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The Transgender Experience and the Limits of Physiological Continuity Theories

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In this paper I want to address an issue at the intersection of the philosophy of personal identity and the philosophy of transgender identity: the fact that, on one influential way of framing the transgender experience, it is incompatible with, and therefore constitutes a challenge for, physiological continuity theories of personal identity. To see this, I begin by outlining the relevant part of physiological continuity theories. Then I turn to the relevant thesis about the transgender experience. After explaining why these are in tension, I conclude with two alternate ways of moving forward, arguing that, although both approaches face challenges, either suffices to avoid this tension.

Keywords: Transgender identity; personal identity; physiological continuity.

In this paper I want to address an issue at the intersection of the philosophy of personal identity and the philosophy of transgender identity: the fact that, on one influential way of framing the transgender experience, it is incompatible with, and therefore constitutes a challenge for, physiological continuity theories of personal identity.[1]

Before I begin, I should make clear that the challenge is not raised uniquely by the transgender experience. But the transgender experience makes the challenge easier to see and, for that reason, harder to deny. I also should make clear that others might think that the challenge is really for transgender identity, or at least for the particular way of framing it that will be explored below, rather than for physiological continuity theories of personal identity. It is a matter of which

[1] Throughout, claims of incompatibility should be understood as restricted to the metaphysically robust reading specified below.

intuitions are more firmly held, and the point is that there is a core thesis in physiological continuity theories that is in tension with a core thesis about the nature of the transgender experience.

To see this, I begin by outlining the relevant part of physiological continuity theories. Then I turn to the relevant thesis about the transgender experience. After explaining why these are in tension, I conclude with two alternate ways of moving forward, arguing that, although both approaches face challenges, either suffices to avoid this tension.

Physiological continuity theories say that one's personal identity is tied to one's physiology in some important way (Kahn 2014: chapter 5; Olson 2024: section 7). Of course, physiology changes through time: red blood cells are being broken down in the liver and generated in the bone marrow; white blood cells are in a constant state of flux; epithelial cells are continuously being replaced; neural networks are formed, stabilized, destabilized, and stabilized again; and so on. But proponents of physiological continuity theories argue that (i) there is some rough continuity between the states of one's body from moment to moment, and (ii) this continuity is explained by some regular causal process. This is what is taken to explain personal identity through time.

Different versions of physiological continuity theory differ in important ways. For example, Sauchelli argues that we are essentially material objects and that these material objects can go through different phases, including those of human animal, person, and corpse (Sauchelli 2017). By way of contrast, according to Wiggins, once we die, we cease to exist: a corpse is what remains of us on Wiggins' account, not a phase of us (as on Sauchelli's account) (Wiggins 2003).

However, what these different versions of physiological continuity theory have in common, and what is most important for present purposes, is the assertion that we are identical to our bodies in some important way and, therefore, that it is not merely impossible, but incoherent, to suppose that we and our bodies could have importantly different properties of the sort that will be at issue in this essay (i.e., sexed properties central to identity, where "sex," as used here, refers to biological or physiological classification).

Physiological continuity theories are contrasted most frequently with psychological continuity theories. The latter approach personal identity in a similar way, as being tied to a process rather than a substance (unlike ensoulment theories of personal identity). But the process that identity tracks is, according to psychological continuity theories, a mental one rather than a bodily one: whereas physiological continuity theories tie identity to physiology, psychological continuity theories tie identity to psychology—to minds (Kahn 2014: chapter 5; Olson 2024: section 4). There is some overlap here insofar as physicalist theories of mental states will say that mental states are instantiated in the body. But the overlap is incidental and, more, physiologi-

cal continuity theories focus on the body as a whole rather than solely those parts responsible for mental activity (primarily the brain).

To understand the differences between physiological and psychological continuity theories, it is helpful to consider some of their key points of contrast.

