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One Way, *Not* Another: An Asymmetrical Account of Personal Identity

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What does it mean to persist as a person over time? The question appears deceptively simple. We speak of identity across time with casual certainty: I plan for the future, regret the past, and recognize my childhood as part of who I am. In the debates about personal identity, to say that someone remains the same individual across time is to invoke a formal relation governed by logical constraints which the subject maintains despite undergoing changes. But what kind of relation exactly must hold for the individual to persist? Across theories of identity—whether the basis for identity itself is said to be psychological, bodily, or hybrid—one converging assumption appears secure: persistence is achieved through satisfaction of formal criteria of identity—reflexivity, transitivity and symmetry. This would seem like an obvious and unproblematic logical truth. Unless, of course, all dominant identity persistence accounts consistently fail precisely where those relations are assumed to hold—I claim, they do. Classical thought experiments involving branching conditions—where one earlier identity stage gives rise to multiple later successors—continue to generate internal contradictions that neither psychological nor biological theories can resolve without resorting to ad hoc restrictions. I suggest that such a

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systematic pattern of failure is not accidental but symptomatic, signaling a deeper issue at the very foundation of theory-building—symmetry relation in the identity notion across time—which, I argue, demands revision.

I begin by outlining some logical principles standardly composing the notion of identity, foreshadowing issues arising in personal identity persistence models. Next, I revisit the fission thought experiment to explicate the cross-theoretical struggles. I then discuss the role of temporal nature, or rather, the human experience of time being inherently asymmetrical. From there, I propose that any viable account of personal identity persistence should abandon symmetry as a necessary condition. In what follows, I offer an alternative, temporally asymmetrical model of persistence: one that preserves the transitivity intuition while accounting for the phenomenology of selfhood.

I. Criteria for Identity

What is at stake when we speak of being the same person over time? At its core, identity seems straightforward: everything is identical to itself and to no other thing. To formalize this, classical logic typically distinguishes a few principles, composing the notion of identity. The first one, Leibniz's Law, also known as the Principle of the Indiscernibility of Identicals, states: if x = y, then x and y must share all the same properties without exception. Whatever is true of one must be true of the other, since they are the same thing. Classical logic adds three more definitive constraints.

Standardly, identity is taken to be an *equivalence* relation, meaning it has to satisfy three essential conditions: reflexivity, transitivity, and symmetry.

Reflexivity seems to be the most intuitive one: everything is identical and related to itself. This condition may appear trivial, yet it remains an undeniably necessary one. Without reflexivity, the very claim that something "remains the same" becomes incoherent. Any account of persistence, thus, must presuppose that a given subject can be reidentified with itself—or else the concept of "that subject" will collapse before the question can even be asked.

The next condition, *transitivity*, is arguably the most widely invoked and discussed one. It states that if *x* stands to *y* in such a relation that is transitive and y, likewise, stands in such a relation to *z*, then *x*, by the nature of transitivity, must stand in the same relation to *z*. In practical terms, if the celestial body of the Evening Star (Hesperus) is the same as planet Venus, while Venus is also identical to the Morning Star (Phosphorus), then it

necessarily follows that Hesperus is Phosphorus. Besides, this condition will further be central in discussions of diachronic—maintained through time—identity, as the notion of persistence through time presupposes that identity has to be capable of chaining across temporal stages.

The third and final condition typically included in identity's formal structure is *symmetry*. This states that if *x* is identical to *y*, then *y* is equally identical to *x*. Expanding the previous example: if Hesperus is Phosphorus, according to symmetry, Phosphorus is also Hesperus. Symmetry is what makes identity bidirectional; it is supposed to protect the intuition that the identity relation is not only retained from one object to another but also holds in reverse.

