

EPISTEMIC POSSIBILITY AND THE NECESSITY OF ORIGIN

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Abstract: The necessity of origin suggests that a person's identity is determined by the particular pair of gametes from which the person originated. An implication is that speculative scenarios concerning how we might otherwise have been had our gametic origins been different are dismissed as being metaphysically impossible. Given, however, that many of these speculations are intelligible and commonplace in the discourses of competent speakers, it is overhasty to dismiss them as mistakes. This paper offers a way of understanding these speculations that does not commit them to incoherence but aims to make the best sense of what they are expressing. Using the philosophical framework of two-dimensional semantics, it proposes that the speculative scenarios are best analysed as epistemic possibilities, rather than as metaphysical possibilities. It then explores some implications of this analysis for the ethical challenges associated with the non-identity problem.

Keywords: epistemic possibility, necessity of origin, non-identity problem, two-dimensional semantics.

1. Introduction

In *Naming and Necessity* (1980), Saul Kripke introduces the necessity of origin, which is the thesis that x 's origin is a necessary property of x . Where x is a person, the relevant origin is the person's gametic origin. That is to say, what is essential to the identity of a person is the particular pair of gametes from which the person originated.

An implication of the necessity of origin is that it restricts the range of imagined scenarios about how we might have otherwise been that are deemed metaphysically possible. Given that one's gametic origin is taken to be essential to one's identity, hypothetical scenarios about how one might otherwise have been had one's gametic origin been different are deemed metaphysically impossible. Kripke writes: "How could a person originating from different parents, from a totally different sperm and egg, be *this very woman*? One can imagine, given the woman, that various things in her life could have changed... But what is harder to imagine is her being born of different parents. It seems to me that anything coming from a different origin would not be this object" (1980, 113). This rules out such hypothetical scenarios as "if I had been born without this genetically

inherited condition,” “if I had been born the opposite genetic sex,” “if I had been born a generation earlier,” and “if I had been conceived by other parents.” I henceforth refer to such prohibited scenarios as alternative-origin scenarios.

The necessity of origin has had widespread influence not only in metaphysics but also in ethics. Notably, it is a key presupposition of the non-identity problem, which arises when certain actions affect who will and who will not be born. Most of us accept that an action is bad for a person if that person’s life would have been better had that action not been performed. If, however, not performing the action had resulted in the person not being born in the first place, then such an action cannot be considered to be harmful for the person, even if that action had led to the person living with an undesirable condition. Here, the identity of the person in question is taken to be determined by the person’s gametic origin. This is considered as subverting the usual ways in which we tend to morally evaluate actions involving the welfare of future people, such as in the debates about wrongful life, preconception genetic selection, preimplantation embryo selection, and environmental policy.

Derek Parfit, a key exponent of the non-identity problem, is particularly dismissive of alternative-origin scenarios because they violate the necessity of origin. In *Reasons and Persons* (1984), he mentions a case of a woman speculating about how she might have been had her parents married other people. His response is abrupt: “Thus one woman writes: It is always fascinating to speculate on who we would have been if our parents had married other people. In wondering who she would have been, this woman ignores the answer: ‘No one’” (1984, 351). Parfit considers such speculation to be misguided. He suggests that the woman is committing an error, because it is metaphysically impossible for her to have originated from gametes other than those from which she actually originated. If her parents had married other people, the resulting child would not be her but a different child. Accordingly, Parfit considers this sort of metaphysically erroneous speculation to have no place in ethical theorising.

There is good reason, however, to be dissatisfied with this abrupt dismissal of such speculation. While the necessity of origin may deem the aforementioned speculative scenario metaphysically impossible, it is nonetheless intelligible. Moreover, these kinds of speculation are commonplace in the everyday discourses of competent speakers. To many of us, such musings as “if I had been born the opposite genetic sex” and “if I had been born a generation earlier” make meaningful sense. For example, think of the relatability of popular song lyrics such as Beyoncé’s commentary in her 2008 single “If I Were a Boy” and the opening line “Wouldn’t it be nice if we were older?” from the Beach Boys’ 1966 single “Wouldn’t It Be Nice.” Alternative-origin scenarios also commonly appear in internet discussions about intergenerational differences, with people from the younger millennial generation speculating about what opportunities they would have had

if they had been from the baby boomer generation and, conversely, people from the older baby boomer generation speculating about how they would currently be handling things if they had been from the millennial generation. As I shall indicate, such musings as “if I had been born without this genetically inherited condition” and “if I had been conceived by other parents” are also commonplace, particularly in cases involving genetic diagnosis and misattributed genetic parentage.

