

Authors' personal copy. Pre-print, pre-edited. Forthcoming as:

Neiders I., Dranseika V. (Forthcoming). Death and personal identity: An empirical study on folk metaphysics. In: K. Hens and A. De Block (eds.) *Advances in Experimental Philosophy of Medicine*. Bloomsbury.

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Death and Personal Identity: An Empirical Study on Folk Metaphysics

1. Introduction

The conception of whole brain death was subject to sharp criticism almost since its inception in 1968.¹ And while the whole brain death as the legal criterion of death is almost universally accepted, the discussion in the bioethics literature as well as some widely debated cases in the media indicate that the opposition to the view is getting stronger. Prominent authors who are involved in the discussion have pointed out that the current consensus about brain death as the criterion of death is unstable (DeGrazia 2005: 121). While there are still authors who defend the whole brain criterion of death (e.g., Gligorov 2016), the view has been attacked from at least two different directions. First, some authors have argued for the higher brain definition of death, according to which human death is defined as an irreversible cessation of the capacity

¹ The diagnostic criteria of brain death for the first time were formulated in (Ad Hoc Committee of the Harvard Medical School, 1968). For historical context see Pernick 1999.

for consciousness (e.g., McMahan 2002; Glannon 2007). Second, there are philosophers who suggest that we have to return to some form of updated cardiopulmonary approach that defines death as irreversible cessation of circulatory-respiratory function (e.g., Truog 1997; DeGrazia 2005. For an overview of the debate see DeGrazia 2017).

In the light of these disagreements, some authors (e.g., Veatch 1989; 2019; Emanuel 1995; Bagheri 2007; Zeiler 2009) have suggested that we should embrace pluralism about death determination - people should be allowed to choose their own criterion of death from a set of reasonable alternatives. In addition to that, there is some evidence that the pluralist solution coheres best with the variety of views people have on death determination (Dranseika and Neiders 2018; Neiders and Dranseika 2020). Provided that both experts and the folk seem to hold such a variety of beliefs about how death should be determined, one might raise a question, how this variation can be explained. One possibility is that the differences in concepts of death - and, consequently, in views about death determination - can be at least partly explained by differences in assumptions about personal identity. As for philosophical literature on the issue, the participants of the debate tend to be explicit about the conceptual link between death and personal identity. For example, in a seminal paper on the metaphysics of brain death, Jeff McMahan explicitly links conditions of one's death and one's cessation of existing with what one essentially is:

“What are the essential conditions of my *death*, or *ceasing to exist*? [...] To answer these questions with confidence, one requires an account of *personal identity* - that is, an account of what is necessarily involved in our continuing to exist. [...] What is required is an account of the conditions for the existence of things of our kind, whatever *kind of thing we essentially are*.”
(1995: 102, *emphasis ours*)

We will start this chapter by looking in more detail at two important - and frequently repeated - claims that play a crucial role as far as conceptualization of death in philosophy is concerned. First, the claim that understanding of death is determined by a conception of personal identity. Second, the claim that we cease to exist at the moment of death. In what follows, we will assume that, if both claims are accepted, the lack of consensus among philosophers about death is to be expected, given that philosophers disagree about personal identity. Our main aim, however, is to see whether our diagnosis of philosophical disagreements about death can also shed light on folk thinking about death and personal identity. We have already seen that the folk differ in their views on death determination (Neiders and Dranseika 2020). Can these differences be also accounted for by the differences in views on personal identity together with conceptual links in folk cognition between death, existence and personal identity?

a) *Death and personal identity*

The idea that our understanding of death is determined by our take on personal identity is a common occurrence in the literature. For example, John Lizza emphasizes that the “Discussion of defining death needs to focus on which approach to personhood makes the most sense metaphysically and morally” (2006: x). This assumption is shared by many authors, e.g., McMahan (1995; 2002), DeGrazia (2005), Green and Wikler (1980), Kagan (2012), and Luper (2009: 48). The reasoning behind the idea goes roughly like this:

- (1) We die *iff* we cease to exist, therefore
- (2) To capture the conditions under which we can be said to be dead, we have to establish when we can be said to cease to exist; and
- (3) To capture the conditions under which we can be said to cease to exist, we have to establish what we essentially are.

As a consequence, one’s answer to the metaphysical question on what we are determines conditions of being dead. Thus, for example, Jeff McMahan, who defends the claim that essentially we are minds, claims that we are dead as soon as our mental capacities are irreversibly lost as that is the point when we cease to exist (1995). This in turn means that the right criterion of death is irreversible cessation of higher brain activity (so-called cortical death). However, for somebody like DeGrazia, who argues that essentially we are human animals, human death should be conceptualized in organismic terms, i.e. as permanent cessation of our organismic functions. Here, however, there is a disagreement about what exactly does that involve. Some authors would say that this condition is captured by the whole brain criterion of death because according to this view, human organism ceases to function as a unified whole as soon as the functions of the whole brain are irreversibly lost (Bernat et al. 1981). DeGrazia, on the other hand, thinks that the whole brain death definition of death fails and he replaces it with an updated version of the traditional standard. According to him, human death is “the permanent cessation of circulatory-respiratory function.” (2005: 147-149)

What about the other end of human life? Interestingly, in contrast to death, there is no parallel philosophical debate on when we are born. Instead, the issue of when we begin to exist seems to create a similar perplexion as the question on when we die. However, moral implications of different views about when our life begins might attract even more public attention than the issues around death determination. Discussions about morality of abortion, use of embryonic stem cells, gene editing technologies sooner or

later stumble upon the question of when our existence begins. But what is more relevant in the present context, in the philosophical literature, the question about beginning of existence is also addressed by appealing to an account of what we are, as was the case in discussing death. So, for example, when DeGrazia addresses the issue, he points out that: “Since the question concerns our existence conditions, its answer depends on a correct account of numerical identity” (2005: 245). As DeGrazia thinks that the correct account of our numerical identity is animalism, then for him the question about when we come into existence turns into a question about when the human animal comes into existence. In a similar manner, Jeff McMahan (2002: 267) points out that his account of identity according to which we are embodied minds implies that we come into existence only when our organisms develop the capacity to generate consciousness. Again, as was the case with dying and ceasing to exist, philosophical accounts of the beginning of our existence seem to depend on a preferred account of what we are.

Philosophical discussions about personal identity are notoriously intricate and there are no reasons to expect that the participants of the debate will reach any (even unstable) consensus. And provided the above-mentioned connection between the issues of identity and death, one must expect that the same lack of consensus should be expected about death as well. But what about the folk? We already mentioned that there is evidence that people also hold varying views about death (Dranseika and Neiders 2018; Neiders and Dranseika 2020). This raises a possibility that also among the folk varying views about death may be associated with varying views about personal identity.

b) Termination Thesis

The second claim that plays an important role in the conceptualization of death in the philosophical literature is the so-called Termination Thesis (TT).² The thesis figures in the first step of the reasoning scheme mentioned above. According to TT, people go out of existence when they die. The claim seems to be endorsed by many prominent philosophers. For example, in the “Letter to Menoeceus”, Epicurus says: “So death, the most frightening of bad things, is nothing to us; since when we exist, death is not present, and when death is present, then we do not exist.” (Epicurus 1997: 29) John Locke notoriously claimed that it is necessary for the persistence of biological items like plants and human beings that they remain alive which means that human beings necessarily cease to exist when they die. (1975: II. xxvii. 4 and 6.