II. Identity Across Time

At first glance, this renders identity seemingly trivial—an unproblematic formalized relation that everything bears to itself and to nothing else. However, matters become far less straightforward when we introduce the phenomenon of change over time. If I compare myself at age seven and at age twenty, I ordinarily take myself to stay one and the same individual. Meanwhile, I acknowledge significant differences between these stages: my appearance, beliefs, values, and memories may all have altered. Thus, if I were to apply Leibniz's Law to myself across time, I would have to conclude that those two versions of me cannot be one and the same identical thing since they fail to share all the same properties. But this conclusion appears bizarre because I have no doubt that I have remained the same person, "myself."

To make sense of this, philosophers generally distinguish between two types of identity: *qualitative identity* and *numerical identity*. Two things are qualitatively identical when they share all or most of the same properties; two copies of a book from the same print, for instance, may look identical and have the exact same content, yet remain numerically distinct objects. Multiple things can share one qualitative identity, whereas numerical identity is necessarily a one-to-one relation which can only hold between a thing and itself.

Yet, this distinction only shifts the problem to be: which criterion ensures a person continues to exist as the same individual despite undergoing potentially radical transformations? One could try to evade the problem by saying that I stay the same person despite qualitative change, so long as my numerical identity stays intact. But what makes it the case that there is a numerical identity between a person at one time and the same person at a later time? Because, as we have seen, it cannot be necessary

that the two have all of the same properties. This discrepancy between the earlier and the later stage must be explained by something else. It seems reasonable that any theory of identity persistence has to explain *what* precisely accounts for the sameness of a person over time. We cannot completely discount the significance of the *qualitative* aspects of identity either, since completely obliterating them would make it difficult to specify what underwrites this diachronic continuity of personal identity. Thus, we need to provide a formalized set of rules for dealing with qualitative transformations that distinguishes mere succession of identity (where one thing replaces another) from genuine persistence (where one thing continues to exist across time).

In the current debate, most theories attempt to explain numerical identity persistence through formalising an account of the qualitative change. Typically, numerical identity is taken to hold as long as the relevant kind of *continuity* or *causal connectedness* is maintained over time, and numerical identity is assumed to persist through the transitivity of the according relation. Two main streams of identity theories have emerged: *psychological continuity* and *biological continuity*.

For the *psychological continuity* view, a person at t_2 is identical to a person at t_1 insofar as their present awareness can extend backwards to the earlier experiences of t_1 and prior, forming the same continuous stream of mental features—memory, intention, belief, character, and broader patterns of consciousness—composing the identity that is maintained across time (Locke 2.27.9). Many theorists have found it broadly intuitive and adapted Locke's view while further diverging in how they tackle objections and the persistence challenge.

Parfit, for example, distinguishes personal identity from survival. He questions the necessity of explaining personal identity because survival seems to track more closely to what identity theorists are interested in. Then, he claims that what matters in survival is a *relation degree* of an earlier person-stage to a later (Parfit 1971, 18). Relation degrees are determined by the similarity of psychological continuity or connectedness and the causality linking the successive selves. Such a relation, therefore, makes survival meaningful even without a strictly maintained identity. Lewis, conversely, uses his broader framework of modal metaphysics to argue that the identity significance must remain intact. Here, identity is maintained as a context-specific, counterpart relation of an aggregate of person-stages with the greatest degree of resemblance across all possible worlds (Lewis 1976, 26). On his account identity does not require absolute *sameness*.

While those approaches offer possible solutions to the persistence puzzles, it is not entirely clear whether any of those adequately handle pressure tests of identity branching scenarios—where one earlier identity

stage gives rise to multiple later successors; to these, I turn later. One might argue they succeed at the cost of undermining basic first-personal intuitions on identity and persistence of the self (in Parfit) or seemingly manage the scenarios with logical robustness but risk being metaphysically inflated without a strong necessity (in Lewis). Or else, some might disagree with the intuition of psychological features composing identity altogether.

