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Reasons to Genome Edit and Metaphysical Essentialism about Human Identity

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The standard view in bioethics distinguishes between “person affecting” interventions that may harm or benefit particular individuals (e.g., by genome editing) and “identity affecting” interventions that determine which individual comes into existence (e.g., by genetic selection). Sparrow questions one of the central assumptions of the debates about reproductive technologies in the past several decades. He argues that direct genetic modification of human embryos should be classified not as “person affecting” but as “identity affecting” because any genome editing in the foreseeable future “will almost certainly” involve creating and editing multiple embryos, as well as selecting the “best possible” embryo by preimplantation genetic diagnosis. Sparrow also assumes that the distinction between “person affecting” and “identity affecting” interventions has crucial ethical significance: “the reasons we have to select embryos are weaker than the reasons we have to modify them” (Sparrow 2022). Thus, classifying genome editing as an “identity affecting” intervention, he concludes that there is no justification for laws requiring enhancement, even if one assumes that enhancement is morally obligatory.

In this commentary paper, we are taking one step further in questioning the central assumptions in the bioethical debates about reproductive technologies. We argue that the very distinction between “person affecting” and “identity affecting” interventions is based on a questionable form of material-origin essentialism. Questioning of this form of essentialist approach to human identity allows treating genome editing and genetic selection as more similar than they are taken to be in the standard approaches. It

would also challenge the idea that normative reasons we have in these two types of cases markedly differ in strength.

MATERIAL-ORIGIN ESSENTIALISM

The distinction between “identity affecting” and “person affecting” interventions, which many bioethicists and philosophers consider intuitively obvious, is based on material-origin essentialism. It is not a scientific claim about human reproduction biology, as many assumed, but a metaphysical view that the material origin is the essential property of individuals. The view has been famously defended by Kripke (1980), who found some properties easier to change in the imagination than others. For example, he argued that it is easier to imagine that Queen Elizabeth never became the Queen but much harder to imagine that she would have been born of different parents. He asks: “How could a person originating from different parents, from a totally different sperm and egg, be this very woman?” and answers that “It seems to me that anything coming from a different origin would not be this object” (Kripke 1980).

Material-origin essentialism, broadly construed, is a rather vague thesis. There is a lot of leeway in how material origins are to be identified. For example, it may assume that it is necessary for the individual to have their actual parents, or to have the exact genetic make-up they actually have, or to originate in exactly the physical matter they actually originate in. All interpretations have their problems (Cooper 2015). The first is vague since the term “parents” may have

different meanings (e.g., in the case of surrogacy), and the progress in reproductive technologies makes this term even more ambiguous. Of course, in one sense, the term “parents” may refer to people who supplied genetic material, which in turn, can be understood either as an information carrier or as an actual physical material. In this first interpretation, genetic material is just a form of instruction that can be recorded on different physical bases; in the second, it is reduced to the identity of physical particles that make up gametes. Both of these options have serious problems: the first leads to genetic reductionism, and the second implies many absurd consequences (e.g., someone’s essence may depend on what one’s father had eaten before conceiving). Moreover, some bioethicists suggest that “radical genetic interventions” may create a different child and hence cannot harm or benefit the particular child (Heyd 2021). This amounts to a rejection of the version of the material-origin essentialism that traces the material origins back to the gametes (for other criticism, see: Janssen-Lauret 2021).

Despite these problems, the material-origin essentialism has been commonly accepted on the grounds of its alleged “intuitiveness” by many bioethicists and philosophers writing about the nonidentity problem (Parfit 1984), as well as legal scholars commenting on wrongful life lawsuits (Shiffrin 1999). In particular, it is widely assumed that a person with a specific genetically-based disability could not have existed without that disability because her genetic make-up is the essential product of a particular sperm and egg. Thus, in such a situation, the person cannot say she would have been better off without such a disability because the only alternative option for her would be not to exist at all.

“Intuitiveness” of material-origin essentialism is also far from obvious. It is in tension with many common statements that seem intuitively true and coherent. For example, if Ann has Huntington’s disease inherited from her father, it would be natural for her to state: “I personally would have been better off without the gene mutation that causes my Huntington’s disease.” Moreover, she could also say: “I would have been better off (in terms of health) if I had a different father.” Or state that if a pre-conception genetic selection (or some “radical” gene editing) would be available for Ann’s future biological child, it will benefit the child because the child would be free of the gene mutation that causes Huntington’s disease. In all these cases, the standard approach that takes the metaphysical claim about material-origin identity for granted treats these sentences as meaningless.

