minerva in this debate. For those seemingly in support see: (Kuhse 2012, 2013; Tooley 2013; Räsänen 2016; 2018). For those against see: (Kaczor 2018; Rodger, Blackshaw, and Wilcox 2018; Blackshaw and Rodger 2019).

² Due to the sensitive nature of the argument, Harman's work received much media attention, particularly in conservative media whose critique was often unjustified and personal (Cleveland 2017; Spielman 2012; Vallicella 2016).

certain fetuses. However, toward the end of her article she argues that ‘the actual Future Principle implies the very liberal view on abortion’ (Harman 1999, 320). Indeed, she argues that her approach is aimed at convincing moderates to adopt the very liberal view. Yet Harman’s conclusions can easily alienate moderates in that they justify abortion in all cases, but raise questions about a person’s decision to continue a pregnancy:

...because it [creating a person] is so morally significant, *and because there is a morally insignificant alternative*, the creation of a person should not be undertaken lightly. ...While there is nothing wrong with having an abortion on a whim, there is something gravely wrong with allowing a pregnancy to continue without moral deliberation. (Harman 1999, 323)

3 The Second Model: Schrödinger’s Fetus

Since Harman’s conclusions are hardly palatable for moderates, it is no wonder they have received ‘rabid criticism’ (Räsänen 2019). Yet, Räsänen believes that discarding Harman’s AFP is counterproductive. Rather, he contends for a slight reinterpretation of Harman’s view so as to find common ground between pro-life and pro-choice campaigners.

Räsänen argues that the ‘standard fetus’ model (that a fetus is either *someone* or *something*) is problematic to both pro-life and pro-choice camps. Pro-life campaigners must contend with the challenges of miscarriage, while pro-choice advocates must wrestle with the fact that we have all been early fetuses at some point, all the while claiming that abortion kills no one (Räsänen 2019, 125–26). To Räsänen, the solution is found in his Schrödinger’s Fetus model.

In Schrödinger’s famous 1935 gambit he posits a cat locked in a steel chamber with a device that would kill the cat at an unknown time. Schrödinger argued that until the chamber was opened, and the cat observed, the cat appeared to be in a superposition of being both alive and dead simultaneously. It is the observation that causes the collapse of this superposition. Schrödinger was writing to Einstein to demonstrate the absurdity of what was being proposed in quantum mechanics at the time. However, in due course, many physicists have come to regard the gambit as accurate (Polkinghorne 1984).

Using Schrödinger’s gambit, Räsänen is able to claim (like Harman) that a fetus’s status as person is not necessarily known now. It depends on the future it will have, and that this cannot be determined until an actual event has occurred. In Schrödinger’s gambit, this event is the observation of the cat, while in Räsänen (and Harman) it may be the decision to terminate the pregnancy, or the event of a miscarriage. Räsänen’s approach modifies Harman’s very liberal stance, so that neither abortion nor carrying to term are morally opposed to each other. Within Räsänen’s model, just like Schrödinger’s, both positions may be maintained together: the early fetus is of no moral significance and at the same time is the type of being that it would be wrong to harm.

One of the fiercest critics of Räsänen is Blackshaw, who believes that both the AFP and Schrödinger’s Fetus models are seriously flawed. Blackshaw argues that Räsänen and Harman base their arguments for personal identity not on psychological features but on animalism. According to Blackshaw, this is evident in that Harman notes the continued biological

nature of human beings and in that Räsänen contends early fetus are persons if they will continue to develop into actual future persons. Blackshaw references Marquis' 'a future like ours' problem (implicit in animalism) as a counter argument to the moral irrelevance of abortion promoted by Räsänen and Harman. Blackshaw disagrees with Räsänen that it is a widely held view that early abortion kills no one, and further encourages both Räsänen and Harman to reject their intuition that we were once early fetuses (thereby rejecting animalism) in favor of a purely psychological account of personal identity. To Blackshaw, this would be a more convincing argument (Blackshaw 2020).

Setting aside the question of animalism, which does not automatically entail either that the 'future like ours' problem comes into play nor that abortion is immoral (Sauchelli 2018, 2019), one is unconvinced that the public generally believes an abortion kills a person. Blackshaw provides no evidence for this counter assumption to Räsänen's intuition. Considering that widespread public opinion polling may provide support for Räsänen and Harman's position it is difficult to see why they should surrender it. Polling indicates that the public is generally accepting of early fetal abortions. It is evident that the public is generally against killing people. Therefore, one may coherently conclude that the general public does not consider aborted early fetuses as persons who are killed.

Furthermore, it would be difficult to reject the widely held intuition that I was once an early fetus. Blackshaw himself acknowledges that 'it seems self-evident that this intuition is broadly accepted' (2020, 322). More than merely accepted, the intuition is deeply rooted in each of us. While I cannot remember being three years old, I was indeed three years old at one point, and likewise a new-born baby, and at one point an early fetus. The reference to *I* here, is a reference to a personal connection with these past states: the three-year-old is me, not some other entity. It is difficult to see why Harman or Räsänen should deny either that the public widely hold such an intuition, or that the intuition is legitimate.

Notwithstanding our objections to Blackshaw's criticism of Harman and Räsänen, there are serious questions about both the AFP and the Schrödinger's Fetus model. Most notable is their inability to explain the intuition that something of moral significance has taken place in the death of a wanted early fetus. Let us consider two scenarios which aptly demonstrate this point. The first – referenced by Räsänen – deals with a violent attacker who causes a miscarriage. Räsänen argues that the fetus that dies is not a person, and the attacker cannot be legally prosecuted on this ground *per se* (Räsänen 2019).