Alternatively, *biological continuity* views ground persistence not in mental traits but rather in the continuous existence of a physical organism over time. On this view, also commonly referred to as animalism, humans are fundamentally viewed as animals/organisms. Thus, a person at t_2 is identical to a person at t_1 insofar as they remain one and the same spatio-temporally continuous biological entity enduring through time and functioning through change (Snowdon 1991, 109; Thomson 2008, 155; Olson 1997, 16). Continuity of mental features here, on the other hand, while often present, is neither necessary nor sufficient for personal identity. With minor differences, biological continuity accounts imply that a person's identity can persist even through total psychological discontinuity, such as permanent coma, amnesia, or radical personality change, as long as the biological organism endures.

Naturally, such positions often provoke discomfort and may clash with common pre-theoretical intuitions, especially when applied to cases of gradual replacement of organic parts or branching cases such as split-brain transplant scenarios. It now appears that we have reached a theoretical impasse: both psychological and biological continuity views face certain challenges and produce contradictions under conditions of branching. I will now turn to this issue in greater detail, examining one of the now-classical identity branching thought experiments: *fission*.

III. Identity in Fission

Fission is a thought experiment exploring identity's structural boundaries in a case of branching. Originally introduced by Wiggins (1967, 53–56) and, famously, further explored by Parfit (1971, 4–10), this scenario goes as follows: imagine a donor's brain is surgically divided, and each hemisphere is transplanted into a different body. The operation is successful: two distinct individuals wake up, each inheriting the totality of the mental contents of our donor. In other words, both recipients are psychologically continuous with the original person: they recall his life, retain his character traits, and act on his intentions. For ease of reference, call them *Lefty* and *Righty*.

Right from the start, it is possible to foresee some issues for the psychological continuity view. From this theoretical standpoint, if every mental feature originally composing the donor is now equally passed onto both Lefty and Righty, each successor appears equally likely to count as the original. And indeed, it is highly conceivable that, recalling the "shared past," both recipients may naturally refer to themselves as the donor. Quite certainly, theoretical commitments of the psychological view now pose a challenge to maintaining the numerical identity principle coherently: the outcome of this fission procedure is not compatible with the identity relation being divided or shared across multiple successors. If identity is transitive through mental features, then both Lefty and Righty stand in the relevant psychological relation to the same donor, and thereby, it should follow that Lefty and Righty are identical to each other. Yet his conclusion forces us to violate the most basic intuition of the identity notion that everything is identical to itself and to no other thing. Proponents of the psychological view attempt two potential solutions to this objection.

On the first *option*, you could admit to the *multiple-occupancy view*, which claims that if your identity will branch in the future, then, prior to branching, there were always two individuals within you to begin with (Lewis 1976, 37–39). However, this solution naturally gives rise to the additional burden of explaining the pre-fission unity of two individuals within one body, and it generates further ethical dilemmas and conceptual challenges. On the *second solution* you could invoke a *non-branching clause* by postulating that psychologically continuant identity holds so long as there is no other contemporary individual who is also sharing the same continuity (Parfit 1971, 13). In that case, even upon a successful procedure, neither Lefty's nor Righty's identity would be considered to be continuous with the donor. This resolution may seem more intuitive than the first one, but upon closer examination, it leads to some surprising repercussions in the fission case: your identity would be preserved if only one of your two hemispheres were transplanted, but a successful transplantation of both would lead to your identity's collapse. Alongside these strange conclusions, such a condition is not an inherent feature of the psychological continuity view alone. It is an ad hoc restriction imposed specifically to preserve transitivity within current theoretical commitments when it fails. If not invoked, once continuity leads to branching, identity collapses, rendering psychological continuity untenable on its own. Consequently, none of the proposed solutions are able to fully defend the psychological continuity view against the fission objections.