² The term seems to be introduced by Fred Feldman in (1992).

Also see Mackie 1999: 236.) Turning to contemporary philosophers, TT is endorsed, for example, by Jay Rosenberg in his *Thinking Clearly about Death* (1998). Rosenberg here argues that statements like:

“My aunt Ethel died last week, and we are burying her tomorrow.”

although idiomatically are perfectly alright, logically are “rather a mess”. That is because the double reference, i.e., aunt Ethel who died last week and aunt Ethel who will be buried tomorrow - is just a linguistic appearance. Strictly speaking, those are two different things (Rosenberg 1998: 41-42).

According to Rosenberg, when a person dies, “a person’s history necessarily comes to an end” (ibid., 159). In other words, the person ceases to exist. In a similar vein, Sumner claims: “The death of a person is the end of that person; before death he *is* and after death he *is not*. To die therefore is to cease to exist” (1976: 153). McMahan points out that there are some exceptions when something can cease to exist without dying (e.g., when an amoeba splits it ceases to exist but doesn’t die), but as far as human beings are concerned, ceasing to exist and dying is the same (e.g., 2002: 425; 1995: 120). A similar point is made by Green and Wikler (1980: 127) and many other authors.³

Feldman, on the other hand, claims that “A substantial portion of our common-sense thought about death conflicts blatantly with the termination thesis” (1992: 93; See also 2000: 101). He mentions various reasons why he thinks that TT is false. For example, he points out that trees don’t go out of existence when they die and that this should be true of every other sort of organism. And if people are organisms, then TT is false. We tend to assume that the claims on gravestones “Here lies..” are true. Feldman mentions these and several other examples to show that TT goes against common sense. Meanwhile, he also emphasizes that the denial of TT follows from his materialism. Feldman claims that we are bodies and since our bodies will continue to exist for a while after we die, we will exist after we die. Therefore, TT is false (2000: 101-102). A similar view is expressed by David Mackie. He claims that “The Termination Thesis strongly conflicts with what ordinary people believe. Non-philosophers think that the Termination Thesis is not only false, but obviously so” (1999: 234).

Still others, however, paint a more complicated picture. Steven Luper, for instance, points out that such appeals to “linguistic support for the suggestion that people and other organisms survive death as corpses is inconclusive at best” (2009: 46). In a particular context, of course, ‘dead organism,’ ‘dead animal,’ ‘dead person’ etc., can refer to corpses, but normally this is not the case. If, for example, we are asked “How many dead people can we name?”, we would not start to count corpses. According to Luper:

³ For more examples see Feldman 2000.

“Normally the terms ‘organism,’ ‘animal,’ and ‘person’ refer to beings while they are alive, or while they were alive. We can forestall confusion by making a stipulation. Let us stipulate that ‘dead organism,’ ‘dead animal,’ and ‘dead person’ all refer to beings who lived in the past, rather than to the remnants they left behind. For the latter, ‘corpses’ is an eminently suitable term.”
(2009: 47)

Therefore, according to Luper, even animal essentialists should agree that the dead survivors view, i.e., the view that we persist as corpses after our death, is false. Luper goes even further. He argues that we should stretch the concept of death so that cases of splitting, division, and loss of identity are also counted as death. This can be done, he thinks, by stipulating that death occurs whenever a living being ceases to exist. This stipulation then makes “dying” and “ceasing to exist” equivalent.

This short overview of the literature shows that TT is controversial. There are authors who defend it and there are others who argue that it is false, and appeals to ordinary language use are not uncommon in this debate. Again, provided the importance of TT in conceptualizing death, it would be helpful to find out whether Feldman and Mackie are right, when they say that for non-philosophers TT is obviously false.⁴

c) The aim of this chapter

To summarize, many influential participants of the debate on the proper criteria of death conceptualize death via the three-step scheme mentioned in the section (a) above. This scheme, however, relies on two contested ideas. First, according to the scheme, the criteria of death are based on a particular view of what we are. Notoriously, however, there is no philosophical consensus on what the correct view on what we are is. It is clear though that the philosophical differences about identity are translated into the differences about the criteria of death. In other words, the source of the impasse in the debate about the criteria of death might be at least partly explained by disagreements about what we are. Second, the inference from judgments about personal identity to criteria of death in this scheme goes via TT. This thesis, as we have seen in the previous section, is contested. Rejecting TT, however, does not block other ways in which philosophical differences about personal identity could be translated into differences about death. On the one hand, there is a conceptual possibility that criteria of death follow from assumptions about personal

⁴ Once again, a claim resembling TT but dealing with birth rather than death - ‘We are born *iff* we begin to exist’ - does not seem to have merited philosophers’ attention.

identity directly - rather than via judgments of ceasing to exist. On the other hand, some other thesis about the relationship of death and ceasing to exist that is weaker than TT could provide the missing link.

The main aim of the present chapter is to explore conceptual links in folk cognition between death, existence and personal identity. We already mentioned that there is some evidence that people's judgments about death determination differ (Dranseika and Neiders 2018, Neiders and Dranseika 2020). If folk judgements about death differ, however, can those differences at least in some degree be driven by people's beliefs about what we are, and if so, does the inference follow the scheme described in section (a)? In particular, do people accept TT (contrary to what Feldman and Mackie claim)? In order to answer these questions, we conducted two studies. The first study looks into how people think about when they begin and cease to exist as well as when they are born and die. The second study replicates the findings of the first study in a different language and country and also extends these results by also looking at what people think about 'what we are', and whether their position on the latter issue is associated to their thinking about when they begin and cease to exist as well as when they are born and die.⁵

At this point one might understandably ask why studying folk reasoning about death and personal identity is relevant? There are, we think, several reasons for doing that. First of all, a study in folk metaphysics is of interest by itself. Second, as we already saw in our discussion of TT, philosophers sometimes appeal to folk beliefs in supporting their own point of view. To the extent that philosophers take coherence between philosophical theories and pre-theoretical beliefs to be a theoretical desideratum, it is important to know what those pre-theoretical beliefs actually are. Third, and most importantly, the question about what criteria of death we should use is not an abstract theoretical issue. The main reason to have such criteria is practical, i.e., to be able to make judgments in clinical contexts about patients. Provided that the question itself is not medical (i.e., cannot be solved by the help of medical science) but metaphysical,⁶ that there is no consensus on the issue between the experts; and that it would be preferable that the solution is accepted by the general public, it is important to find out how death is conceptualized by the folk. If ordinary normative disagreements have their roots in differences in folk assumptions, then studying the latter can help in understanding why and how the former arise. We admit that the reasons for paying attention to folk concepts we have presented here might not persuade everybody. Some authors might still think that this matter should be decided by philosophers and professionals with knowledge in the relevant area. As for us, the result of several decades of the debate sketched in this introduction makes us less optimistic about this strategy.

⁵ Studies were approved by Research Ethics Committee at Rīga Stradiņš University.

⁶ See Rodríguez-Arias et al. 2020.