The intelligibility and prevalence of such alternative-origin scenarios in the everyday discourses of competent speakers suggests that they cannot simply be dismissed as nonsense. In this paper, I provide a more charitable approach to understanding alternative-origin scenarios that does not commit ordinary language users to incoherence but instead aims to make the best sense of what they are trying to express. Some philosophers have sought to reject the necessity of origin by assuming other metaphysical accounts of identity that do not involve gametic essentialism.¹ While I am sympathetic to some of these approaches, my own approach will be different. Rather than interpreting alternative-origin scenarios as putative metaphysical states of affairs, I argue that they are best understood as epistemic possibilities. An advantage of this approach is that it does not rely on commitment to any particular metaphysical account of identity. Drawing on the work of David Chalmers (1996; 2004; 2010), I use the philosophical framework of two-dimensional semantics to clarify the distinction between metaphysical and epistemic possibilities. I also use this framework to illuminate the modal properties of alternative-origin scenarios. Finally, I explore some potential implications of my analysis for the ethical challenges associated with the non-identity problem.

2. Metaphysical Possibility and Identity

Consider the two following cases. The first case concerns the diagnosis of a genetically inherited condition:

Diagnosis: Billy is the genetic child of Barbara and Brian. Barbara suffers from polycystic kidney disease, which is an autosomal dominant inherited condition that does not become clinically apparent until middle adulthood. Brian does not have polycystic kidney disease. The chance of a genetic child of Barbara and Brian inheriting the condition is 50 percent. Before he reaches the age at which the condition would usually become clinically apparent, Billy undergoes a diagnostic test for polycystic kidney disease. The test yields a positive result indicating that Billy has inherited the genetic condition from Barbara. Dismayed by this outcome, Billy speculates about how his future could have turned out had the diagnostic test instead yielded a negative result.

¹ Cooper 2015; Mackie 2006; Madell 2015; Williams 2013; Wolf 2009; Wrigley 2012.

The second case concerns misattributed genetic parentage in a child conceived using donor gametes:

Donation: Rosie is the legal child of Olivia and Simon. Because both Olivia and Simon suffer from infertility, Rosie was conceived using gametes from donors. For much of her life, Rosie had believed that Olivia and Simon were her genetic parents. One day, however, Olivia and Simon disclose to Rosie that she was conceived using donor gametes. Reflecting on this news, Rosie speculates about whether or not Olivia and Simon would have treated her any differently had she actually been their genetic child. Rosie is reassured by Olivia and Simon that they love her just the same as they would have done had she been genetically related to them.

The speculations of Billy and Rosie in these cases make intuitive sense. It does not take much effort to conceive of a scenario where Billy's diagnostic test for polycystic kidney disease yields a negative result instead of a positive result. Similarly, it does not take much effort to imagine Rosie being the genetic child of Olivia and Simon. Indeed, Rosie had believed this to be the case before her parents' disclosure about her having been conceived using donor gametes.

Despite being *prima facie* intelligible, these alternative-origin scenarios are deemed metaphysically impossible by the necessity of origin. In the case of *Diagnosis*, his positive test result indicates that Billy originated from an ovum whose genome contains the polycystic kidney disease gene. If, counterfactually, the test result had been negative, then this would have indicated a different gametic origin, specifically one involving an ovum whose genome does not contain the polycystic kidney disease gene. Given that the necessity of origin suggests that one's gametic origin is essential to one's identity, the person in this counterfactual world who receives a negative test result would not be Billy but someone else. In other words, there is no metaphysically possible world in which Billy does not have polycystic kidney disease. Similarly, in the case of *Donation*, a genetic child of Olivia and Simon in a counterfactual world would not be Rosie but someone else. According to the necessity of origin, there is no metaphysically possible world in which Rosie is the genetic child of Olivia and Simon.

These metaphysical considerations have ethical implications relating to the non-identity problem. Because there is no metaphysically possible world in which Billy does not inherit polycystic kidney disease, he cannot claim that he has been harmed by his having inherited polycystic kidney disease. Similarly, given that there is no metaphysically possible world in which Rosie is the genetic child of Olivia and Simon, Rosie cannot wonder whether she is better off or worse off for being genetically unrelated to Olivia and Simon. Indeed, as noted earlier, Parfit dismisses as simple errors such hypotheses about how people might otherwise have been had their gametic origins been different.