These results could have prompted us to consider abandoning the view as a whole; however, the biological continuity view fares no better in the branching scenario. In fact, the challenges arise just by conceptualizing

brain transplants within the framework. Since the theoretical commitments of this account hold that we, as persons, are identical to the human animal organisms, then our persistence conditions are also inseparable from those of such animals. Once proponents agree to consider a genuine metaphysical possibility of the mental life, functioning and contents being preserved and transplanted with merely a brain, they are forced to face a choice: either deny that the person survives at all (going against strong intuition pulls of mental life significance) or to concede that persons and animals are not the same (undermining their own thesis). Some attempts to counter this objection involve reframing the original thesis to the claim "human animal is the brain", aiming to preserve both identity persistence and survival, yet by doing so, they bring upon themselves the same branching problem from the psychological continuity account (Snowdon 1991, 112).

At this point, it becomes apparent that neither theory fully succeeds. Nevertheless, each seems to capture something essential about identity: psychological continuity illuminates why first-person phenomena like memory, anticipation, and self-awareness matter, while bodily continuity explains our deep-rooted association of identity with a particular organism, especially in practical and institutional contexts. To move beyond this theoretical stalemate, we have to admit that either none of the current personal identity accounts manage to accurately capture the sought relation or something is wrong with the very notion we are trying to explain. Since concluding the former appears rather dubious, I suggest we take a step back to revisit and reassess our criteria for the identity *over time*.

IV. Temporal Asymmetry

Previously in this paper, I outlined a formal property composing the notion of identity: necessary numerical sameness (entailing shared qualitative identity), which simultaneously satisfies reflexive, transitive and symmetric relations. The integral nature of each principle is not only apparent by common sense but also widely established and justified in classical logic literature (Wiggins 1967, 41). Such formal constraints, thus, undeniably exhaust all the required criteria for the identity notion to hold, and yet, we cannot disregard the consistency of cross-theoretical shortcomings once applied to persistence across time. What is more, if personal identity is something inevitably lived *in time* (or the experience of it), then, as a further analysis, it would be worth examining whether the temporal nature itself changes those requirements.

Despite ongoing debates over the metaphysical status of time, there is much more shared certainty in the perception of it: we, people, universally experience time as a tripartite structure composed of past, present, and future, always "passing" or maintaining its "flow" linearly, from past to future. These features seem to be inescapable and especially significant to human apprehension. To begin with, there is an undeniable difference in how we think of the future, upcoming events, in contrast to the ones that have already happened and were experienced by us. The future feels more *abstract* and *indefinite*, whereas the past, already manifested, feels more *significant* and *real*. In that sense, our experience is inherently *asymmetrical* (Hoerl et al. 2022, 5–12).

Although this fixed phenomenological directionality does not serve as a sufficient reason for redefining personal identity over time, there are still a wider range of asymmetries found among the *contents* of time (Dainton 1980, 44). One empirical example of such an asymmetry is physical entropy — simply put, a measure of atomic freedom and randomness tends to increase over time, so things become more "disordered" (Maudlin 2007, 117). Entropy, like experiential asymmetry, is one-directional and not reversible. Furthermore, some other evidential content asymmetries are found within *causation* (earlier events always cause the later ones), our *knowledge* (even though sometimes we take accurate predictions of the future, true *epistemic* knowledge can only be gained from the past), as well as our own *action-orientation* (always directed towards the future and never towards the past) (Fernandes 2023, 20–23 ; Dainton 1980, 45). That said, human attitude biases and perceptions of themselves are, likewise, repeatedly found to be future-oriented and thus, asymmetric in nature (Fernandes 2022, 185–187; Parfit 1987, 69).

This evidence still does not guarantee temporal asymmetry in a strict ontological sense, but nonetheless, given the apparent temporal asymmetries in nature, and in our experience and apprehension of it, ought we be assuming that personal identity over time is, nevertheless, symmetrical? I suggest not.