2.1. Study 1. Life-cycle

In this study, we look into how study participants think about when they begin and cease to exist as well as when they are born and when they die

Participants. 604 participants completed this English language study on Prolific.ac for monetary compensation. Study participation was limited to the US and the UK nationals. 50% identified as females, 50% - as males, 1 participant identified as non-binary; mean age: 36.5; $SD_{age} = 13.7$; age range 18–80, one participant indicated unrealistic age, and thus we deleted this data-point.

Materials. Since we are interested in whether people differ in how they think about when they begin and cease to exist as well as when they are born and die, we needed a way to develop a scale that would map various events and abilities of interest to philosophers interested in beginning and end of life issues onto a single developmental time-line. For this purpose, we adapted and extended a scale we previously used in (Dranseika and Neiders 2018) and (Neiders and Dranseika 2020). Study participants were asked to read the following possible description of a life-cycle, presented in numbered stages:

1. Conception takes place.
2. Organism starts to form.
3. Heart forms and starts to beat.
4. Brain forms.
5. Ability to feel pain develops.
6. The baby leaves the mother's body.
7. Self-understanding and complex psychological life arises.
8. Life from adulthood to old age.
9. Self-understanding and complex psychological life is lost due to dementia.
10. All consciousness including ability to feel pain is irrevocably lost.
11. All brain functions stop.
12. Heart stops beating.
13. Organism stops functioning.
14. The body is decomposing.

After reading the description, they were asked to think about their own life as such a sequence of stages.

Over the next four pages, presented in randomized order, they were asked to indicate the stage at which, in their opinion, some events occur.

You are born.

You begin to exist.

You cease to exist.

You die.

After each of these claims, the same life-cycle was presented as on the first page, but with two additional options:

Before Stage 1 [presented as the first item on the list, coded as 0]

Later than Stage 14 [presented as the last item on the list, coded as 15]

For each of the four questions, participants were also asked to indicate how certain they are of their response on a (0-100)% scale.

Results. Distribution of responses in Study 1 is presented in Figure 1.

Being born. Unsurprisingly, the vast majority of participants (82%) thought that they were born during stage 6 ('The baby leaves the mother's body'). 18% of participants, surprisingly, indicated that they were born at an earlier stage.

Beginning to exist. Completely different picture can be observed looking at the question of beginning to exist. Here, there is no dominant response option and responses are spread widely from before conception till birth, the modal answer (27%) being Stage 1 ('Conception takes place').

Being born vs beginning to exist. Wilcoxon Signed-ranks test indicated that participants tend to choose earlier stage for when they begin to exist ($Mdn = 2$, 'Organism starts to form') than for when they are born ($Mdn = 6$, 'The baby leaves the mother's body'), $Z = 18.6$, $p < .001$, $r_{rb} = .92$. Looking in more detail, 82% chose an earlier stage for beginning to exist while only 7% chose an earlier stage for being born. The remaining 10% chose the same stage for being born and beginning to exist.

Dying. Responses to the death question are much more varied than was the case for the being born question. The modal response (38%) is Stage 12 ('Heart stops beating'), but several other responses were

also chosen by a sizable proportion of participants: ‘All brain functions stop’ (Stage 11, 18%) and ‘Organism stops functioning’ (Stage 13, 30%).

Ceasing to exist. Responses to the ceasing to exist question seem to be more spread-out than responses to the question about death, spanning from ‘Self-understanding and complex psychological life is lost due to dementia’ (Stage 9) till after the body decomposes, ‘Later than Stage 14’ being the modal answer (23%).

Dying vs ceasing to exist. Wilcoxon Signed-ranks test indicates that participants tend to think that they die ($Mdn = 12$, ‘Heart stops beating’) earlier than they cease to exist ($Mdn = 13$, ‘Organism stops functioning’), $Z = 4.6$, $p < .001$, $r_{rb} = .25$. Looking in more detail, 46% choose an earlier stage for death than for ceasing to exist while only 25% chose the opposite pattern. The remaining 28% chose the same stage for dying and ceasing to exist.

Correlations. Responses about beginning to exist were negatively correlated with responses about ceasing to exist, $r_s = -.25$, $p < .001$, the earlier is the beginning of existence, the later is the cessation. No correlation was observed between responses to questions about being born and dying, $r_s = .00$, $p = .939$. Responses about beginning to exist were not correlated with responses about being born, $r_s = .07$, $p = .086$, while responses about ceasing to exist were weakly positively correlated with responses about dying, $r_s = .23$, $p < .001$

Certainty. In general, participants were rather certain in their responses, median certainty ranging from 85% for the beginning to exist question to 100% for the being born question. Looking only at participants who were at least 80% certain in their responses to all four questions ($n = 282$), the same pattern of results emerges.

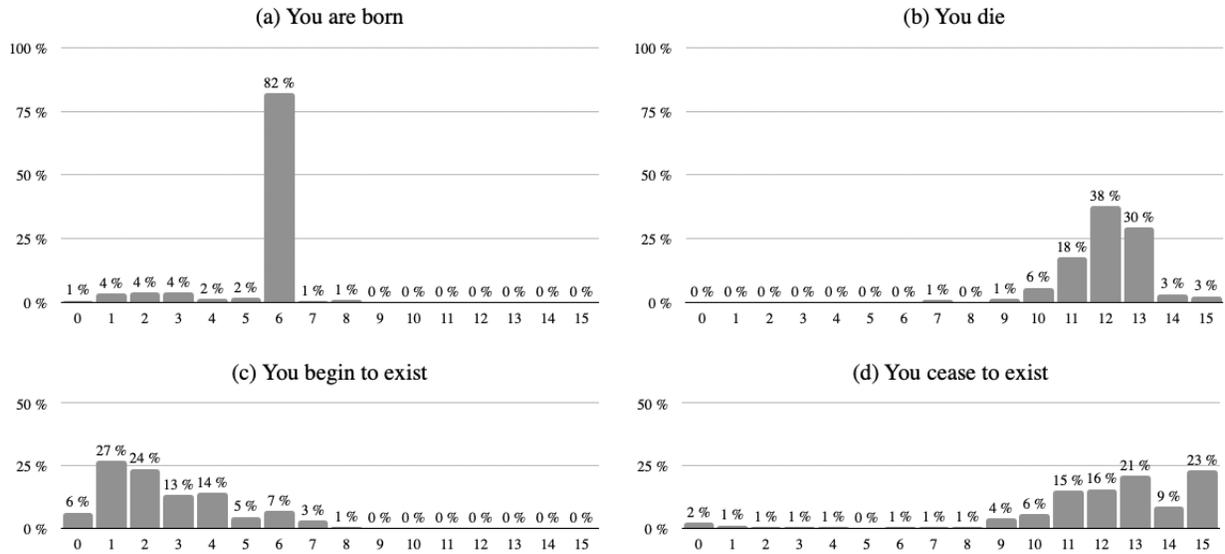


Figure 1. Percentage of participants in Study 1 choosing each response option (N = 604). Labels on the X-axis indicate stages in the life-cycle, as described in study materials.