It is arguable that Räsänen is incorrect in this regard. Consider that in the United States, the *Unborn Victims of Violence Act* (2004) specifically recognizes an embryo or fetus at any stage of development as human and that it is possible for an early fetus to be the legal victim of a crime, including murder (exemptions are in place for abortions).³

The second scenario – referenced by Harman – deals with miscarriages in cases of a wanted fetus. Harman cites a couple who mourn the miscarriage of just such an early fetus. Harman affirms that it was legitimate for them to love the early fetus and to prepare for its arrival as long as they held the 'false belief' (1999, 316) that it would be carried to term. However, Harman contends that upon the miscarriage, it becomes apparent that the fetus was not in fact an appropriate object of love:

³ While we are talking here about a legal claim, murder refers to the killing of a specific being: a personal being, and not just any termination of life. No-one is convicted of murdering an animal.

...as it turns out, the fetus was not the beginning of their child; its entire existence lacked any moment of consciousness or experience. It turns out that the fetus did not have a moral status. The couple rightly recognize the miscarriage as a terrible thing that has happened to them; not only is it traumatic, but now they must start again in their attempt to have a child. However, they should also recognize that the death of the fetus should not be mourned – it should not be treated as the death of a morally significant being – because it turns out that the fetus lacked moral status. (Harman 1999, 316)

Räsänen or Harman's constructions are not accurate descriptions of the general intuitions held by the public. Their constructions display a shockingly low degree of empathy. Harman recognizes the trauma a couple experiences, but for seemingly unemphatic reasons. That the couple mourns the loss of their own hard work and time (i.e., they need to 'start again') does not capsize the full extent of their grief. In fact, it is arguable that Harman and Räsänen's positions increase suffering. The realization that the fetus never had any moral status seems pastorally unhelpful and intuitively more distressing. Thus, Harman and Räsänen's concern to alleviate the moral distress of those who willingly abort an early fetus appears to extract a price from those who are distressed at the unwanted loss of an early fetus.

Here we have uncovered a third important intuition not mentioned in either Harman's or Räsänen's arguments: that the unwanted death of an early fetus has moral significance. It speaks to the death of a person. Yet how is this possible? How is it that we intuitively feel that a person has died in the case of wanted pregnancies but not in the case of unwanted pregnancies?

While one can appreciate the concerns associated with an essentialist approach to personhood, is it possible that the psychological approach – an approach that necessitates the individual possession of certain psychological characteristics, is also lacking? If so, is there perhaps a third model that may justify the considered intuition (Tännsjö 2015, 12–17) of those who mourn the death of a person in cases of pregnancy loss?

4 A Third Model: Relational Ontology

...we cannot begin to tackle this perennial applied ethics issue [abortion] without first addressing the metaphysical quagmire of personal identity, for where one stands on this metaphysical issue may greatly influence when one thinks potential begins to matter when it comes to the human fetus. (Manninen 2014, 192)

Our discussions above have noted the Standard View of personal identity that ascribes human personhood on the basis of certain physical or psychological characteristics present in individual human beings. In this section we will present what we consider to be a better alternative: a relational ontological model. However, first we must address an important aspect of personal identity that is often overlooked in abortion debates. That is, personal identity speaks to a specific sense of identity among many senses of identity (Kelsey 2009, 334 ff.).

It is obvious that an object can have different identities at the same time. A wooden spoon, for example, has a wooden identity. It is identifiable in that it is made of wood. In this it shares part of its identity with other wooden objects. It also has a spoonish identity. In this sense it is akin to a metal spoon in its 'spoonish' identity but distinct in its metallic identity. We often speak of historical identity, cultural identity, gender identity etc. However, as the quotation given above indicates, when one speaks about identity in the context of abortion debates, one is primarily interested in a specific sense of identity: personal identity.

To speak of personal identity in this context is to speak of a different sense of identity than merely individuality or uniqueness. When we talk about fetal personal identity, we are not simply trying to identify the fetus out of a crowd of fetuses (its individual identity), or to describe the basic continuation of the fetus throughout its life (its enduring identity). We are not asking: 'Which fetus is John's?' or 'Who is the fetus really?' We are interested in that sense of identity that may (or may not) categorize the fetus as a person. This category of beings – personal beings – are evaluated to have universal, unqualified, and inalienable dignity and value. Consequently, members of the category of persons have certain rights (Kelsey 2009, 288–91). It is the ascription, or non-ascription, of these rights that interests us most in abortion debates, and therefore it is this sense of identity – personal identity – that is at question.

Some animalism authors, such as Olson (whom Harman positively references), propose a 'Biological View of personal identity' (Olson 1997, 106 cf. Harman 1999, 313 fn. 3). Olson attempts to argue that a human creature – as a biological organism – retains its personal identity throughout its life on the basis of its biological continuation, 'as other animals do' (Olson 1997, 106). He goes on to argue that while the personal identity may continue throughout the life career of the physical human organism, the organism is only a person as long as it retains certain psychological features (Olson 1997, 106). In this way, *person* is a phasal sortal; denoting a particular phase of a personal identity's career (see also McMahan 2002; 2014).