One argument made against psychological continuity theories appeals to the Birth Problem:

> If psychological continuity theories are correct, then we were never born. (Kahn 2014: chapter 5; Olson 2024: section 7)

The idea here is that the kind of robust psychological properties required for psychological continuity are not realized, according to empirical psychologists, until age 1 or 2, long after both conception and birth. Thus, if psychological continuity theories are correct, then we emerged into being about a year after our bodies were born and about two years after our bodies were conceived.[2] Because this is counterintuitive, it is a problem for psychological continuity theories—one which physiological continuity theories do not face.

A second argument made against psychological continuity theories appeals to what David DeGrazia has dubbed the Someone Else Problem:

> If psychological continuity theories of personal identity are correct, then deciding what medical decisions should be made in the event that one becomes psychologically incapacitated is deciding about what should happen to someone else. (DeGrazia 1999)

The Someone Else Problem is taken to show that psychological continuity theories undermine the authority presupposed in the practice of living wills, and, because the practice of living wills is thought to be unproblematic, the Someone Else Problem, like the Birth Problem, is supposed to pose a challenge to psychological continuity theories, but not to physiological continuity theories.

On the basis of these kinds of arguments against psychological continuity theories, some proponents of physiological continuity have begun to voice disapproval for brain death as a criterion of death (Pellegrino et al 2008). In cases in which integrative bodily functioning is still present but brain activity is irretrievably absent, legal codes (like those in the US and Europe) which honor brain death (of some kind) as a sufficient condition of death pronounce a person dead. But, according to these critics, because, in such cases, physiological continuity continues even when psychological continuity does not, pronouncements of death are premature.

[2] Although EEG activity can be detectable as early as 6 weeks, clear state transitions do not seem to appear until around 30 weeks (Britton et al 2016). This suggests that, even if there is an answer to the Birth Problem (if psychological continuity can be built on less robust psychological properties), it would founder on the idea that we were conceived, or that the first quickening event was when my mother first felt me move.

The Birth Problem, the Someone Else Problem, and questions about criteria of death concern either the beginning or the end of life of an individual. But the transgender experience is not generally framed in those terms. The transgender experience is generally framed as arising in the course of an individual's life. On one popular narrative—which will be challenged below—a member of the transgender community is someone who is sufficiently psychologically mature to have a concept of self; to be aware of their body; to be aware, in particular, of their body as sexed; and to feel a profound sense of alienation from their body insofar as it is sexed. That is, according to many individuals in the transgender community, transgender issues arise when the subject feels that they do not fit in their body (Erickson-Schroth 2022). Call this the Popular Transgender Narrative:

> Members of the transgender community believe that the sex of their bodies does not match their experienced sex.[3]

For the purposes of this paper, I am focusing on readings of such claims that treat "mismatch" as involving a difference in what the subject is (in the identity-constituting sense), rather than merely how the subject is socially classified or experienced. I should emphasize that this is a philosophically loaded reconstruction of the narrative: many individuals and theorists understand such claims in less metaphysically committal ways, for example as concerning gender identity, social role, or lived experience, rather than identity in the strict numerical sense, and I am going to explore precisely such an alternative reconstruction at the end of this essay. With that being said, the reason the Popular Transgender Narrative is important for present purposes is that it is predicated on a distinction between body and individual, a distinction that leads to two categories of individuals: cisgender individuals, whose bodily sex matches the sex with which they self-identify (i.e.,

[3] Moschella provides evidence that this is a popular transgender narrative (Moschella 2021: section II; see also Skrzypek 2023, esp. section IV). She uses this to point us toward the same tension between the transgender experience and physiological continuity theories that I am going to point us toward. However, Moschella goes further than I: she argues, in addition, that non-psychological continuity theories are mistaken; that transgender individuals are laboring under an illusion; and that "offering hormonal and surgical gender reassignment treatments for gender dysphoria is analogous to offering liposuction for anorexia" (Moschella 2021: 795). This analogy is controversial and not widely accepted, but it illustrates the strength of the position she defends.