Discussion. This simple task allowed us to see some striking results. First, while there is notable divergence of positions on when one dies, opinions seem to be even more widely spread on questions when one begins and ceases to exist. Second, study participants tend to think that they begin to exist before they are born and that they continue to exist after they die, thus showing that there is no straightforward conceptual connection between being born and dying on the one hand and beginning and ceasing to exist on the other. However, the results also contain an unexpected finding that almost one fifth of participants chose an earlier stage for when they are born than Stage 6 (‘The baby leaves the mother’s body’). This raises a question whether the claim was interpreted in a way that was not intended. We also realized that our Stage 13 (‘Organism stops functioning’) is redundant and probably misleading. The description is usually taken as a definition of the concept of the organismic death and cessation of the brain functions (Stage 11) or cessation of the cardiopulmonary functions (Stage 12) are two possible criteria of the application of the concept. We attempted to address these shortcomings in Study 2.

2.2. Study 2. Life-cycle and ‘What we are’

The second study replicates the findings of the first study in a different language and country. Furthermore, it was designed to address several issues that were left unexplored in Study 1, such as why some people say that we are born before we leave the mother’s body and why some people say that we

begin to exist before conception or continue to exist after our bodies decompose. In addition to that, we added a new task aimed to look at whether people's intuitions about 'what we are, most fundamentally' are related to their judgments about death and existence.

Participants. The study questionnaire in Latvian language was distributed via social networks Twitter and Facebook with a short request to complete the survey and share the link on their social network profiles. Within 5 days through which it was live, 1481 study participants completed the study (70% identified as females, 28% - males, 1% identified as non-binary, 3 participants (.2%) did not provide any answer; mean age: 37.2; $SD_{age} = 10.5$; age range 18–79, 6 participants (.4%) did not indicate their age while another 3 study participants (.2%) indicated their age in the range of 99-101. While it is not strictly impossible that at least some of these participants are actually of this age, we've made a decision to treat these clear outlier cases as mistaken and we excluded these data-points from the above-mentioned age statistics.

Materials

The study consisted of two tasks: 'Life-cycle' task and 'What we are' task.

'Life-cycle' task

As in Study 1, participants were asked to read a possible description of a life-cycle, presented in numbered stages. The description was different from the one in Study 1 in two respects. First, Stage 5 was changed from 'Ability to feel pain develops' to a more general 'Basic ability to feel and sense develops'. Second, Stage 13 'Organism stops functioning' was removed as redundant, thus resulting in a shorter description:

1. Conception takes place.
2. Organism starts to form.
3. Heart forms and starts to beat.
4. Brain forms.
5. Basic ability to feel and sense develops.
6. The baby leaves the mother's body.
7. Self-understanding and complex psychological life arises.
8. Life from adulthood to old age.

9. Self-understanding and complex psychological life is lost due to dementia.
10. All consciousness including ability to feel and sense is irrevocably lost.
11. All brain functions stop.
12. Heart stops beating.
13. The body is decomposing.

Then, on the next page they read:

Now think about your own life as such a sequence of stages. Please indicate the stage at which, in your opinion, the following events occur:

You are born.

You begin to exist.

You cease to exist.

You die.

After each of these claims, the same life cycle was presented as on the previous page, but with two additional options:

Before Stage 1 [presented as the first item on the list, coded as 0]

Later than stage 13 [presented as the last item on the list, coded as 14]

The four claims were presented in a randomized order, except the 'You are born' claim, which was presented as the first claim for half of the participants and as the last of the four claims for the other half. This was done in order to check whether interpretation of this claim will differ depending on the order of presentation.

For each of the four claims, participants were also asked to indicate how certain they are of their response on a (0-100)% scale.

Furthermore, follow-up questions were asked to participants who chose particular answers that we - in the light of results of Study 1 - thought worth exploring in more detail.

First, those who chose options earlier than Stage 6 ('The baby leaves the mother's body') as the stage at which they were born, were asked to justify their response in one or two sentences.

Second, those who chose option 'Before Stage 1' on 'You begin to exist' question were asked which of the following options best captures their opinion: 'I existed as a soul' or 'I lived past lives'; they could also choose 'Other', with a possibility to explain their answer in the text box.

Third, those who chose option 'Later than Stage 13' for the 'You cease to exist' question, were asked which of the following options best captures their opinion:

I'll continue to exist as a corpse.

I'll continue to exist in memories of other people.

I'll be reincarnated into another being.

I'll pass to the afterlife as a soul.

I'll survive in my children and / or my creations.

They could also choose 'Other', with a possibility to explain their answer in the text box.

'What we are' task

Since we are interested in whether study participants' assumptions about personal identity impact their thinking about birth, death and beginning and ceasing to exist, we needed a way to measure these assumptions in a way that does not presuppose familiarity with philosophical discussions on this topic. In order to do this, we came up with a brief discussion between four characters, each of whom presents - in a non-technical manner - one of four most common philosophical theories about 'what we are, essentially'. Namely, that we are, respectively, organisms, souls, persons, and minds. Study participants were asked to read the following discussion between four characters:

Laura: Of course, we are creatures who can think, remember, imagine things and so on, but to be honest, we are really very complicated animals. We may be many things, but most fundamentally, when you think what it really means to be one of us, it is to be a living human organism. We begin to exist only when our organisms form and we cease to exist as soon as our organisms stop functioning.

Anna: I don't agree. I think that we are much more than that. The very ability to think and imagine proves that we are souls, who just temporarily reside in a human organism. We may be many things, but most fundamentally, when you think what it really means to be one of us, it is to be a soul. We begin to exist only when our souls begin to exist and we would cease to exist only if our souls would cease to exist.

Linda: This is going too far. I do not believe that there are such things as immaterial souls. I also do not agree that we are simply human organisms. I think that what really makes me who I am are my memories and my ability to think about myself as a being with a past and a future. We may be many things, but most fundamentally, when you think what it really means to be one of us, it is to be a self-conscious and rational being. We begin to exist only when we are capable of self-consciousness and rationality and we cease to exist as soon as we lose our capability for self-consciousness and rationality.

Kristine: I think that even that is too much. I believe that even if I would lose all of my memories, I would still be me. Even if I would not be able to think anymore, it is enough simply to have a mind - an ability to have feelings and sensations. We may be many things, but most fundamentally, when you think what it really means to be one of us, it is to be a mind, a conscious being. We begin to exist only when we are capable of having feelings and sensations and we cease to exist as soon as we lose our capability of having feelings and sensations.

After reading the dialogue, participants were asked which of the four character they are most inclined to agree with, with the following options:

Laura ('Most fundamentally, we are human organisms.')

Anna ('Most fundamentally, we are souls.')

Linda ('Most fundamentally, we are beings capable of self-consciousness and rationality.')

Kristine ('Most fundamentally, we are beings capable of having feelings and sensations.')

I agree with more than one of these characters.

I disagree with all four characters.

They were also asked how certain they were in their response to this question.

Those who chose 'I agree with more than one of these characters', on the next page were asked to indicate all the characters with which they agree.

Results

Part 1. Life-cycle

Distribution of responses in the ‘Life-cycle’ task of Study 2 is presented in Figure 2.