V. Concerns about Personal Identity (A)symmetry

Introducing an account of identity persistence that abandons one of the central identity assumptions—symmetry—may appear radical. To understand this worry, it is necessary to examine what intuitions we are trying to preserve and explain with the symmetry principle on its own. This is the same move Parfit starts his influential "Personal Identity" paper with—questioning whether it is the *identity issue* as such that bears significance to us,

or rather, we are just trying to satisfy the concerns stemming from certain *presuppositions* we make about ourselves as individuals ("Personal Identity" 4). Here, one might sensibly push a worry that rejecting the criterion of symmetry would leave us without a stable framework of persistence, collapsing personal identity into a series of detached stages rather than a formalized relation of a continuous and connected, enduring entity. I argue that this is *not* the case—we can maintain a stable framework of continuous and connected identity persistence, the presupposition Parfit warns people may be hesitant to surrender, without the criterion of symmetry.

Earlier in this paper, I claimed that the symmetry constraint ensures that identity stays bidirectional. But *bidirectionality* is a technical feature—it does not seem to be the goal of our theory-making. On the intuitive level, this constraint is imposed to secure the presupposition that individuals remain strictly the same, one and only entity across time. On that matter, I have two points to make. Firstly, this intuition is already fulfilled by the transitivity criterion: if we are able to describe how a person's identity is chained, persisting across temporal stages, what are the further necessities of making those stages "identical" to each other in the strict and absolute, symmetrical sense? Secondly, we have seen that preserving this absolute, numerical sameness in personal identity over time raises issues: identity's qualitative aspects inescapably change across temporal stages. Thus, so long as two other criteria, reflexivity and transitivity, remain satisfied, we will have a coherent account of personal identity persistence. The former, reflexivity, will still ensure the uniqueness and numerical identity of an entity and the latter, transitivity will formalise the preservation of this identity across temporal stages and qualitative change.

The challenge, then, is not to replace one theory with another but to assess whether our commitment to the symmetry principle in a standard formulation of personal identity has to be preserved as a metaphysical necessity, or if it remains only as a philosophical habit, which obscures more than it resolves. Taking branching failures and temporal asymmetries together, we are now motivated to see if there is a coherent, asymmetrical account of personal identity persistence. I will now offer such a model in the following section.

VI. Asymmetrically Accumulating Personal Identity

Conceptualizing personal identity as symmetrical in a strict sense presupposes it is *fixed* or *static* in nature. But this supposition fails diachronically. As we saw in previous sections, it is unlikely that personal identity *over time* mirrors a relation—symmetry—that the *nature of time* it is

experienced *in* does not sustain in the first place. So how can we reconcile our conception of identity as a *static*, unchanging relation of successive temporal stages with its persistence conditions—temporal and psychological asymmetries? I claim that we should not.

I propose that personal identity over time is *asymmetric* and *cumulative*. What I mean by this is, all of the previously described asymmetric conditions indicate the asymmetry of personal identity *itself*, as a notion; while identity's qualitative change over time (which, I claim, is ontologically significant) implies not fixed, but a *dynamic* and *evolving* nature.

This proposal is plausible because humans are both psychologically and biologically changing across time one-directionally, from the past to the future. Our memories contain earlier but not the future events, extending backwards, with any possible mental phenomena *accumulating* within this temporal orientation. Our bodies, too, age with the "flow" of time, but not in reverse. To emphasize again, the found asymmetries here are foundational: past temporal stages of the selves are directionally accumulated to be, then, integrated with the upcoming, future ones, but never vice versa, resulting in personal identity *aggregation* over time.

This is not the first time that selfhood has been formalized as cumulative. Lewis, for example, in his "Counterparts of Persons and Their Bodies" explicitly refers to persons and bodies as *aggregates of momentary stages*—"mereological sums, or something similar"—according to his formulation (Lewis 1971, 203). Lewis, however, was a proponent of a perdurantist view of identity, where objects and persons are thought not to be fully present at each moment but instead extended through time as temporal counterparts of one whole. Here, I do not wish to adopt the temporal parts doctrine, and neither do I think that one needs to be committed to Lewisian perdurantism in order to accept my proposal.