Not everyone shares the view that the aforementioned alternative-origin scenarios are metaphysically impossible. Many reject the genetic essentialism associated with the necessity of origin, and they instead assume different metaphysical accounts of identity and possibility. For example, one could, following René Descartes (1996 [1641]), accept that dualism is true and take one's nonphysical consciousness to be essential to one's identity. Endorsing a version of this view, the philosopher Geoffrey Madell proposes that identity is basic and concerns "the point of view of the experiencing subject" (2015, 7). I have some sympathy with this approach, which shares some similarity with my own, but an important difference that will become clear is that my approach interprets the set of possibilities concerning the experiential subject in epistemic rather than metaphysical terms. Rachel Cooper (2015) explores a different approach based on Harry Frankfurt's (1971) volitional account of identity. According to this account, the cares or desires that a person endorses count towards his or her identity and constrain the possible courses of action that are available to that person. Penelope Mackie (2006) rejects the view that identities have to be grounded in substantial properties and instead argues that individuals can have bare identities. That is to say, a person can have an entirely different set of properties in a possible world and yet be the same person. Meanwhile, Anthony Wrigley (2012) and Nicola Williams (2013) consider a different approach to metaphysical possibility based on David Lewis's (1968) counterpart theory. This theory analyses the possible ways one might otherwise be in terms of the properties of one's counterparts in other possible worlds. For any person p and any property q , p is possibly q iff p has a counterpart in a possible world who is q . Furthermore, p is necessarily q iff all of p 's counterparts are q . This approach is more permissive than Kripke's genetic essentialism, because the counterparts need not resemble the person genetically. Depending on what kinds of similarity are considered relevant, the counterparts can resemble or differ from the person in various ways.

By rejecting the unduly restrictive account of identity associated with the necessity of origin, the aforementioned accounts allow some alternative-origin scenarios to be deemed metaphysically possible. In the case that dualism is true, Rosie could have possibly been the genetic child of Olivia and Simon, insofar as there is a counterfactual world where Olivia and Simon are fertile, and where Rosie's nonphysical consciousness is associated with the body that originates from the meeting of gametes from Olivia and Simon. If the volitional account of identity is assumed, Rosie could have possibly been the genetic child of Olivia and Simon if being the genetic child of Olivia and Simon is compatible with the cares that she considers central to her identity. If one assumes the bare-identity thesis, Rosie could have possibly been the genetic child of Olivia and Simon because Rosie's identity is not grounded in any substantial property or set of properties. If counterpart theory is assumed, Rosie could possibly have

been the genetic child of Olivia and Simon in virtue of her having a counterpart in a possible world who differs from her with respect to genetic parentage but resembles her in other relevant respects.

While the above approaches may allow us to take alternative-origin scenarios seriously as metaphysical possibilities, they do come with metaphysical commitments that not everyone will find acceptable. Many philosophers find counterpart theory metaphysically problematic and instead endorse a modal framework that conserves transworld identity. The criticisms of counterpart theory form an extensive literature, and it is beyond the scope of this particular paper to examine any of them in detail. Critics have, however, appealed to the inability of counterpart theory to account for the modal claim “I have a counterpart who is quite unlike me” (Feldman 1971), the dependence of counterpart theory on an implausible modal realism (Merricks 2003), the inability of counterpart theory to accommodate an actuality operator that is required to represent many modal claims (Fara and Williamson 2005), and the failure of counterpart theory to conserve the transitivity of identity (Bader 2016). The aforementioned metaphysical accounts of identity are also contentious. Theorists who reject the necessity of origin are unlikely to reach agreement about which account of identity is the correct one. This is further complicated by Clark Wolf’s (2009) observation that the term “identity” is ambiguous and encompasses different concepts that are easily conflated. Distinctions have been made in the literature between “volitional identity” and “narrative identity” (Cooper 2015), between “metaphysical identity” and “ethical identity” (Appiah 1990), and between “numerical identity” and “narrative identity” (DeGrazia 2005). Moreover, there is controversy over which senses of identity are appropriate to use in which contexts (Cooper 2015; Wolf 2009).