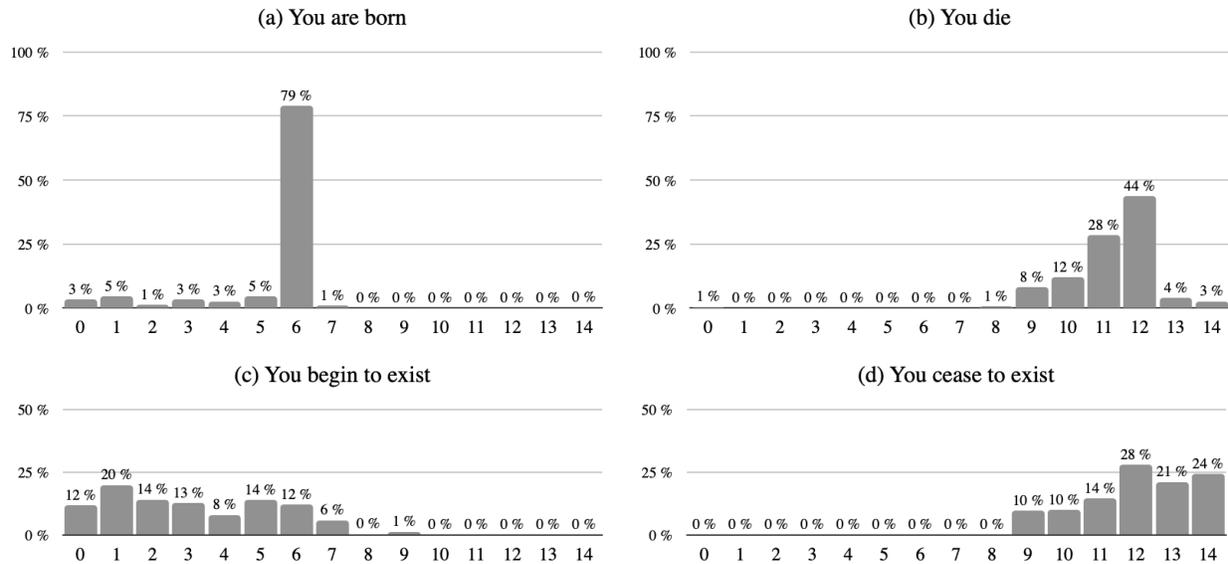


Figure 2. Percentage of participants in Study 2 choosing each response option (N = 1481). Labels on the X-axis indicate stages in the life-cycle, as described in study materials.

Being born. Vast majority of participants (79%) thought that they were born during stage 6 (‘The baby leaves the mother’s body’). 20% of participants (comparable to 18% in Study 1) indicated that they were born at an earlier stage.

Being born before leaving the mother’s body. We anticipated that this can potentially happen due to some participants interpreting ‘You are born’ as meaning ‘You begin to exist’ and therefore asked participants who indicated stages earlier than 6 to also answer a follow-up question. Participant’s answers indicated that our guess was correct. Some participants gave answers that made it explicit that they meant existence not birth “Organism starts to form at the moment of conception, that is when the soul starts to exist”, “A child is alive also in the mother’s body”, “Heart already has been formed” and so on. One participant explicitly admitted that “It was a mistake. I wanted to point out that we exist already before conception. I think that souls that we basically are, is a cosmic phenomenon.” In other cases the answers were difficult

to interpret (e.g. “That is what I have heard from people who engage in spiritual practices’.) And, finally, one participant admitted - “I don’t know”.

Another reason to think that some participants interpret the question about birth as a question about beginning to exist is that the proportion of such ‘born before leaving mother’s body’ responses is much larger when ‘You are born’ question is asked before (28%) than when it is asked after (10%) other questions (including ‘You begin to exist’).⁷

Beginning to exist. Once again, a completely different picture can be observed looking at the question about beginning to exist. Here, there is no dominant response option and responses are spread widely from before conception till Stage 7 (‘Self-understanding and complex psychological life arises’). While the modal answer is that one begins to exist at conception (Stage 1), this accounts for only 20% of responses. Most strikingly, 12 % indicated that they begin to exist before conception.

Existing before conception: When asked to explain why they chose this option, 52% of such participants chose an option ‘I existed as a soul’ while another 14% chose ‘I lived past lives.’ Remaining 34% chose ‘Other’ and then were asked to explain their response. There were participants who selected ‘Other’ because they thought that both answers seemed appropriate to them. Several participants appealed to some form of physical pre-existence of a biological kind (“My beginning was in my father’s body before the conception at the cellular level”, “I existed as information in my parent’s sperm and oocyte”, “In the oocyte there is already inscribed a part of me”). Some participants gave an explanation involving a kind of spiritual or mental pre-existence (“We exist in a unified consciousness in different forms”, “I existed as a thought”, “I existed as a spirit before conception”). One participant attempted to explain pre-existence in both physical and spiritual terms - “I existed both as a soul and as a combination of two not yet united physical elements in my parent’s bodies”. Some answers indicated that Stage 0 was chosen by mistake (e.g., “I started to exist at the moment of conception”). Finally, several participants admitted that they don’t know.

Being born vs beginning to exist. Wilcoxon Signed-ranks test indicated that participants tended to think that they begin to exist ($Mdn = 3$, ‘Heart forms and starts to beat’) earlier than they are born ($Mdn = 6$, ‘The baby leaves the mother’s body’), $Z = 24.4$, $p < .001$, $r_{rb} = .79$. Looking in more detail, 72% chose an

⁷ This diagnosis is further strengthened by the fact that it was those participants who thought that ‘most fundamentally, we are souls’ who were more inclined to choose an earlier stage for birth than participants in any other group.

earlier stage for beginning to exist while only 13% chose an earlier stage for being born. The remaining 15% chose the same stage for being born and beginning to exist.

Dying. Responses to the death question are much more varied than was the case for the being born question. The modal response (44%) was Stage 12 ('Heart stops beating'), but several other responses also were chosen by a sizable proportion of participants: Stage 11, 'All brain functions stop', 28%; Stage 10, 'All consciousness including ability to feel and sense is irrevocably lost', 12%; Stage 9, 'Self-understanding and complex psychological life is lost due to dementia', 8%.

Ceasing to exist. Responses to the ceasing to exist question are more spread-out than responses to the question about death, spanning widely from Stage 9 ('Self-understanding and complex psychological life is lost due to dementia') to Stage 14, indicating that one keeps on existing after one's body decomposes. The latter option was chosen by 24% of participants. The modal response (28%) was Stage 12 ('Heart stops beating').

Existing after the body decomposes. After being asked why they chose an option suggesting that they continue to exist after the body decomposes, 40% of such participants chose 'I'll pass to the afterlife as a soul' while another 15% chose 'I'll continue to exist in memories of other people'. The other three options were chosen by a smaller percentage of these participants: 9% chose 'I'll be reincarnated into another being' while 7% chose each of 'I'll continue to exist as a corpse' and 'I'll survive in my children and / or my works'. Remaining 22% of participants chose 'Other' and were asked to explain their choice. It seems that some participants saw the options offered to be too general for them ("I will continue to exist as a recombined soul", "I will exist as a spirit", "I will continue to exist as a soul, but then there are further possibilities of development", "I will continue to exist as a soul for some time and then I will reincarnate", "I will resurrect", "I believe in eternal life and the resurrection of the flesh"). The few latter examples indicate that participants believe in resurrection and didn't find any of the options offered in the task to fully correspond to that idea. In some cases it seems the reason for choosing 'Other' was the lack of option to select more than one answer ("I will continue to exist in my works, children and memories", "At the same time second, fourth and fifth answer", "All answers"). Other participants mentioned some additional forms of existence besides those that were offered in the task ("I will continue to exist as a part of the collective consciousness", "I will continue to exist in the ecosystem in a form of different substances", "I will continue to exist as a field or electromagnetic oscillation and continue to carry information", "I will continue to exist in the historical documents, because if something has existed cannot turn into something that has never have been"). Finally, as in the previous cases, there were participants who confessed that they have no idea how they will continue to exist.