As will emerge below, my goals are much more modest than Moschella's: I merely want to point to the tension between the Popular Transgender Narrative and physiological continuity theories; I am not going to take a stand on the probity of other theories of personal identity, and, as I will point out at the end of this essay, I remain open to ways of conceptualizing the transgender experience which are consistent with physiological continuity theories. Thus, unlike Moschella, I remain open to (a) retaining the Popular Transgender Narrative and embracing alternate theories of personal identity, and to (b) embracing physiological continuity theories but reconciling the way we think about the transgender experience therewith.

with their self-conception or psychological identification), and transgender individuals, whose bodily sex does not match the sex with which they self-identify.

I am not claiming that the phenomenology described above entails a metaphysical conclusion on its own; rather, it is relevant insofar as it is compatible with, and often naturally expressed in terms that suggest, such a reading. In support of this strong interpretation, it is worth attending closely to the way in which some transgender individuals describe their experiences in first-person terms. In a range of autobiographical and quasi-clinical contexts, individuals report, not merely that they are treated incorrectly, or assigned to the wrong social category, but that their bodies themselves feel wrong for them in a more direct and immediate sense. For example, descriptions of distress focused on particular sexed features, such as primary or secondary sex characteristics, are often framed not as complaints about how those features are socially interpreted, but as expressions of alienation from those features as parts of one's own body (Serano 2007; Mock 2014; Erickson-Schroth 2022). First-person narratives likewise frequently describe a sense of inhabiting a body that does not fit one's sense of self, rather than merely occupying an ill-fitting social role (Bornstein 2016; McBee 2014). While such statements are certainly open to multiple interpretations, one natural way of understanding them is as expressing a form of self/body mismatch that is not exhausted by claims about social role or presentation. At the very least, these cases make it difficult to rule out, from the outset, a reading on which the speaker is expressing a tension between what they take themselves to be and the sexed character of their body.

This point can be reinforced by considering accounts of gender dysphoria that emphasize the phenomenology of embodied distress. Clinical and theoretical discussions note that such distress is often directed at the body as such, rather than solely at the social meanings attached to it (American Psychiatric Association 2022; World Professional Association for Transgender Health 2022). Individuals frequently report discomfort, anxiety, or even revulsion in response to their own sexed anatomy, independently of any immediate social interaction or role-based constraint (Erickson-Schroth 2022). Phenomenological and philosophical treatments likewise stress the immediacy with which the body can be experienced as alien or discordant with one's sense of self (Heinämaa 2003). If this phenomenology is taken at face value, then a purely social or role-based interpretation of the transgender experience risks leaving something out. A more robust reading, on which the subject experiences their body as, in some sense, not properly their own or not reflective of what they are, offers a straightforward explanation of why the distress takes this specifically embodied form. This does not show that the metaphysical reading is correct, but it does support the claim that it is a live and theoretically motivated option.

Finally, it is important to make explicit a methodological assumption guiding the present discussion. In philosophical contexts, claims about identity are often taken as one legitimate starting point unless there is a compelling reason to reinterpret them in weaker terms. This approach is reflected in influential work in the philosophy of language and metaphysics, where ordinary usage is often taken as a starting point for theorizing about reference and identity (Kripke 1980; Evans 1982; Lewis 1983). More recent work in analytic metaphysics and conceptual analysis similarly emphasizes the legitimacy of beginning from surface-level commitments embedded in ordinary discourse, absent strong defeaters (Thomasson 2015; Cappelen 2018). When a speaker asserts that they "do not match their body," one option is to treat this as a loose or metaphorical way of expressing facts about social role, presentation, or psychological discomfort. Another option, however, is to take the claim more literally, as expressing a tension between the self and the body in a way that bears on questions of personal identity. The present argument proceeds by exploring the consequences of adopting this latter interpretation. Unless there is decisive reason to rule it out in advance, it is methodologically legitimate to ask what follows if such claims are understood as making, or at least committing one to, a metaphysically robust assertion about the relation between self and body.

But, if this is how we understand the transgender experience, then either physiological continuity theories are incorrect, or claims about mismatch between self and body are incorrect. If identity tracks physiology (if physiological continuity theories of personal identity are correct), then when someone says that they do not match their body, what they are saying is not merely false but contradictory since, on this view, the predicate and subject cannot come apart in the relevant way without violating identity itself. This is a semantic claim about literal truth conditions under rigid designation, not a claim about psychological intelligibility or pragmatic usage. More generally, if a subject-term rigidly refers to X, then a denial of identity with X cannot be literally true under that semantics, since it would require X to both be and not be identical to itself in the relevant context.