As mentioned, Lewisean perdurantism entails a rather unsatisfactory claim: I am *not fully present* at each stage or each slice of this spatiotemporal worm. What follows from this is that none of my temporal parts are ontologically *whole* or *complete*. Yet accepting this outcome is suboptimal. Although metaphysically robust and logically coherent, this theoretical commitment violates or, at least, conflicts with some common intuitions on the persistence of our own self: as I am writing this sentence, there is a way in which I undoubtedly feel *fully* present in *this very moment*, even though I *do* realize that as time goes by and I look back on the same moment of writing, my intuitions on my own "completeness" at *this current stage* would change. Thus, it is not entirely clear why we ought to sacrifice such basic intuitions on the nature of our own existence for the sake of theoretical commitments. However, under perdurantism, identity is still viewed as a *fixed* relation. It is precisely this presupposition of static identity

that necessitates the invocation of the spatio-temporal worm to fulfill the requirements for identity's symmetrical persistence across time.

Now, since my account seeks to abandon the symmetry requirement, while also allowing for identity's dynamic nature, we can reach a more satisfactory equilibrium between theoretical robustness and personal intuitions of selfhood. Here, with one-way directionality adopted, we can say: "I am one and the same person as those earlier temporal stages of mine; yet those temporal stages are not, in the strict, absolute sense, one and the same person as me now".

Therefore, I claim identity persists in a continuous and causally connected *structural accumulation*, where the later stages are successively added up and remain *contained within* the current stage and the future unfolding self.

To provide a more precise definition, an individual X at a temporal stage t_2 is the same individual as X at t_1 if and only if this individual Xt_2properly (fully) contains the total identity of Xt_1 *and* additionally accumulated "identity substate"—aggregated difference between stages t_1 and t_2—henceforth denoted as "ΔX". Formalizing this definition:

$Xt_2 = Xt_1 + \Delta t_1 \rightarrow t_2X$

The same formulation then applies to the persistence of the later stages of the same individual: at t_3, for example:

$Xt_3 = Xt_2 + \Delta t_2 \rightarrow t_3X$

A similar way of conceptualizing this total containment would be a mathematical analogy of proper sets. If an individual X at a temporal stage t_1 is wholly composed of properties such as *a*, *b* and *c*, then the composition of Xt_1 can be expressed as follows: $Xt_1 = \{a, b, c\}$. Then, let us say that, between t_1 and t_2, X accumulates additional properties ($\Delta t_1 \rightarrow t_2X$) *d* and *e*, so $Xt_2 = \{a, b, c, d, e\}$. In that case, saying that Xt_2 remains the same individual as Xt_1 can be captured by a proper containment of Xt_1 within Xt_2, formally: $Xt_1 \subset Xt_2$. If, by the next temporal stage t_3, X further accumulates properties *f* and *g*, we can express it as $Xt_3 = \{a, b, c, d, e, f, g\}$. Therefore, we can equally say that $Xt_2 \subset Xt_3$. It is crucial to note here that even if the later stages properly contain the earlier ones, this containment is *one-directional*, meaning that the earlier stages *do not* equally contain the later ones.

VII. Concluding Notes on the Continuity Criteria

I have attempted to motivate the need for an asymmetrical account for personal identity over time. Beneficially, this novel account is capable of resolving issues in identity branching scenarios. This advantage is clearly exemplified by the same fission case: even if we suppose that the

transplanted brain (or a single hemisphere) will contain all of the original mental contents, a successful procedure will result in novel experiences being accumulated in *different bodies* and thus, in *different ways*. Hence, there can be two individuals at time t_2, each identical with all stages of the donor that led up to time t_1. But, since personal identity over time is conceived as asymmetrical and accumulating, those states are not in the same sense *identical* with either recipient at t_2; and thus, the individuals at t_2 are not claimed to be identical with one another. Thus, by avoiding symmetry commitments, such an account manages the branching problem encountered in classical theories.