The Biological account raises many questions. Animalism uses a particular sense of identity that is not of primary interest within debates around abortion. Olson, in the context of asking if we were ever early fetuses (so as to address the question of abortion) claims that

we have our criterion of identity by virtue of being an organism and not by virtue of being people. What it takes for us to survive is the same throughout our careers: we persist, as other animals do, just in case our biological *lives* continue. (Olson 1997, 106 original emphasis)

Here Olson is clear that when he refers to personal identity, he is referring to that sense of identity that is responsible for the biological continuation of the organism. He speaks primarily about the individualistic or enduring identity of an organism when he speaks about personal identity. However, as we have noted, when deployed in abortion debates, the question of personal identity is a question of categorization and evaluation: can one categorize this identity (this fetus) as a personal identity and consequently evaluate it to have unqualified dignity?

Furthermore, Olson distinguishes between personal identity and personhood, arguing that one's personhood is solely based on mental activity or psychological features. He goes on to explain that even if our cerebrum was transplanted to another being (i.e. our psycho-

logical features were removed) the biological organism would continue. This is, naturally unobjectionable. However, Olson claims that the biological organism (not the psychological features) is responsible for the personal identity and that it is the personal identity that is 'us':

The person who ends up with your cerebrum in the "transplant" case could not be you, if you are an animal, for he is not the animal that you are. He does not have your biological life. (Olson 1997, 107)

Thus Olson claims that 'Psychology is *irrelevant* to personal identity...' (Olson 1997, 107 original emphasis). This raises a number of very serious questions. For example, 1) Who is the 'us' or 'me' in Olson's account. Is it the personal identity or is it the person? Olson seems to be indicating that the 'you' is the personal identity and that the person is not the basis of the 'you' 'me' or 'I'. This is highly perplexing. He is claiming that if your psychological features – your personhood in his construction (the very thing associated with your unqualified dignity and respect) – are transplanted to another body, you would continue to exist as a mindless body. Another mindless body (another 'I') would now have your consciousness, but it would not be you, it would be 'them'. 'You' and 'I' is predicated on the personal identity that is our biological body.

2) Consequently, what exactly is the relationship between one's personal identity and one's personhood? In Olson they are entirely different. Personhood refers to psychological features that (although rooted in the physical organism – neurons) can be entirely removed from the personal identity in question.

3) This further begs the question: what exactly is Olson referring to when he speaks of 'personal' in personal identity. If personal identity is not directly related to personhood (as it has traditionally been) and is solely in the biological continuity of the organism 'as other animals,' is he claiming that animals also have a 'personal identity'? This seems unlikely. Therefore, one may deduce that to Olson, personal identity has something to do with the uniqueness of the 'human animal' purely as a biological fact. This would imply that human DNA somehow is responsible for personal identity? If so, how? Why is it that human DNA is 'personal' but orangutan DNA is not?

In our opinion, the claim that personal identity has very little connection to personhood, that a being can have a personal identity without being a person or that the first and second person pronoun 'you' and 'I' are not directly associated with personhood, is incoherent. Authors who assert this appear to have missed the very purpose of the qualifier *personal* in *personal identity*.

When we ask the questions: 'Does an early fetus have a personal identity?' or 'Were we ever early fetuses?', we are not primarily concerned with our biological continuation, nor even our psychological continuation. We want to know if we can categorize the fetus within the category of persons in the same way we can categorize ourselves as persons or that a particular fetus is significantly linked to us as persons. Within the context of abortion debates, that our animal existence continues, or that we have or do not have certain psychological features, is only material insofar as it affects the question of our categorization as a person. While one can appreciate Olson's desire to distinguish between the biological continuation of an entity and the personhood (value) of a being, his understanding of the *personal* in personal identity is not well defined and leaves many questions unanswered.

Similarly there are other challenges with the Standard View of personhood. This view falls squarely within the substantive conception of personal identity, a conception held by authors such as Rodger, Blackshaw, Wilcox, and Kaczor, as well as Hershenov and Hershenov (Rodger, Blackshaw, and Wilcox 2018; Blackshaw and Rodger 2019; Kaczor 2018; Hershenov and Hershenov 2017). In brief: ‘The substance view claims that human beings are individual substances that are rational moral agents by nature’ (Blackshaw and Rodger 2019, 965). This view holds that the basis of personal identity is a substantive part of a being; that is to say, rooted within themselves as an essential feature of their nature. Over the years many characteristics have been suggested as the basis of this essential feature. Candidates such as rationality; morality; higher order thinking; self-reflection; and of course, consciousness.

Elsewhere, one of us has critiqued this view at length (Milford 2018, 2019). Among the most serious critiques levelled against this view is its questionable universality. There is simply no consensus as to what exact feature, or limited set of features, is sufficient to include a being into the category of *person* (Grenz 2007; Gunton 1993; McFarland 2001; Rudman 1997; Milford 2018). It is highly problematic that selected features are almost always dependent on specific cultural values. For example, the conception of a ‘rational being’ is often associated with a very Western view of rationality (Hall 1986).

Most problematic of all is that huge swathes of the human population do not hold these features (and certainly not to the same extent) throughout their lives; think, for example, of young children or the senile. In like fashion, when one says – as Harman does – that certain psychological features must be present for personhood, one is not precisely clear what features they are referring to, or to what extent they must be present. Defining consciousness has been difficult, let alone measuring it. Consequently, the substantive view cannot be the basis of personal categorization as it undermines a universality to humanity and is therefore directly in contradiction to its intended appeal (Milford 2019).