Here, I shall not adjudicate between the different metaphysical accounts of identity but shall avoid the controversy by instead offering an approach to understanding alternative-origin scenarios that does not require commitment to any particular metaphysical account of identity. I suggest that when ordinary competent speakers conceive of scenarios in which they have different gametic origins, often they are conceiving these scenarios not as putative metaphysical possibilities but as epistemic possibilities. This distinction between metaphysical and epistemic possibilities can be illuminated by using the conceptual framework of two-dimensional semantics developed by Chalmers (1996; 2004; 2010). Insofar as the approach I offer does not require commitment to any particular metaphysical account of identity, it is compatible with whichever metaphysical account of identity one assumes.

3. Epistemic Possibility and Two-Dimensional Semantics

For the purpose of elucidating the philosophical theory underlying my proposal that alternative-origin scenarios are epistemic possibilities, let us analyse a metaphysical claim that has become standard in the

philosophical literature, namely, “water is H_2O .”² According to the modal framework of Kripke, “water is H_2O ” is an a posteriori necessary truth. It is a posteriori true, because it corresponds to a fact about the world that was empirically discovered, that is, that the drinkable liquid in oceans and lakes of our acquaintance that we call “water” has the chemical composition H_2O . It is necessary, because the identity holds across all possible worlds in which water is present. Hence, “water is not H_2O ” is impossible under this metaphysical account. Chalmers (1996) notes, however, that there is still an intuition that “water” and “ H_2O ” differ in some aspect of meaning. One could know that something is water without knowing that it is H_2O . Indeed, for much of human history, people did not know that water is H_2O . Moreover, even though it was actually the case that the drinkable liquid in oceans and lakes that we call “water” was discovered to be H_2O , one could still envisage a scenario in which it had been discovered to be something else. For example, we might envisage a scenario in which we are the occupants of Hilary Putnam’s (1973) Twin Earth, where the drinkable liquid in oceans and lakes of our acquaintance that we call “water” was discovered to be XYZ. Therefore, the claim “water is H_2O ” seems defeasible in a way that a tautology such as “water is water” does not.

This discussion about “water” reveals the tension between Kripke’s claim that “water is H_2O ” is necessarily true and the claim that “water is XYZ” could possibly have been true had our world turned out to be different in the relevant way. This tension can be resolved by distinguishing the former as a claim about metaphysical necessity from the latter as a claim about epistemic possibility. Two-dimensional semantics provides a way to understand this distinction. This is a modal framework that has been endorsed by a number of philosophers for various purposes, including characterising what is communicated when interlocutors have different communicative intentions (Stalnaker 1978), analysing indexicals (Kaplan 1979), distinguishing between two kinds of necessity (Davies and Humberstone 1980), capturing the a priori aspect of meaning (Jackson 1998), and understanding descriptive and causal conceptions of certain theoretical terms (Maung 2016). The most extensive and most generalised formulation of two-dimensional semantics, however, is provided by Chalmers (1996; 2004; 2010), and so it is this formulation on which I draw.

Under Chalmers’s formulation, two-dimensional semantics illuminates how different ways of conceiving how the world could otherwise have been bear on the notions of possibility and necessity. It recognises that the modal profile of a term such as “water” is dependent not only on what the term was discovered to denote in the actual world but also on which world is assumed to be the actual world. In Kripke’s modal framework, only the world we currently occupy is taken to be the actual world, while all other

² Chalmers 1996; Jackson 1998; Kripke 1980; Putnam 1973.

worlds are evaluated as counterfactual relative to this world. On Earth, which we currently occupy, the drinkable liquid in oceans and lakes that speakers call “water” was discovered to be H_2O , which is taken to fix the identity “water is H_2O ” across all counterfactual worlds. If, however, the actual world we occupy had turned out to be one with all the properties of Twin Earth, then the drinkable liquid in oceans and lakes that speakers call “water” would have been discovered to be XYZ. In this scenario, “water is XYZ” would be true.

This suggests that a term such as “water” can be taken to express two intensions, which Chalmers respectively calls the primary intension and the secondary intension, but which other theorists have also respectively called the diagonal intension and the horizontal intension (Stalnaker 1978), and the A-intension and the C-intension (Jackson 1998). The secondary intension of “water” simply corresponds to its intension under Kripke’s modal framework. It is determined though a posteriori empirical discovery of its chemical composition in the world we currently occupy. This is then rigidified across all worlds evaluated as counterfactual relative to the world we currently occupy, so that “water” necessarily picks out H_2O in virtue of its secondary intension. By contrast, the primary intension of “water” is determined by its mode of presentation, which we know through acquaintance, prior to or irrespective of the empirical discovery of its chemical composition. Roughly, this corresponds to “the dominant clear, drinkable liquid in the oceans and lakes of *my* actual acquaintance” (Kipper 2012, 74–75). What the primary intension of “water” happens to pick out is thus dependent on which world is assumed to be the actual world we occupy. If the actual world we occupy had turned out to be one with all the properties of Earth, which indeed it has, then the liquid we dubbed “water” would have been discovered to be H_2O , and so the primary intension of “water” would pick out H_2O in this scenario. If the actual world we occupy had turned out to be one with all the properties of Twin Earth, then the liquid we dubbed “water” would have turned out to be XYZ, and so the primary intension of “water” would pick out XYZ in this scenario.