Dying vs ceasing to exist. Even though median response for both dying and ceasing to exist was 12 ('Heart stops beating'), Wilcoxon Signed-ranks test indicated that participants tended to think that they die earlier than they cease to exist, $Z = 14.5, p < .001, r_{rb} = .49$. Looking in more detail, 54% of participants chose an earlier stage for death than for ceasing to exist while only 22% chose the opposite pattern. The remaining 24% chose the same stage for dying and ceasing to exist.

Correlations. Responses about beginning to exist were negatively correlated with responses about ceasing to exist, $r_s = -.44, p < .001$, the earlier is the beginning of existence, the later is the cessation. No correlation was observed between responses to questions about being born and dying, $r_s = -.03, p = .189$. Responses about beginning to exist were weakly positively correlated with responses about being born, $r_s = .17, p < .001$, while responses about ceasing to exist were weakly positively correlated with responses about dying, $r_s = .29, p < .001$

Certainty. In general, participants were rather certain in their responses, median certainty ranging from 85% for the beginning to exist question to 99% for the being born question. Looking only at participants who were at least 80% certain on their responses to all four questions ($n = 697$), the same pattern of results emerges.

Part 2. What we are.

12% of participants agreed that most fundamentally, we are human organisms; 13% - that most fundamentally we are souls, 24% - persons, and 10% - minds. 7% disagreed with all presented options.

Remaining 34% of participants chose a pluralist option. However, we are not certain that this expresses intrapersonal ontological pluralism, that is those study participants simultaneously agreeing with several theories of personal identity, or simply the failure of the study to get the 'essentiality' across.⁸

In general, participants were quite certain in their responses ($Mdn = 80\%$).

⁸ Those participants who chose a pluralist option were also asked with which individual characters they agree or disagree with. No clear pattern emerged. The most frequent combination (28%) was that most fundamentally we are persons and minds but not souls or organisms. Another five combinations were selected by approximately 10% of participants each (9.8% - 11.4%): (i) We are souls and minds; (ii) We are souls and persons; (iii) We are organisms and persons; (iv) We are organisms, persons, and minds.; (v) We are organisms, souls, persons, and minds. Remaining participants (approx. 20%) chose various less frequent combinations.

Comparison: What we are, death and existence.

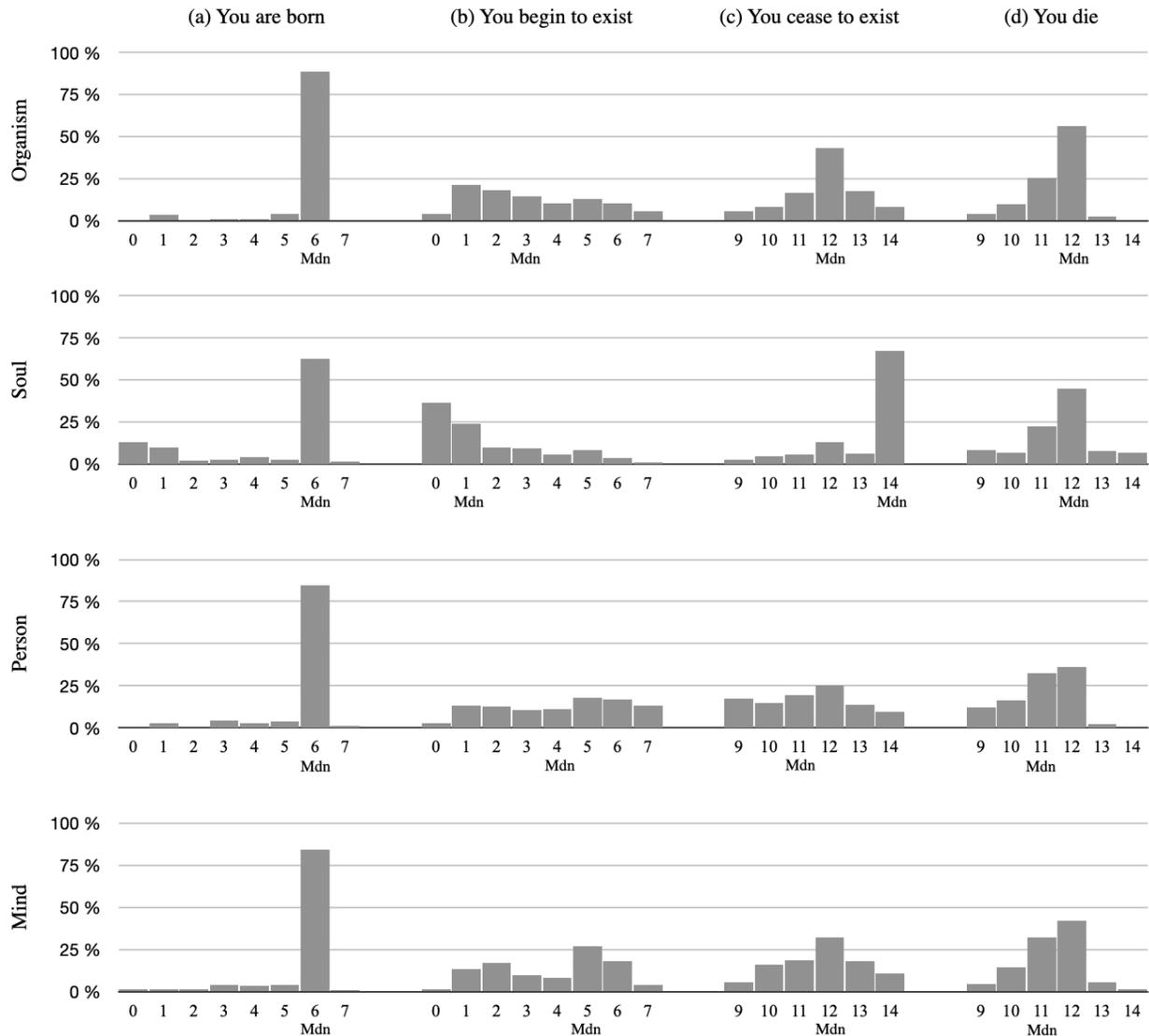


Figure 3. Distribution of responses in Study 2, separated into four groups depending on the participants' views on 'what we are, most fundamentally' ($n = 880$). Labels on the X-axis indicate stages in the life-cycle, as described in study materials. Parts of the life-cycle with almost no responses (Stages 8-14 for 'You are born' and 'You begin to exist' and Stages 0-8 for 'You cease to exist' and 'You die') are not shown. Mdn indicates median response.