The last few decades have seen a shift in philosophical anthropology toward a relational view of personhood (Brown 1998; Engelhardt 1973; Macmurray 1995; McFadyen 1990; McFarland 2001; Shults 2003; Shutte 1984). In relational constructions, personhood is not viewed as a substantive element within an individual living human being, but a dynamic attribute rooted externally in the manner in which persons relate and are related to. The literature on this topic is vast and we have no intention of engaging in a comprehensive philosophical overview of it here. However, pertinent to our theme in this project is a school of thought derived from a postliberal view of anthropology, originating from Yale University.⁴

In his critically acclaimed work, *Eccentric Existence* (2009), the Yale Professor David Kelsey puts forward an eccentric rooting to personhood by arguing that personhood is, at its very core, a relational concept. A person becomes a person as they are related to in personal ways by other beings who are themselves so constructed. Within Kelsey’s model, *personal* comes before *person* and denotes the kinds of relationships an entity has (Kelsey 2009, 357–58). We are not substantively persons. That is to say, persons do not exist in isolation of other persons as a consequence of their independent possession of certain characteristics

⁴ The sources referenced in our project here on this topic mainly relate to theological anthropology. Although the existence of an engaged deity is assumed in the literature, this is not per se necessary to affirm a relational ontology. The Deity acts merely as the unmovable mover/first cause. Considering all constructions of personhood necessitate a starting/limiting point, there is no reason why a non-divine construction of relational ontology cannot be coherent. One need simply find an alternate first cause. We leave for others to debate the exact nature of this presupposition.

such as consciousness. Rather, persons are created as persons through their personal relationships. *Personal* qualifies identity in a particular way, calling attention to the distinctive sense of identity one is describing. If one uses this qualifier adverbially, then we speak about the particular relations certain creatures (such as humans) have with members of the class of persons (Kelsey 2009, 357–58).

It is these distinctive relationships that both recognize the inherent properties of a human being (substantive natures) and encapsulates humans into the community of persons (human and non-human). Engelhardt argues that this is exactly what is happening with new-born babies. Apart from some very vague resemblance, a new-born infant displays very few of the characteristics traditionally associated with the Standard View of personhood. Yet the infant plays the role of a person in the parent-child relationship. Here the infant is treated as a person in its own right and is thereby personalized by their parent.⁵ If this applies to an infant, why not also to an early fetus?

What is important in this construction is its 'ex-centric' view. Personhood is not internally rooted in an individual but is externally rooted in the community of persons. This construction, an active protest against the toxic individualism that has plagued the West since the Enlightenment, has been challenged by the Majority World. In their critique of individualism, collectivist proponents view person as the categorical marker that indicates the community to which a being belongs.⁶

Such relational understandings of personhood have been taken up by the literature on pregnancy loss – a phenomenon distinctly different to active fetal termination or miscarriage (Parsons 2010). Drawing attention to the often fetal-centric nature of abortion debates, writers in this field make use of a similar construction of personhood as those who explore relational ontology. In their socially constructed models, personhood is not used as a substantive sortal that denotes an intrinsic characteristic (as in the psychological account), nor the phase sortal of McMahan's Embodied Mind construction (McMahan 2002, 2014), but is externally rooted in the decisions and activities of the pregnant person.

For example, Chambers argues that 'a being who may not otherwise have moral status on its own can come to have some moral standing in virtue of someone else's decision or activity' (Chambers 2020, 952). In Chamber's discussion on pregnancy, if someone actively decides to embark on the activity of 'person-creation' (Chambers 2020, 953) they imbue the relevant fetal identity with personhood: 'An early fetus has moral standing in relation to another person when it is also that person's productive end' (Chambers 2020, 958).

In the context of pregnancy loss, fetal personal identity is not intrinsic to the fetus, but is 'determined by an entity's place in a history or network of relationships with other moral beings' (Chambers 2020, 951 fn.6). It is argued that such a social focus can more readily include those human beings who may lack certain substantial or phasal features often associated with individualistic accounts of personhood, into the community of persons (Chambers 2020). Fetuses are beings who are 'called into personhood' (Lindemann 2013 cf. McFadyen

⁵ It should be noted that Engelhardt does not have a fully developed relational ontology, and person may be here interpreted as a role or social office that imbues the being with value and dignity (Engelhardt 1973, 23).

⁶ The debate between collectivism and individualism is extensive. We see no need to engage in that here. Like many debates, it is most likely that neither side is wholly right or wrong. Both have something to contribute to our understanding of human being. Here we draw on the positives of collectivism while being conscious of the challenges.

1990) and therefore ‘needn’t be considered persons in their own right because their personal identity can be held for them by others’ (Chambers 2020, 951 fn.6).

At this point one should note an important distinction between a social construction of human personhood, and our proposed relational ontological construction. Within the social construction, the fetus is not considered a person in its own right. Consider this quote from Chambers:

...once the decision is made [to keep the foetus] one is not always free to change their mind. While there may be reasons to drop the person creation activity... Creating a person is a serious endeavor... To stop creating the person you purposefully set out to create, for no reason at all, or for a reason that doesn’t reflect the value of what you’re creating, looks like a kind of moral mistake. That mistake might not, in the end, be person-affecting, but it is still a mistake about persons and their value. (2020, 960)

Here Chambers notes that something of moral significance has taken place with the termination of the person creating activity. However, that action has not affected an actual person (the fetus). Wright goes so far as to claim that ‘the gestating being has no claims or rights to the world into which he or she may be born until he or she is born’ (2018, 148). For authors like these, personhood is a social construct that may be given and taken. The personhood of an early fetus may be held loosely and temporarily within the community as long as the fetus retains a potentiality to one day become a person. Where its potentiality is irrevocably thwarted (such as in miscarriage, or pregnancy loss), its actuality *qua* person becomes doubtful. In this sense, authors who speak on pregnancy loss are very close to the position taken by Harman and Räsänen. A lost wanted fetus was never a person (actual or potential).