The scenarios in the domains of primary and secondary intensions respectively correspond to epistemic and metaphysical possibilities. As suggested above, the secondary intension of “water,” namely, “ H_2O ,” is determined a posteriori in the world we currently occupy and is taken to hold necessarily. A metaphysical possibility is any world that is constrained by this a posteriori necessity, which encompasses the actual world we currently occupy and the worlds evaluated as counterfactual relative to this world. By contrast, the primary intension of “water” is determined by its pretheoretical mode of presentation with which we are acquainted prior to any a posteriori discovery of its chemical composition, and so scenarios in its domain are not constrained by such a posteriori necessity. Rather, they are constrained by a priori reasoning. Accordingly, Chalmers

proposes that an epistemic possibility is any such hypothetical scenario concerning the nature of the actual world that is not ruled out a priori. For example, we know “water is H_2O ” not in virtue of a priori reasoning on its own but in virtue of the a posteriori discovery that water is H_2O . Hence, the possibility “water is XYZ” is not excluded on the basis of a priori reasoning without empirical evidence. While “water is H_2O ” turned out to be excluded by the a posteriori discovery of water’s chemical composition in our world, it nonetheless is a priori conceivable that the stuff we call “water” with which we are acquainted could have been discovered to be something other than H_2O had the actual world we occupy turned out to be different. For instance, we can conceive of a scenario where the early experiments of Henry Cavendish and Antoine Lavoisier had yielded different results. By contrast, we know through a priori reasoning that an oxymoron such as “water is not water” is false, and so this scenario is epistemically impossible.

More needs to be said about the structure of a world taken to be actual. According to Chalmers, an epistemically possible scenario can be characterised as a centred world, or “an ordered triple of a possible world along with an individual and a time in that world” (2010, 546). This specification of the world, individual, and time designates self-location by serving as a “you are here” marker (211). The reason for this characterisation is that the actuality of a world for a speaker is not determined until the experiential perspective of the speaker is specified. That is to say, a hypothesis that a given world is actual for a speaker includes the hypothesis that the speaker is marked at the centre of that world at a specified time. For example, when I imagine the epistemic possibility “water is XYZ,” I am imagining that I currently reside in a world in which the drinkable liquid in oceans and lakes that I call “water” was discovered to be XYZ. Hence, the difference between my entertaining a metaphysically possible world and my entertaining an epistemically possible scenario is respectively the difference between my assuming the experiential perspective of my current earthling existence and my assuming my experiential perspective to be that of a Twin Earthling (Ebbs 2009, 206).

It is worthwhile noting that the appeal to epistemic possibility is not confined to science fiction theorising of the sort exemplified by the Twin Earth thought experiment but is commonplace in genuine scientific reasoning. For example, consider this two-dimensional semantic analysis of the discovery that poliomyelitis has a viral aetiology (Maung 2016). Under Kripke’s modal framework, it is a necessary a posteriori fact that poliomyelitis has a viral aetiology, and so it is metaphysically impossible for a disease that clinically resembles poliomyelitis but does not have a viral aetiology to be poliomyelitis. Nonetheless, it is epistemically possible that poliomyelitis could have been discovered to have a different aetiology had our world been different in the relevant way. Indeed, before Karl Landsteiner and Erwin Popper made the empirical discovery that

poliomyelitis has a viral aetiology, they had seriously considered the hypothesis that it had a bacterial aetiology (Skern 2010, 1372). This hypothesis is an epistemic possibility that yielded testable predictions that were eventually refuted empirically. Therefore, while it was confirmed through a posteriori discovery that poliomyelitis's having a viral aetiology is metaphysically necessary, it is epistemically possible that the world in which we reside could have been one in which poliomyelitis had turned out to have a bacterial aetiology.