To check whether participants' beliefs about what we are are related to their responses to questions about when we are born, die, begin and cease to exist, we used a series of Kruskal-Wallis tests, followed by

Dwass, Steel, Critchlow-Fligner (DSCF) multiple comparison analysis for post hoc tests. For this, we look only at participants who chose one of the four definite answers to the ‘what we are, most fundamentally’ question ($n = 880$). Distribution of responses, separated into four groups depending on the participants’ views on ‘what we are, most fundamentally, are presented in Figure 3.

Being born. Participants’ beliefs about what we are were associated with their responses to the question about birth, $H(3) = 40.7, p < .001, \varepsilon^2 = .05$. While median value was the same for all four groups (6, ‘The baby leaves the mother’s body’), participants who believe that we are souls were more likely than participants in all the other three groups to choose an earlier stage (all $ps < .001$; vs organism: $r_{rb} = .22$; vs person: $r_{rb} = .21$; vs mind: $r_{rb} = .19$). 35 % of participants chose a stage earlier than 6 in the soul group while in other groups such choices were less frequent (11-14 %). No other pairwise differences were observed (all $ps > .65$, all $r_{rb} \leq .04$).

Dying. Beliefs about what we are also affect responses to the question about death, $H(3) = 36.6, p < .001, \varepsilon^2 = .04$. Participants who believe we are persons were more likely to choose an earlier stage for death ($Mdn = 11$, ‘All brain functions stop’) than those in all three other groups: souls ($Mdn = 12$, ‘Heart stops beating’, $p < .001, r_{rb} = .24$), organisms ($Mdn = 12, p < .001, r_{rb} = .24$), and minds ($Mdn = 11, p = .013, r_{rb} = .16$). No other differences were observed (all $ps > .25$, all $r_{rb} \leq .11$).

Beginning to exist. Beliefs about what we are also affect responses to the question about when we begin to exist, $H(3) = 151, p < .001, \varepsilon^2 = .17$. Participants who believe we are souls were more likely to choose an earlier stage for the beginning of existing ($Mdn = 1$, ‘Conception takes place’) than those in all three other groups (all $ps < .001$, vs organism: $r_{rb} = .44$; vs person: $r_{rb} = .58$; vs mind: $r_{rb} = .57$). Participants who believe we are organisms ($Mdn = 3$, ‘Heart forms and starts to beat’) were more likely to choose an earlier stage for beginning of existing than those who believe we are persons ($Mdn = 4$, ‘Brain forms’, $p < .001, r_{rb} = .22$) or minds ($Mdn = 5$, ‘Basic ability to feel and sense develops’, $p = .018, r_{rb} = .19$). No difference was observed between the latter two groups ($p = .750, r_{rb} = .06$).

Ceasing to exist. Finally, beliefs about what we are affect responses to the question about when we cease to exist, $H(3) = 184, p < .001, \varepsilon^2 = .21$. Participants who believe we are souls ($Mdn = 14$, ‘I continue to exist later than Stage 13, Stage 13 being ‘The body is decomposing’) were more likely to choose a later stage for ceasing of existing than those in all three other groups (all $ps < .001$, vs organism: $r_{rb} = .57$; vs person: $r_{rb} = .63$; vs mind: $r_{rb} = .57$). Participants who believe we are persons ($Mdn = 11$, ‘All brain functions stop’) were more likely to choose an earlier stage for ceasing of existing than those who believe

we are organisms ($Mdn = 12$, 'Heart stops beating', $p < .001$, $r_{rb} = .20$) or minds ($Mdn = 12$, $p = .028$, $r_{rb} = .15$). No difference was observed between the latter two groups ($p = .836$, $r_{rb} = .05$).⁹

Duration of existence. A new dummy variable for duration of existence was calculated by subtracting the stage at which one begins to exist from the stage at which one ceases to exist. Maximum possible duration is 14 units (Stage 14 minus Stage 0). Median duration for those who believe we are souls was 13 units; organisms - 9 units; minds - 8 units; persons - 7 units. Beliefs about what we are affect beliefs about duration of existence, $H(3) = 206$, $p < .001$, $\epsilon^2 = .24$. Participants who believe we are souls were more likely to assign longer duration than those in all three other groups (all $ps < .001$, vs organism: $r_{rb} = .55$; vs person: $r_{rb} = .68$; vs mind: $r_{rb} = .64$). Participants who believe we are organisms assign longer duration than those who believe we are persons ($p < .001$, $r_{rb} = .26$), but there was no difference from those who believe we are minds ($p = .067$; $r_{rb} = .16$). No difference was observed between the latter two groups ($p = .180$, $r_{rb} = .11$).¹⁰

Death and ceasing to exist. For this analysis, we grouped participants into three groups: those who chose an earlier stage for ceasing to exist than for dying, those who chose an earlier stage for dying than for ceasing to exist, and those who chose the same stage for dying and ceasing to exist. Independent-samples chi-squared test of association was run to see if there is association between participants' beliefs about what we are, and which of these three groups they belong to. A statistically significant difference was found, $\chi^2(6, N = 880) = 77.4$, $p < .001$. Post hoc tests (Bonferroni-corrected) show that there were six combinations that were statistically significant contributors to this association. Three of these combinations occurred exceptionally frequently compared to other combinations. First, those who believe that (i) we are souls and believe that (ii) we continue to exist after we die ($p < .001$). Second, those who believe that (i) we are organisms and believe that (ii) we die and cease to exist at the same time ($p = .004$). Third, those who believe that (i) we are persons and believe that (ii) we cease to exist before we die ($p < .001$).

⁹ Let's look now only at participants who were (a) at least 80% certain on their responses to all five core questions of both parts of the study and (b) exclude those who chose pluralist and 'disagree with all' responses in 'what we are' task ($n = 417$). The same pattern of results emerges for associations between participants' beliefs about what we are and their responses to questions about when we are born, die, begin and cease to exist, aside from the following three cases where the differences are no longer statistically significant: (a) souls vs minds for 'You are born' claim; (b) persons vs minds for 'You die' claim; (c) organisms vs minds for 'You begin to exist' claim. One potential reason why these three differences ceased to be statistically significant in this restricted sample may be that the 'we are minds, most fundamentally' is the smallest of the four groups.

¹⁰ For <1% of participants the dummy variable for duration of existence was 0 or negative. Excluding these participants does not change the pattern of results.

Discussion. Study 2 replicates and extends the results of Study 1. As in Study 1, there was notable divergence of positions on when one dies, and even more pronounced variety of opinions on when one begins and ceases to exist. In Study 2, as was also the case in Study 1, study participants tend to think that they begin to exist before they are born and that they continue to exist after they die, thus once again showing that there is no straightforward conceptual connection between being born and dying on the one hand and beginning and ceasing to exist on the other. In addition to these findings, Study 2 also looked into the question whether people's intuitions about 'what we are' are related to how they think about when we are born and die as well as when we begin and cease to exist. Such association was observed for all four kinds of judgments. And while it can probably be explained away in the case of the 'You are born' question by a greater tendency of those who think that we are souls to interpret the claim as asking about the beginning of existence, no such explanation seems to be available for the other three claims.

3. General discussion

In two studies reported in this chapter, we looked into how people think about when they begin and cease to exist as well as when they are born and die, and whether these judgments are associated with judgments about 'what we are'. Our results paint a rich and nuanced picture, but let us focus on the most important contours.