Relational ontology, however, makes a stronger claim. While recognizing a social element to personhood, this model considers relationships as far more fundamental to the ontological basis of an entity, not just a personal entity. Consider the concept of coordinates on a grid. While a single coordinate may exist as a physical dot of ink on paper, it can only exist as a coordinate in relation to other coordinates. Strictly speaking there is no such thing as a single coordinate. In this example, a coordinate’s relationship to other dots on the paper is ontologically fundamental to its identity *qua* being a coordinate (Gunton 1993, 71–73). The same is true for other entities: parents need children to be parents, a queen needs a respective country, a winning athlete needs a respective losing athlete. In like fashion, while a being may be physically a living human organism (it has human DNA and is a member of a certain species), the notion of it being a person is, at its core, relational one.

There are good philosophical grounds for this stronger claim. Refraining from a detailed critical analysis of two and half thousand years of philosophy – as Shults has eloquently done (Shults 2003) – we might note that before Kant, philosophers tended to emphasize the essence (substance) of beings rather than their relationship to other beings. Kant, however, recognized that one can only speak of an entity as it appears to the observer (phenomena) but not strictly speaking of the entity itself (noumena). On this basis Kant proposed a reversal of the importance of human subjectivity and the objective world. To Kant, it is the human subject itself that provides structural categories by which objects appear (as phenomena) in consciousness. In Kant’s Table of Categories (a revision of the Aristotelian categories), he subverts substances into his third category – Of Relation – and in the process elevates relationality out of the Aristotelian category of Quantity.

Kant's revisions set the stage for Hegel and later philosophers to re-evaluate the nature of relationality and being. Hegel challenged the traditional separation of the categories of substance and accident, and insisted that the phenomena of relationality is essential, not only to the reflective movement of knowledge, but to being itself. This challenge greatly influenced philosophers from Kierkegaard, and Heidegger, right through to Whitehead who postulated process (essentially a non-substantive relational concept) as one of the defining characters of being.

This turn to relationality shaped the way philosophers understand the very nature of being. The human person is no longer understood as an 'individual substance of a rational nature' (Boethius), but as always, and already, embedded in relations between itself, others, and the world around them. Consequently, philosophers such as Buber (in his seminar understanding of human personalism) have argued that the 'between' of 'I and Thou', is itself constitutive for personhood.

In Buber, it is not that *I* stands in relation to *Thou* as an independent subject divorced from either the *Thou* or 'between.' Rather *I* is only *I* in the 'between' of *I* and *Thou* (Buber 1970). It is arguable that authors such as Kelsey (2009), Grenz (2007), McFayden (McFadyen 1990), and Shults understand human personhood as being constituted in the 'between' of *I* and *Thou*, and consequently *I* and *Thee*. That I am a person is predicated on the 'between' of you and me. It is only between you and me, that I am formed and recognized as a person. In the same way, the fetus *qua* person is only person in the 'between' of parent and child.

It must, however, always be borne in mind that here we are speaking about a particular sense of identity: personal identity. We are here only talking about that aspect of an entity's identity that categorizes that entity as a person - not those aspects that identify the entity in another sense. The individual identity (uniqueness), biological, or numerical identity of the entity do not speak to the entity's categorization as a person, nor are they necessarily constructed relationally ontologically.

The stronger view implied by ontological relationality of personhood goes beyond the social construction. It argues that for as long as the fetus was/is constituted as that living entity that was/is in personal relation to the parent, it was/is a person – an actual person. Its personhood is not constituted by its potentiality to one day become something else, or its actual accidental features such as DNA, rationality or self-consciousness. Rather, its personal identity is constituted in the 'between' of it and its parent.

5 Some Possible Objections

It is possible to raise some objections to a relational ontological approach to fetal personal identity. Objections could focus on the types of relationships that count as personal; the kinds of beings that can be personalized; and the implications for depersonalizing relationships. One of us has dealt with these, and other objections, in depth elsewhere (Milford 2020). Nevertheless, it is important that we briefly note some of the key objections here as they relate directly to fetal personal identity.

The first objection, and perhaps the most serious, is the implied problematic subjectivity. That a person may simply personalize another being (thereby including it into the category of *persons*, and granting it unqualified dignity and value), is problematic on two accounts. A) beings not traditionally associated with personhood may be arbitrarily assigned this cat-

egorical marker. This may be the case, for example, of Sandra the Orangutan from Buenos Aires zoo (a legal non-human person), or even cats and dogs in the Town of Trigueros del Valle in Spain who have been granted the status of non-human citizens (Milford 2020; Bawden 2014; Dawber 2015). Indeed, it is arguable that the Non-Human Rights Project is attempting to do just this.

B), where personhood is assigned (as opposed to recognized) it may be de-assigned – with devastating consequences. We think, for example, of slavery or genocide, whose horrific crimes can arguably be attributed to the failure to recognize certain groups as being part of the community of human persons.

To address part A, one must note that not all entities can be personalized. It is absurd to think of plants or rocks as possible persons. Only beings with certain historical lineage (e.g., *homo Sapiens* or perhaps a certain extraterrestrial species), and whose membership on the whole displays personalizing relationality can be personalized. To go beyond these boundaries is to stretch personal relationality in inappropriate ways. The consequence is either the demoting of persons everywhere, or the promoting of non-persons (such as plants) beyond what is fitting.⁷ In both cases, the consequence is to jeopardize the concept of unqualified dignity, and the notion that certain beings (most notably living human beings) have rights that must be respected.