In this section, I have shown that Chalmers's modal framework of two-dimensional semantics clarifies the distinction between epistemic and metaphysical possibilities. The latter encompasses counterfactual worlds that are constrained by the a posteriori necessity that is fixed in the world we currently occupy, whereas the former encompasses hypothetical scenarios concerning the nature of the actual world we occupy. This analysis shows that there is no tension between "water is H_2O " being metaphysically necessary and "water is not H_2O " being epistemically possible. In the following section, I argue that the same kind of analysis can be applied to alternative-origin scenarios.

4. Alternative-Origin Scenarios as Epistemic Possibilities

Consider that Rosie originated from ovum o_1 and spermatozoan s_1 . According to Kripke's modal framework and the necessity of origin, "Rosie's gametic origin is o_1-s_1 " holds across all possible worlds in which Rosie is present, suggesting that "Rosie's gametic origin is o_1-s_1 " is metaphysically necessary and "Rosie's gametic origin is o_2-s_2 " is metaphysically impossible. Furthermore, for reasons I give below, "Rosie's gametic origin is o_1-s_1 " is an a posteriori necessary truth analogous to "water is H_2O ." This indicates that "Rosie's gametic origin is o_2-s_2 " is not excluded on the basis of a priori reasoning alone, and so is epistemically possible.

The a posteriori nature of a statement like "Rosie's gametic origin is o_1-s_1 " can be emphasised by reconsidering the aforementioned cases of *Diagnosis* and *Donation*. In *Diagnosis*, his learning that he had originated from an ovum whose genome contains the polycystic kidney disease gene was an a posteriori discovery for Billy, revealed through genetic testing. Prior to his receiving the test result, he did not have the relevant knowledge about his gametic origin. The alternative scenario in which his diagnostic test for polycystic kidney disease yields a negative result is prima facie conceivable and is not ruled out a priori. Similarly, in *Donation*, her learning that she is genetically unrelated to Olivia and Simon was an a posteriori discovery for Rosie, revealed through the testimony of Olivia and Simon. Her former belief that she is the genetic child of Olivia and Simon is not ruled out a priori. Therefore, although the necessity of origin states that it is metaphysically necessary for one to have the gametic origin

that one has, the a posteriori nature of this knowledge suggests that it is nonetheless epistemically contingent.

The considerations above indicate that it is epistemically possible that one could have had a gametic origin different from the gametic origin one has in this world. One can readily conceive of scenarios where one learns, perhaps from viewing a birth certificate or a medical record, that one was born a year earlier, born a different genetic sex, or even born to different parents. Hence, the claim “I am the person who originated from gametes o_x and s_x ” seems epistemically defeasible in a way that a tautology such as “I am me” does not. That is to say, the speculation that one could turn out to have originated from different gametes cannot be ruled out a priori. This is not in tension with the claim that such an alternative-origin scenario is metaphysically impossible, as the modal framework of two-dimensional semantics shows how epistemic possibility and metaphysical possibility can come apart. Indeed, Billy could say “I would have had a better life if I had grown from a different ovum” and in the very same breath say something like “but, of course, someone who grew from a different ovum would be a different person from me.” The first clause expresses an epistemic possibility, while the second clause expresses a metaphysical possibility.

This can be couched in terms of primary and secondary intensions. If the necessity of origin is assumed, then the secondary intension in a speculation about how one might otherwise have been would be determined by one’s gametic origin. This is rigidified across all worlds evaluated as counterfactual, so that in any given counterfactual world where nobody with the relevant gametic origin had been conceived, the secondary intension would have no referent. Hence, Parfit’s dismissal of an alternative-origin scenario on the basis of metaphysical impossibility hinges on a secondary intension analysis of the speculation. In this world, Rosie originated from gametes o_1 and s_1 , which, assuming the necessity of origin, determines the relevant secondary intension of “Rosie.” Under such a secondary intension analysis, a possible person who originated from gametes o_2 and s_2 would not be Rosie but someone else. By contrast, the epistemic possibility of a scenario where one has a gametic origin different from the gametic origin one has in this world hinges on a primary intension analysis of the speculation. Under such an analysis, it is Rosie who turns out to have grown from gametes o_2 and s_2 in the speculative scenario. And so, it is the primary intension analysis that is relevant to the understanding of an alternative-origin scenario as an epistemic possibility.