Study participants' beliefs about when we die vary to a considerable extent. In both studies, the modal response is that we die when the heart stops beating (Study 1 - 38%, study 2 - 40%), referring to the cardiovascular criterion of death. However, both alternatives to the cardiovascular criterion that are widely discussed in bioethics literature - whole brain death and higher brain death - also were chosen by a considerable proportion of participants. These results cohere well with the results reported in (Neiders and Dranseika 2020), which used a different study design. This variation of positions on death contrasts with the fact that there was a strong consensus about the stage at which we are born. As far as judgments about beginning and ceasing to exist are concerned, we observed an even wider distribution of responses than was the case for death, with no clear dominant answers.

There seems to be no straightforward conceptual connection in our data between being born and dying on the one hand and beginning and ceasing to exist on the other. In both studies, participants tended to choose an earlier stage for beginning to exist than for being born as well as an earlier stage for death than for ceasing to exist. The latter result supports Mackie's and Feldman's claim that TT goes against

common sense as it seems that people do tend to think that we continue to exist after death. In fact, while ascriptions of dying were positively correlated with ascriptions of ceasing to exist, the correlations were weak in both Study 1 ($r_s = .23$) and Study 2 ($r_s = .29$). These considerations might be used to justify the claim that the concept of ceasing to exist should not be used in conceptualizing death, provided, of course, that we want our conceptualizations of death to align with the way people actually think. However, we should be cautious here as in both studies there were sizable minorities of participants with different patterns of responses. Around a quarter of participants chose the opposite pattern, i.e., that we cease to exist before we die,¹¹ and the remaining quarter of participants (Study 1 - 28%, study 2 - 24%) exhibited a pattern of results compatible with TT - they indicated the same stage for death and ceasing to exist. Importantly, the relationship between the two concepts seems to be at least partly driven by our participants' assumptions about what we are. For example, those who believe that we are souls, were more prone than others to think that we continue existing after we die while those who think that we are persons were more prone to thinking that we cease to exist before we die.

Study 2 also showed that the participants have pronounced differences in views about what we are. The relatively high proportion of participants (34%) who selected the pluralist option can be interpreted as either evidence for intrapersonal ontological pluralism, meaning that a third of our study participants simultaneously agreed with several theories of personal identity¹² or that our study design was not sufficient to make sure that all participants understood that the question was about what we are essentially, rather than what we happen to be in fact. Majority of the participants (59%), however, opted for a single definite answer to the question about 'what we are, most essentially'. Focusing on these participants, we found that differences in views about what we are had an impact on study participants' thinking about birth, death, and beginning and ceasing to exist. However, while this association was strong in case of beginning ($\epsilon^2 = .17$) and ceasing to exist ($\epsilon^2 = .21$), it was weak in case of being born ($\epsilon^2 = .05$) and dying ($\epsilon^2 = .04$).

So what about the reasoning scheme that we mentioned in the introduction that allows philosophers to move from claims about who we are to the criteria of our death? Do we have evidence that folk pluralism about death (Neiders and Dranseika 2020) can be accounted for in such a manner? The first step of the scheme ('We die *iff* we cease to exist', TT) does not seem to have a place in ordinary cognition. Only a quarter of responses were consistent with the TT while the majority of participants chose different stages

¹¹ One of the conceptual frameworks that could help interpret this seemingly paradoxical pattern can be found in the discussions on the true self. There is a real sense in which one can be said to cease to be one's true self while still being alive (see Newman et al. 2014; Strohminger et al. 2017; Earp and Hannikainen et al., this volume).

¹² For discussions of intrapersonal ontological pluralism about personal identity see Sider 2001; Tierney et al. 2014; Tierney 2020.

for dying and ceasing to exist. While ascriptions of dying and ceasing to exist are positively correlated, in both studies the correlations were weak. Furthermore, while our data suggest that study participants' beliefs about what we are have an impact on their ascriptions of both when they die and when they cease to exist, this association is weak for ascriptions of death and strong for ascriptions of ceasing to exist. Together, these results suggest that folk pluralism about personal identity cannot be accounted for in the way suggested in this philosophical inferential scheme.¹³

Conclusion

In this chapter, we present the results of two empirical studies that look into how people think about when they begin and cease to exist as well as when they are born and die, and whether these judgments are associated with judgments about 'what we are'. To summarize, studies presented in this chapter show that, first, people seem to hold a considerable variety of different views about death, coming into existence, ceasing to exist and what we are. The studies also recovered a number of conceptual links between these concepts. These results potentially bear on a number of issues in bioethics, i.e., not only discussions on death determination, but also on abortion or embryonic research.¹⁴ As for death determination, the results can be taken to provide further support for the pluralist proposal defended by Veatch (2019), Zeiler (2009) and several other authors.¹⁵ Second, the study provides little evidence for the claim that people's beliefs about death are driven by their assumptions about personal identity, i.e., their understanding of 'what we are'. In particular, there is little evidence that differences among people on death result from differences among people on personal identity. Finally, such authors as Fred Feldman

¹³ One should however also consider some possible limitations of our studies. First, we already mentioned that the results raise some concerns about whether our 'What we are' task in fact managed to capture participants' intuitions on what we are essentially. Teasing out those intuitions is difficult. However, if Tierney (2020; see also Tierney et al. 2014) is right that people are intrapersonal pluralists about personal identity, then the question about what we are essentially doesn't have a single definite answer. This issue deserves further attention. Second, the set of options that we offered in the 'what we are' task was guided by the views that are discussed in the theoretical literature. It might be objected that the validity of the task might be improved if we would choose the opposite approach, i.e., if we would start from eliciting folk intuitions about the self in a bottom-up manner and then use this information to develop the set of options. Future studies should address these limitations.

¹⁴ The fact that only a minority of study participants identified the beginning of existing with the moment when conception takes place (27% in Study 1 and 20% in Study 2) can also have implications for another major bioethical issue - the non-identity problem (see Parfit 1984; Moorman et al., this volume). This result indicates that there is probably little intuitive appeal to taking the moment of conception as a cut-off point for distinguishing between identity-affecting and non-identity-affecting interventions (see also Żuradzki and Dranseika 2022).

¹⁵ See (Neiders and Dranseika 2020) for a normative argument from differences among people concerning death determination to a pluralistic policy of death determination. See Earp et al. 2021 and Earp et al. (2022) for more general discussions on how experimental philosophy can contribute to normative bioethical arguments.

and David Mackie are correct in claiming that people don't reason in accordance with the Termination Thesis (TT), the claim that death just is the cessation of existence. The link between folk ascriptions of death and cessation of existence, while present, is weak. The extent to which these results will be taken to have implications to normative debates about the beginning and end of life as well as to theoretical debates on metaphysics of death or personal identity will, of course, depend on the extent to which the participants in these debates believe that their philosophical theories are accountable to ordinary concepts and intuitions.

Acknowledgments. IN was supported by the Latvian Council of Science (Project "Memento Mori: End of Life, Death and Imagined Afterlife in the Contemporary Latvian Lifeworld, lzp-219/1-0223). VD was supported by the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation program [grant agreement 805498].

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