With regard to part B of the objection, a distinction must be made between relational ontology and a social construction of personhood. As noted above, a social construction of personal identity contends that personhood may be held loosely by other persons temporarily. The implication being that an entity's identity *qua* personhood is transitory, temporary and transferable.

The stronger claim made by a relational ontological model is that the distinctive relationships that define an entity as it develops are ontologically constitutive for the remainder of its living existence. Just as it is impossible to remove the nutrients from a living organism once it has incorporated them into its being without destroying the organism, it is impossible to undo the personal relationships that formed a person. Naturally, one recognizes the tragedy of a break in personal relationship (both individually and communally), nevertheless, this does not ontologically depersonalize a person. While the person may (and many are) be treated as a non-person, ontologically they remain a person. It is for this reason that the depersonalizing of individuals and groups of people – as is the case with slavery or genocide – is always wrong.

A second objection to a relational ontological approach may be the implied circularity: Persons are created by persons who are created by persons. This leads to an apparently absurd never-ending regression whereby we posit persons upon persons (Harris 1998). While at first appearing as a *reductio ad absurdum* argument, it should not be dismissed out of hand. First, the same *reductio ad absurdum* argument can be made about any view of personhood, even the substantive and biological. No matter what basis we claim for the foundation of personhood, it remains the case that only persons create persons. Merely the mechanism changes.

Furthermore, this particular *reductio ad absurdum* only applies if too broad a perspective is considered, in which case it would apply universally to all existence. Animals give rise to their own kind in a never-ending circularity: the chicken giving rise to an egg giving rise to a

⁷ As is the case of the Gene Technology Act 2004, passed in Switzerland, which effectively states that plants have dignity (Harmon 2009).

chicken. Even when evolutionary biology – that extends over millions of years – is included, one can argue that it is life (reptiles) that gives rise to life (avians), chemicals giving rise to chemicals, matter to matter etc.

If, however, we constrain our discussion to the topic at hand (the early fetus), no such circularity is implied. Our question is: when does a person come into being? The answer (within a relational ontological framework) is: When a suitable being is personally related to by a person. The most natural personal relationship here being that of the pregnant person to their own fetus.

A final objection of note is that a relational ontological construction fails to provide a precise point in time when a person has come to be. The precise timing of the presence of personal identity is understandably of immense importance and has been debated *ad infinitum* (Wennberg 1985, 105–12). It is true that when a personalizing relationship formally begins is often hard to identify. However, just as in the case of AFP or Schrödinger's Fetus, once the relationship has formed the actual moral status of the fetus has been revealed. This applies retrospectively to the revelation.

Räsänen unwittingly provides clarity on this point for our relational construction. He refers to the scenario in which a couple discuss when their relationship first formed. The couple agree that their relationship began on the first date but that they only knew this at a future point in time because it went past the third date. The couple agree that had they not gone past the second date, no relationship would have formed. Thus, while they could only recognize that they had a personal relationship past the third date, they both agree it started on the first (Räsänen 2019, 127).

Using Räsänen's scenario we may argue as follows: a pregnant person may become aware of their pregnancy very early (first date). They may spend time thinking about their pregnancy (second date) only to have a natural miscarriage or decide on an abortion. In which case no significant personal relationship may have been formed.⁸ On the other hand it is possible that they continue to grow their bond with the fetus, in which case they may attest to the bond beginning from the very start. Should they then have a natural miscarriage, decide on a termination due to medical reasons, or suffer a trauma, it is coherent for them to mourn the loss of something morally significant.

6 Conclusion

Räsänen and Harman have rightly attempted to provide coherent grounds for two widely held, contradictory intuitions about abortion and early fetuses. However, their models fail to consider an important third intuition: that something of moral significance has taken place in the case of the loss of a wanted pregnancy. Taking seriously the literature on pregnancy loss, and in light of a relational account of personhood, can best describe all three core intuitions.

First, that no one is harmed in abortion speaks to the lack of personal relationality formed by a pregnant person with the early fetus. It aptly describes the context of a non-person termination: the absence of emotional trauma or the lack of feelings of guilt associated with the loss of a person. Second, that we were all early fetuses, and that it would have been wrong

⁸ We say *may* here, as it is also very possible for a significant relationship to form and for the pregnant person to earnestly mourn the loss of a fetus in miscarriage.

to have terminated us in our early development stage. This intuition speaks to the kinds of relationships we have now that impact our past.

Third, that it is coherent to mourn the unwanted passing of an early fetus in that the pregnant person – and indeed the wider community – has lost an entity to which they related in personalizing ways. This is true in the case of a natural miscarriage, where an abortion has been chosen as a necessity to alleviate further suffering, as well as in the case of a violent attack that results in a termination. A person has died, and it is right that this is marked and mourned with respect and dignity.

Funding Open access funding provided by North-West University.