More now needs to be said about what determines the primary intension in the context of an alternative-origin scenario. As previously noted, the primary intension of a term such as “water” is determined through one’s acquaintance with its pretheoretical mode of presentation, which is independent of any a posteriori discovery of its chemical composition. Roughly, this is “the dominant clear, drinkable liquid in the oceans and lakes of *my* actual acquaintance” (Kipper 2012, 74–75). Likewise, the

primary intension in an alternative-origin scenario about a given person is determined through acquaintance with the person, prior to or irrespective of any a posteriori discovery of the person's gametic origin. Hence, the primary intension of "Rosie" is determined through one's ordinary acquaintance with her, prior to any discovery of her gametic origin and prior to any theoretical reckoning about the metaphysics of identity. As Chalmers (2002) notes, this allows for the mode of presentation to vary between speakers, even though the referent may be the same. For example, in *Diagnosis*, when Billy imagines an alternative-origin scenario where he did not inherit polycystic kidney disease, the primary intension of "Billy" is determined through his primitive first-person acquaintance with himself qua experiential subject. Phenomenologically speaking, this could be taken to pertain to the basic sense of first-person selfhood that individuates a given experiential subject from the countless plurality of other experiential subjects (Zahavi 2005). When, however, someone else, say Barbara, imagines the alternative-origin scenario where Billy did not inherit polycystic kidney disease, the primary intension of "Billy" might be determined through her acquaintance with Billy from her interpersonal interaction with him, prior to any a posteriori discovery of his gametic origin.

To summarise so far, then, an alternative-origin scenario of the form "if x had gametic origin o_y-s_y instead of gametic origin o_x-s_x " can be understood as the epistemically possible hypothesis that our world is one in which the individual with whom one is ordinarily acquainted as " x " turns out to have originated from gametes o_y and s_y . In the case where x is entertaining this alternative-origin scenario about himself or herself, the relevant sense of " x " is the primary intension, which is determined through x 's immediate first-person acquaintance with himself or herself qua experiential subject, prior to any a posteriori discovery about his or her gametic origin and prior to any metaphysical theorising about identity. For the purpose of this primary intension, we need not worry about whether this experiential subject turns out to be correlated with a particular brain, be correlated with a particular succession of person stages, or indeed be identified with a particular nonphysical consciousness, as this is a metaphysical question in the domain of the secondary intension. What matters with respect to the primary intension is the primitive acquaintance of x with himself or herself as a subject with a particular locus of experience, prior to or irrespective of any theoretical knowledge of what metaphysically underpins this experience.

The approach I have offered has two major attractions. The first attraction is that it takes seriously the meanings of alternative-origin scenarios, instead of committing ordinary language users to incoherence. The second attraction, as noted earlier, is that it does not get embroiled in the metaphysical controversy about what determines identity. By couching alternative scenarios in epistemic rather than metaphysical terms, the approach

allows us to account for the intelligibility and modal significance of these alternative-origin scenarios without committing us to any particular metaphysical account of identity or to any particular view about the necessity of origin. That is to say, we can accept that alternative-origin scenarios are epistemically possible regardless of whether or not we consider them to be metaphysically possible. Hence, a dualist or a bare-identity theorist could accept that it is both epistemically and metaphysically possible for one to have originated from a pair of gametes different from those from which one had actually originated, while a defender of the necessity of origin could agree that it is epistemically possible but hold that it is metaphysically impossible.

5. Implications

The two-dimensional semantic account of alternative-origin scenarios I have presented has potential implications for the ethical challenges associated with the non-identity problem. First, it captures a key reason why people find Parfit's dismissal of alternative-origin scenarios unsatisfying. As noted above, the force of the non-identity problem rests on the necessity of origin, which rules out certain states of affairs on the grounds that they are metaphysically impossible. Our speculations are not necessarily bound by the constraints of metaphysical possibility, however. That is to say, the states of affairs that are deemed metaphysically possible do not exhaust the states of affairs that are conceivable and intelligible to competent speakers. I have shown that certain speculations we entertain about how we might otherwise have been can be *prima facie* intelligible in virtue of being epistemically possible, even if they are shown to violate the metaphysical constraints set by the necessity of origin. Hence, while Parfit's appeal to the necessity of origin may suggest that an alternative-origin scenario is metaphysically impossible, it fails to undermine its intelligibility and relatability as an epistemic possibility. Pointing out that someone in a counterfactual world with a gametic origin different from mine would be a different person from me does not preclude me from being able to entertain a scenario where I happen to be associated with a different gametic origin.