It is worth noting that the asymmetry proposal is not entirely novel to the debates of personal identity. In 2018, Theodore Sider published a paper titled "Asymmetric Personal Identity," in which asymmetry is introduced as a feature that arises only in exceptional cases—most notably certain fission or dissociation scenarios—where forward- and backward-looking identification relations come apart (Sider 133). On Sider's account, asymmetry functions as a localized response to these extreme cases, while the underlying logic of personal identity notion itself remains otherwise standard with symmetry criterion preserved (134). By contrast, my present proposal treats asymmetry not as a contingent solution to branching puzzles, but as a structural feature of personal identity persistence as such, independent of any further continuity or composition criteria.

The remaining question lies within the basis of such an account. Although my proposal is limited to the rejection of symmetry and does not claim to provide any continuity criteria—meaning that an appropriate solution still requires further investigation—I would suggest a somewhat hybrid account for identity persistence. On the one hand, psychological continuity illuminates why first-person phenomena like memory, anticipation, and self-awareness matter. Nevertheless, the evidence gathered from amnesia, dementia and traumatic brain injury cases that alter personality radically, testify against a purely psychological account—it is likely insufficient both for the constitution and persistence of personal identity. Bodily continuity, on the other hand, excels at explaining our deep-rooted association of identity with a particular organism—especially in practical and institutional contexts, and yet, remains unable to fully capture the undeniable significance of mental phenomena and lived experience.

Psychological views are mainly found to carry more of an intuitive appeal; however, it is equally reasonable to accept that the physical body—a medium, an assigned origin through which (and simultaneously *into* which) this identity substrate accumulates in the first place—also takes a great matter of importance in the identity formation (and persistence) process. The physical composition of a body can retain and be shaped

by experiences that the conscious mind forgets or remains out of reach—PTSD traumas, for instance, may physically alter your brain, simultaneously resulting in alteration of your perception and encoding of the events in memories that differentiate you as an individual.

So far, it appears that both frameworks have their own benefits: both continuity theories excel in capturing different aspects of what matters in survival and persistence of identity. Perhaps, certain predispositions may still lead theorists towards maintaining either psychological or biological views. But regardless of an account, it remains essential, I insist, to reconceptualize personal identity over time as *asymmetrical*.

Works Cited

Dainton, Barry. *Time and Space*. London: Routledge, 2016.

Fernandes, Alison. *The Temporal Asymmetry of Causation*. Cambridge University Press, 2023.

Hoerl, Christoph. *Temporal Asymmetries in Philosophy and Psychology*. Edited by Teresa McCormack, and Alison Fernandes, Oxford University Press, 2022.

Lewis, David. "Counterparts of Persons and Their Bodies." *The Journal of Philosophy*, vol. 68, no. 7, 1971, pp. 203–11.

———. "Survival and Identity." In *Identities of Persons*, edited by Amélie Oksenberg Rorty, University of California Press, 1976, pp. 17-40

Maudlin, Tim. *The Metaphysics within Physics*. Oxford University Press, 2007.

Olson, Eric T. *The Human Animal: Personal Identity Without Psychology*. Oxford University Press, 1997.

Parfit, Derek. "Personal Identity." *The Philosophical Review*, vol. 80, no. 1, 1971, pp. 3–27.

———. *Reasons and Persons*. Oxford University Press, 1987.

Sider, Theodore. "Asymmetric Personal Identity." *Journal of the American Philosophical Association*, vol. 4, no. 2, 2018, pp. 127–46.

Snowdon, Paul F. "Personal Identity and Brain Transplants." *Royal Institute of Philosophy Supplement 29*, 1991, pp. 109–26.

Thomson, Judith Jarvis, and Jonathan Dancy. "People and Their Bodies." In *Contemporary Debates in Metaphysics*, edited by Theodore Sider, John Hawthorne, and Dean W. Zimmerman, Blackwell, 2008, pp. 155–76.

Wiggins, David. I*dentity and Spatio-Temporal Continuity*. Blackwell, 1967.