Declarations

Conflict of Interest No conflicts of interest are recorded.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Bawden T (2014) “Orangutan Inside Argentina Zoo Granted ‘Non-Human Person Rights’ in Landmark Ruling.” *Independent*, December 22, 2014. <http://www.independent.co.uk/news/world/americas/sandra-the-orangutan-inside-argentina-zoo-granted-human-rights-in-landmark-ruling-9940202.html>
- Blackshaw BP, and Daniel Rodger (2019) Why a right to Life Rules out Infanticide: A Final reply to Räsänen. *Bioethics* 33(8):965–967
- Blackshaw BP (2020) Schrödinger’s Fetus Examined. *Med Health Care Philosophy: Eur J* 23(2):321–323. <https://doi.org/10.1007/s11019-019-09936-0>
- Boonin D (2003) *A defense of abortion*. Cambridge Studies in Philosophy and Public Policy. Cambridge University Press, Cambridge
- Brown WS (1998) “Cognitive Contributions to Soul.” In *Whatever Happened to the Soul*, edited by Warren S. Brown, Nancy Murphy, and H. Newton Malony, 99–125. Theology and the Sciences. Minneapolis: Fortress
- Buber M (1970) *I and Thou*. Translated by Walter Arnold Kaufmann. New York: T & T Clark
- Chambers K, Lindsey (2020) It’s complicated: what our attitudes toward pregnancy, abortion, and Miscarriage tell us about the Moral Status of early fetuses. *Can J Philos* 50(8):950–965
- Cleveland M (2017) “Yes, The Princeton Prof’s Argument for Early Abortion Is Stupid.” *The Federalist*. August 14, 2017. <https://thefederalist.com/2017/08/14/yes-princeton-profs-argument-early-abortion-stupid/>
- Dawber A (2015) “Human Rights for Cats and Dogs: Spanish Town Council Votes Overwhelmingly in Favour of Defining Pets as ‘Non-Human Residents.’” *Independent*, July 22, 2015. <http://www.independent.co.uk/news/world/europe/human-rights-for-cats-and-dogs-spanish-town-council-votes-overwhelmingly-in-favour-of-defining-pets-10408546.html>
- Engelhardt H, Tristram (1973) Beginnings of Personhood: philosophical considerations. *Perkins J* 27(1):20–27
- Feinberg J (1981) The rights of animals and unborn generations. In *Responsibilities to future generations*. Prometheus Books, Buffalo, NY
- Frias L, and Noel Struchiner (2013) The cognitive psychology of the potentiality argument. *Am J Bioeth* 13(1):36–38
- Giubilini A, and Francesca Minerva (2013) After-birth abortion: why should the Baby live? *J Med Ethics* 39(5):261–263

- Glover J (1990) *Causing death and saving lives*. Penguin, London
- Grenz SJ (2007) *The Social God and the relational self: a trinitarian theology of the Imago Dei*, 1st edn. Westminster John Knox
- Gunton CE (1993) *The one, the three and the many: God, Creation and the culture of modernity*. The Bampton Lectures 1992. Cambridge University Press, Cambridge
- Hall DJ (1986) *Imaging God: Dominion as Stewardship*. Eerdmans, Grand Rapids
- Hare RM (1975) Abortion and the Golden Rule. *Philos Public Affairs* 4(3):201–222
- Hare RM (1988) When does Potentiality Count? A comment on Lockwood. *Bioethics* 2(3):214–226. <https://doi.org/10.1111/j.1467-8519.1988.tb00049.x>
- Harman E (1999) Creation Ethics: the Moral Status of early fetuses and the Ethics of Abortion. *Philos Public Affairs* 28(4):310–324
- Harmon SHE (2009) Of plants and people. Why do we care about dignity? *EMBO Rep* 10(9):946–948. <https://doi.org/10.1038/embor.2009.191>
- Harris HA (1998) Should we say that personhood is relational. *Scott J Theol* 51(2):214–234
- Hershenov DB, Rose JH (2017) If abortion, then Infanticide. *Theoretical Med Bioethics: Philos Med Res Pract* 38(5):387–409
- Kaczor C (2018) A Dubious Defense of ‘After-Birth abortion’: a reply to Räsänen. *Bioethics* 32(2):132–137
- Kelsey DH (2009) *Eccentric existence: a theological Anthropology*. Westminster John Knox, Louisville
- Kuhse H, and Peter Singer (1985) *Should the Baby Live: the Problem of Handicapped Infants*. Oxford University Press, Oxford
- Kuhse H (2012) “Symposium on ‘after-Birth Abortion’: Some Comments on the Paper ‘After-Birth Abortion: Why Should the Baby Live?’” *Monash Bioethics Review* 30 (1): 44. <https://doi.org/10.1007/bf03351331>
- Kuhse H (2013) Some comments on the paper ‘After-Birth abortion: why should the Baby live?’. *J Med Ethics* 39(5):323–324
- Langerak E (2014) “Abortion: Listening to the Middle.” In *Potentiality: Metaphysical and Bioethical Dimensions*, edited by John P. Lizza, 84–95. Maryland: John Hopkins University
- Lindemann H (2013) *Holding and letting go: the Social Practice of Personal Identities*. Oxford University Press, Oxford
- Locke J (2004) “An Essay Concerning Human Understanding, Volume 1 MDCXC, Based on the 2nd Edition, Books 1 and 2.” <http://www.gutenberg.org/files/10615/10615.txt>. 2004. <https://www.gutenberg.org/cache/epub/10615/pg10615.html>
- Lockwood M (1988) Warnock Versus Powell (and Harradine): when does Potentiality Count? *Bioethics* 2(3):187–213. <https://doi.org/10.1111/j.1467-8519.1988.tb00048.x>
- Macmurray J (1995) *Persons in Relation*. Vol. 2. The Gifford Lectures 1954, The Form of the Personal. London: Faber & Faber
- Manninen BA (2014) “Revisiting the Argument from Fetal Potential.” In *Potentiality: Metaphysical and Bioethical Dimensions*, edited by John P. Lizza, 191–220. Maryland: John Hopkins University
- McFadyen AI (1990) *The call to Personhood: a christian theory of the individual in Social Relationships*. Cambridge University Press, Cambridge
- McFarland IA (2001) *Difference & identity: a theological Anthropology*. Pilgrim, Cleveland
- McMahan J (2002) *The Ethics of Killing: problems at the margins of life*. Oxford Ethics Series. Oxford University Press, Oxford
- McMahan J (2014) “Potentiality.” In *Potentiality: Metaphysical and Bioethical Dimensions*, edited by John P. Lizza, 140–73. Maryland: John Hopkins University
- Milford SR (2018) Substantive or relational? The Counterfeit choice in the Imago Dei Debate. *McMaster J Theol Ministry* 20
- Milford SR (2019) Eccentricity in Anthropology: David H. Kelsey’s Anthropological Formula as a way out of the substantive-relational Imago Dei Debate. *Pickwick*, Eugene
- Milford SR (2020) The Problem with Sandra: addressing the unfortunate Consequences of Relational Ontological Personhood. *Relig Theol* 27(3–4):275–298
- Olson ET (1997) Was I ever a Fetus? *Philos Phenomenol Res* 57(1):95–110. <https://doi.org/10.2307/2953779>
- Parsons K (2010) Feminist reflections on Miscarriage, in light of abortion. *Int J Feminist Approaches Bioeth* 3(1):1–22. <https://doi.org/10.2979/fab.2010.3.1.1>
- Pew RC (2022) “Public Opinion on Abortion.” *Pew Research Center’s Religion & Public Life Project* (blog). 2022. <https://www.pewforum.org/fact-sheet/public-opinion-on-abortion/>
- Polkinghorne JC (1984) *The Quantum World*. Longman, London
- Räsänen J (2016) Pro-life arguments against Infanticide and why they are not convincing. *Bioethics* 30(9):656–662
- Räsänen J (2018) Why pro-life arguments still are not convincing: a reply to my critics. *Bioethics* 32(9):628–633