In contrast, an anti-essentialist view inspired by “flexistentialism” proposed by Dasgupta (2018) postulates giving priority to ethical judgments about harm and wrongdoing as a guide to metaphysical claims about the identity of the entities that matter. The view assumes that there is no intelligible distinction between essence and accidents. It also accepts that some counterfactuals (e.g., about someone’s disability or someone’s father) can be literally true even if that person actually lacks the power to change their disability or parent in the way the counterfactual describes. Therefore, under this approach, it is perfectly understandable that Ann’s health would have been better if she had a different father or that Ann’s child could have literally benefited from a pre-conception genetic selection in the same sense as from some “person affecting” interventions (e.g., a Huntington disease therapy, if it existed). Such sentences are understandable because we can, for example, identify Ann as a person born from such and such a mother (but not father) (cf. ovular essentialism, Lewens 2021), or we can identify Ann’s child not as “the child with such and such genetic make-up,” but, for example, as “Ann’s first child” (Żuradzki 2008). In the next section, we will provide empirical data suggesting that a substantial minority of English native speakers agree with counterfactuals that are incompatible with an important version of the material-origin essentialism. Namely, the view that a person could not have had a different biological father. The data suggest that folk intuitions are more flexible about identities than assumed in the mainstream bioethical debates.

FOLK INTUITIONS ABOUT IDENTITY

We asked 280 study participants (51% F, 48% M, 1% non-binary, $M_{\text{age}} = 39.5$, age range 18–75, Prolific, UK and US nationals, English as the first language) about the possibility of having a different biological father, in a between-subjects design. First, study participants read the following introduction to the task, aimed at explaining that we are interested in counterfactual possibilities [wording differences in brackets]:

This is a brief study about what you [think could or could not have happened/consider possible and impossible]. Perhaps you think [you could have chosen/it was possible for you to choose] a different profession or hobby than your current one. Perhaps you think [you couldn’t have/it was impossible]. Perhaps you think [that Germany could have won/it was possible for Germany to win] World War II. Perhaps you think [it couldn’t have/it was impossible].

Each participant was then provided with one claim about the possibility of having a different biological

father. They had to choose one of three categorical response options (“I agree,” “I disagree,” and “I do not know”) and then explain their response in one or two sentences. Claims differed in how the possibility was worded (“[I could/It was possible for me to] have had a different biological father”; respective wording was also used in the introduction to the task) and whether it was presented in first- or third-person format (“[I/Tom] could have had a different biological father”; in third-person conditions, additional background information was given right after the introduction: “Tom’s biological father was Barry”).

No differences in frequency of responses were observed between the four conditions ($X^2(6, N=280) = 3.27, p = .775$). Overall, almost a third of study participants (30.0%) thought it possible for a person to could have had a different father. 64.3% of participants disagreed with the claim, while the remaining 5.7% chose “I do not know.” Reading through explanations provided by the participants, however, clearly shows that many of them did not understand the task in the intended manner. For example, many interpreted the task as dealing with (un)certainty of who in fact is the biological father, as in “My mother has been with my father since she was 16, she has had no other partners, which I believe severely limits the chances I could have had a different biological father.” (M, 33).

For this reason, we excluded participants based on their provided explanations if the explanation did not sufficiently demonstrate that the task was understood in the intended way. This left us with $n=113$ study participants. No differences in frequency of responses were observed between the four conditions ($X^2(6, N=113) = 8.73, p = .189$). Overall, a third of the remaining study participants (32.7%) thought it possible for a person to could have had a different father. 63.7% of participants disagreed with the claim, while the remaining 3.5% chose “I do not know.”

Here we provide a few sample explanations given by participants who agreed with the claim: “If his mother had slept with a different man, he could have had a different father.” (F, 34); “I believe I could, if my mum and dad never [met] in school or met someone before him I would have a different dad.” (M, 27); “Because my mother could have met different male that became her husband and subsequently my father.” (M, 54); “If my mother had stayed in her own country, I would have a different biological father as my parents wouldn’t have met.” (F, 36).



CONCLUSIONS

In conclusion, material-origin essentialism is a contested metaphysical view that neither enjoys a consensus among philosophers nor captures how non-philosophers think about counterfactual possibilities. Neither it is derived from the way English language functions. Metaphysical views that are incompatible with material-origin essentialism can coherently be expressed. In combination, these observations put the burden of proof on bioethicists who insist on assuming the truth of the material-origin essentialism and its normative significance.

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