At this point, a natural objection is that this reconstruction of the Popular Transgender Narrative is mistaken: one might argue that when transgender individuals say that they do not match their bodies, they are not making a claim about identity in the strict metaphysical sense, but rather about gender identity, social role, or lived experience. If that is right, then the tension identified here dissolves, since physiological continuity theories need not deny that there can be profound forms of psychological or social mismatch of this kind. However, this objection does not undermine the present argument so much as it redirects it. For the claim being made here is conditional: if the Popular Transgender Narrative is understood in the more metaphysically robust way outlined above, then the tension arises; if it is not, then an

alternative reconstruction, of the sort considered below, will be more appropriate.

That is, the tension discussed here arises only if the Popular Transgender Narrative is read as asserting a mismatch in what one is, not merely in how one appears, is treated, or feels in contingent respects, and, again, an alternative approach will be explored below. For present purposes, it suffices to note that this is a philosophically demanding but defensible way of understanding such claims—and that, if physiological theories of personal identity are correct, then the sentence "I do not match my body" cannot be true on this interpretation because, on this view, I just am my body. Thus, either we must reject physiological continuity theories, or we must reject what I am calling the Popular Transgender Narrative: they cannot both be true under this interpretation. (The result is therefore conditional on adopting the metaphysically robust reading of the narrative outlined above.)

Proponents of psychological continuity theories of personal identity might welcome this result: they might hold on to the Popular Transgender Narrative while rejecting physiological continuity theories and never look back. Similarly, those who think that transgender individuals are laboring under an illusion also might welcome this result: they might hold on to physiological continuity theories while rejecting the Popular Transgender Narrative and never look back. However, in the remainder of this essay, I want to canvass two alternative ways of moving forward with the conjunction of the Popular Transgender Narrative and a physiological continuity theory, even while conceding that this requires some modification of one or the other.

The first way of moving forward, which is speculative and applies only in some contexts, argues that we should retain the Popular Transgender Narrative for pragmatic reasons, even though it is, strictly speaking, inaccurate. The idea is that, when there is a mismatch between body and mind of the kind experienced by transgender individuals, it is often easier to change, or at least to disguise, the mismatched aspect of the body (rather than the mismatched aspect of the mind).

For example, suppose that a trans woman believes that her body is incorrectly sexed. Her options include (i) trying to pass as a woman in public, (ii) undergoing gender reassignment surgery, and (iii) undergoing extensive psychotherapy in order to rid herself of the belief that her body is incorrectly sexed. Option (i) is typically a lower-cost solution: it might involve a change in wardrobe and grooming routine.[4] Options (ii) and (iii), by way of contrast, will be high-cost: they are financially expensive, bring risks of complications, and might not resolve the underlying issue. On this view, the options can be ranked, from best to worst, in the order in which they were enumerated: disguising the body

[4] Option (i) also might offer only temporary respite: it changes how much the individual thinks about the mismatch between body and mind, but the underlying mismatch remains.

(option (i)) is the first thing to try; then gender reassignment surgery (option (ii)); then psychotherapy (option (iii)).

These claims are illustrative. The ranking is intended only as a rough heuristic, not as a claim about all cases. However, if we accept this heuristic, then, according to this first way of moving forward, we can, and perhaps should, continue to talk about the transgender experience in terms of a mismatch between the self and physiology, rather than in terms of a mismatch between the self and psychology. That is, a proponent of this approach might argue that, although this way of speaking about the transgender experience is, strictly speaking, inaccurate (because physiological continuity is the correct criterion of personal identity, and physiological continuity is inconsistent with the Popular Transgender Narrative), so is our way of talking about the motion of the sun (e.g., we talk about the sun "rising" and "setting," as if it orbits the earth rather than the other way around).