- Räsänen J (2019) Schrödinger's Fetus. *Med Health Care Philosophy: Eur J* 23:125–130. <https://doi.org/10.1007/s11019-019-09916-4>
- Rodger D, Blackshaw BP, and Clinton Wilcox (2018) Why arguments against Infanticide remain Convincing: a reply to Räsänen. *Bioethics* 32(3):215–219
- Rudman S (1997) Concepts of persons and Christian Ethics. Cambridge University Press, Cambridge
- Sauchelli A (2018) The future-like-Ours Argument, Animalism, and Mereological Universalism. *Bioethics* 32(3):199–204. <https://doi.org/10.1111/bioe.12417>
- Sauchelli A (2019) Animalism, abortion, and a Future like Ours. *J Ethics: Int Philosophical Rev* 23(3):317–332. <https://doi.org/10.1007/s10892-019-09298-y>
- Shults F, LeRon (2003) Reforming Theological Anthropology: after the philosophical turn to Relationality. Eerdmans, Grand Rapids
- Shutte A (1984) What makes us persons. *Mod Theol* 1(1):67–79
- Singer P (1979) Killing humans and killing animals. *Inquiry* 22(1–4):145–156. <https://doi.org/10.1080/00201747908601869>
- Singer P (1993) Practical Ethics. Cambridge University Press, New York
- Spielman M (2012) “The Actual Future Principle.” *Abort73.Com*. August 22, 2012. https://abort73.com/blog/the_actual_future_principle/
- Stone J (1987) Why potentiality matters. *Can J Philos* 17(4):815–829
- Sullivan B (2022) and Kristin Gourlay. “Here's Where Abortions Are Now Banned or Strictly Limited, and Where They May Be Soon.” *NPR*, June 24, 2022, sec. Reproductive rights in America. <https://www.npr.org/sections/health-shots/2022/06/24/1107126432/abortion-bans-supreme-court-roe-v-wade>
- Tännsjö Torbjörn (2015) Taking life: three Theories on the Ethics of Killing. Oxford University Press, Oxford
- Tooley M (1972) Abortion and infanticide. *Philos Public Affairs* 2(1):37–65
- Tooley M (2013) Philosophy, critical thinking and ‘after-Birth abortion: why should the Baby live?’. *J Med Ethics* 39(5):266–272
- Unborn Victims of Violence Act*. (2004)
- Vallicella B (2016) “Abortion: The Actual Future Principle, An Objection, and a Sophistical Reply.” *Maverick Philosopher*. August 16, 2016. https://maverickphilosopher.typepad.com/maverick_philosopher/2017/08/abortion-the-actual-future-principle-and-the-potentiality-principle.html
- Wennberg RN (1985) Life in the balance: exploring the abortion controversy. William B. Eerdmans Publishing Company, Grand Rapids
- Wright LJ (2018) Relationality and life: phenomenological reflections on Miscarriage. *Int J Feminist Approaches Bioeth* 11(2):135–156
- YouGov (2022a) “Should the Legal Time Limit to Have an Abortion Change?” *YouGov*. 2022. <https://yougov.co.uk/topics/politics/trackers/should-the-legal-time-limit-to-have-an-abortion-change>
- YouGov (2022b) “Should Women Have the Right to an Abortion?” *YouGov*. 2022. <https://yougov.co.uk/topics/politics/trackers/should-women-have-the-right-to-an-abortion>

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.