We can capture this in terms of primary and secondary intensions. As noted in the previous section, Parfit's dismissal of an alternative-origin scenario on the basis of metaphysical impossibility hinges on a secondary intension analysis of the speculation. The necessity of origin may rule out certain counterfactual worlds in the domain of such a secondary intension analysis. This, however, would be unsatisfying to a speaker who intends the speculation to be understood in virtue of its primary intension. For example, Billy might say, "I would have had a better life if I had grown from a different ovum," to which Parfit might reply, "That's impossible, because someone who had grown from a different ovum would not be

you.” Unsatisfied by this reply, Billy might respond with “I know, but I’m imagining a scenario where the individual is me.” It would appear in this dialogue that the interlocutors are talking at cross-purposes. Billy finds Parfit’s reply unsatisfying, because it is in the domain of a secondary intension analysis of his speculation, while Billy himself intends his speculation to be understood in virtue of its primary intension.

Second, alternative-origin scenarios seem able to support evaluative judgements of comparative well-being despite being metaphysically impossible. When Billy says, “I would have had a better life if I had grown from a different ovum,” he is not only envisaging an epistemic possibility where his experiential perspective is associated with a different gametic origin, he is also making the evaluative judgement that his existence would be better in that epistemic possibility than in his current state of affairs. Of course, I concede that it is far from clear whether the evaluative judgements we make about epistemic possibilities are capable of supporting claims specifically about harm. The fact that Billy can conceive of an epistemically possible scenario where he is better off due to his having grown from an ovum that does not contain the polycystic kidney disease gene does not necessarily imply that he has been harmed by his having grown from an ovum that does contain the polycystic kidney disease gene. To ascertain this would require a more substantive account of harm, which is beyond the scope of this current paper. Nonetheless, even if it is unclear whether epistemic possibilities can support evaluations of harm, my analysis at the very least opens up the possibility of taking seriously such evaluative claims as “I would have had a better life if I had been born without this genetic disorder,” “I would have had a better life if I had been born a generation earlier,” and so on. Because these claims express epistemic rather than metaphysical possibilities, they cannot simply be dismissed on the grounds that they violate the necessity of origin.

And so, a positive aspect of the account I have offered is that it allows us to make comparative evaluations relative to epistemically possible scenarios that would otherwise have been dismissed offhand for violating the rigid metaphysical constraints set by the necessity of origin. While it is unclear whether these possible scenarios can support evaluations of harm, my analysis at the very least provides a way of preventing the non-identity problem being invoked to shut down any comparative evaluations whatsoever. This could allow scope for further ethical discussions about whether and why certain states of affairs can be deemed bad for the persons experiencing them, even though these states of affairs may be metaphysically necessary.

6. Conclusion

This paper has considered hypothetical scenarios concerning how we might otherwise have been had our gametic origins been different, which I have termed alternative-origin scenarios. Proponents of the necessity of origin,

such as Kripke and Parfit, dismiss alternative-origin scenarios as mistakes on the grounds that they are deemed metaphysically impossible. I have argued that such an abrupt dismissal does not do justice to the prima facie intelligibility of alternative-origin scenarios. I have offered a more charitable approach to understanding alternative-origin scenarios that does not commit ordinary language users to incoherence but conserves their intended meanings. Using Chalmers's modal framework of two-dimensional semantics, I have suggested that an alternative-origin scenario can be interpreted as an epistemically possible hypothesis about how one might have had a different gametic origin had one's world turned out to be different in the relevant way. By couching alternative-origin scenarios in epistemic rather than metaphysical terms, the account I have offered allows us to take seriously the meanings and modal implications of alternative-origin scenarios without having to commit to any claims about whether they are metaphysically possible. Accordingly, it allows us to account for the intelligibility and prevalence of alternative-origin scenarios while sidestepping the metaphysical controversies surrounding the nature of identity and the status of the necessity of origin thesis. The account I have offered has potential implications for the ethical challenges associated with the non-identity problem. First, it sheds some light on why some people might find Parfit's dismissal of alternative-origin scenarios unsatisfying. If an alternative-origin scenario is intended to be understood as an epistemic rather than a metaphysical possibility, one will be unconvinced by the attempt to dismiss it by showing that it is metaphysically impossible. Second, it allows us to make comparative evaluations relative to epistemically possible scenarios that would otherwise have been dismissed offhand for being metaphysically impossible, thus providing a way of preventing the non-identity problem being invoked to shut down ethical discussions about whether certain states of affairs can be deemed bad for the persons experiencing them.

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