Of course, the moral and social stakes are vastly different when it comes to conventions for talking about the sun and conventions for talking about the transgender experience. But the point for present purposes is merely the pragmatic retention of misleading language. Thus, someone who favors this first approach can contend that this way of talking about the transgender experience, while inaccurate in this strict sense, does no harm and, further, that there is a good reason for retaining it, namely: we know how to change and disguise the body and thereby allay the alienation inherent in the transgender experience in a way that we do not know how to change and disguise psychology. Thus, this approach, which depends on the empirical assumption that modifying or presenting the body is often more tractable than altering deep-seated psychological states, says that, although the Popular Transgender Narrative is, strictly speaking, incorrect (it is the psychology that does not match the self, not the other way around), we should retain it for pragmatic reasons.

An alternate way of moving forward is to reframe the transgender experience. This alternative is best understood as rejecting the metaphysical reading of the Popular Transgender Narrative rather than competing with it on its own terms. For example, Talia Mae Bettcher argues that transgender dysphoria does not arise from the belief that there is a mismatch between body and self, but, rather, from the belief that there is a mismatch between self and socially imposed roles and ways of being which are, according to Bettcher, incorrectly based on the body (Bettcher 2024). For example, on Bettcher's account, a trans woman might feel bad when she looks at her body, not because she thinks that it has the wrong sex, but because having her biological sex at the forefront of her consciousness reminds her of the painful fact that society will not allow her to compete as an athlete in the women's-only category, even though there is, according to Bettcher, no objective reason for this prohibition. Thus, according to Bettcher, a trans individual

who maintains that their body has the wrong sex is using a sort of shorthand. It is not the sex of their body that is upsetting; what is upsetting is that society prevents them from doing something they want to do, and they are reminded of this latter fact when they see the sex of their body, because that is what the prevention is based on. But, if the distress is about social constraints rather than bodily misidentification, then there is no need to posit a divergence between self and body in the identity-constituting sense. This makes Bettcher's account of the transgender experience compatible with physiological continuity theories of personal identity, in the limited sense that it does not require denying them. In this way, Bettcher's account does not so much resolve the tension as dissolve it by rejecting the assumption that claims about transgender experience are claims about metaphysical identity in the first place.

Some might object that, because, on Bettcher's account, it is society that is in the wrong—according to Bettcher, the social rules that are in question should not be based on biological sex—transgender individuals should change society, not their bodies. However, Bettcher can respond with a cost-benefit analysis that mirrors the one from a few paragraphs up. That is, Bettcher might point out that it is much easier to change the body than society. Thus, Bettcher might conclude, while it might be good to strive for social change in the long run, for the concrete here and now, a transgender individual who experiences powerful and persistent dysphoria would do better to focus on what they can do to change (or disguise) their body.

Indeed, Bettcher may argue, further, that, because of the way in which human psychology works, transgender individuals might think that their body really is the problem, perhaps because they do not realize that the social roles and categories in which they want to participate are only incorrectly based on biological sex. In such cases, these individuals might say that their bodies do not match their selves. But, Bettcher might argue, these individuals need to dig deeper to get to the root of the problem, and, when they do so (Bettcher might say), they will see that their experience is consistent with physiological continuity theories, not because it supports them, but rather because it sidesteps issues about metaphysical identity altogether.

However, these two alternatives are not unassailable. For example, the first approach can be challenged by those who are sympathetic to the transgender community on the grounds that it makes transgender individuals into deceivers, and it also can be challenged by those who are unsympathetic to the transgender community on the basis of a Cliffordian commitment to the truth. Similarly, the second approach can be challenged on the grounds that some transgender individuals seem to assert that their dysphoria arises from the experience of their bodies directly, rather than from the fact that their bodies recall to them the painful exclusion from desired social practices—and some who are less

sympathetic to the transgender community might challenge Bettcher's idea that these exclusionary practices should not be based on biology.

But the purpose of the present essay is not to settle these issues, nor is it to figure out what the best path forward is. My purpose is merely to highlight the tension between physiological continuity theories and the Popular Transgender Narrative, at least on one way of understanding it, and that aim has been accomplished.

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