

# A Theory of the Relational Self: The Cumulative Network Model

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## ABSTRACT

In this paper, I outline the *cumulative network model of the self*. This model articulates the self as relational, recognizing social relations as constitutive of the self. The theory (1) arises out of concerns about the individualistic paradigms of two main frameworks in the analytic philosophical literature on personal identity, namely, the psychological and the animalist approaches to personhood and (2) is explicitly inspired by feminist theories on relational autonomy and self. I argue that “relationality” is not only social, but that the self is relational throughout, psychologically, physically, biologically, culturally, semantically, as well as socially. Hence, the self *is* a network of relations. The model also aims to recognize that temporality or historicity is constitutive of the self, that the self is a process, not a static three-dimensional thing. Hence, the self is a *cumulative* network.

Challenges to a predominant conception of the self in analytic philosophical thought have come from other philosophers – feminists, communitarians, narrative self theorists, as well as from psychologists, cognitive scientists and neuroscientists. The challenges have different emphases, but share a common, core objection, namely, that predominant conceptions of self are too atomistic, ignoring, or giving inadequate place to relational and social aspects of selves, or failing to recognize the locatedness and dependency (1) of the self in lived experience and (2) of the “external” or “distributed” sources of cognition.

In this paper, I outline an alternative model, what I call the *cumulative network model of the self*.<sup>1</sup> The model articulates a way of understanding the self as relational. It (1) arises out of concerns about the two main frameworks in the analytic philosophical literature on personal identity, namely, the psychological and the animalist approaches to personhood and (2) is explicitly inspired by feminist theories on relational autonomy and self. I argue that “relationality” is

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<sup>1</sup> See also Wallace 2019 where I develop this theory in more detail.

not only social, but that the self is relational throughout, psychologically, physically, biologically, culturally, semantically, as well as socially. Hence, the self *is* a network of relations. The model also aims to recognize that temporality or historicity is constitutive of the self, that the self is a process, not a static three-dimensional thing. Hence, the self is a *cumulative* network.

I begin with a brief outline of the psychological and the animalist theories of persons and personal identity and their limitations (Section 1). In Sections 2 and 3, I introduce my cumulative network model of the self. I contrast it with psychological and animalist theories (Section 4). In Section 5, I show how the model conceptualizes subjectivity as consisting of multiple “I” perspectives that reflexively communicate with one another. And in Section 6, I briefly indicate some practical applications of the model.

### 1. Psychological and Animalist Theories

In the analytic philosophy literature on personal identity, selves (‘persons’ is the term used in this literature) have been conceived as primarily mental or psychological, on the one hand, or as bodies or animals, that is, biological organisms, on the other. While animalist views are enjoying a resurgence (e.g., Olson 1997, 2007; Snowdon 1990, 2014), psychological theories have been very influential and my focus will be on those. Psychological theories take consciousness, intentionality, memory, thinking and other mental experiences as distinctive of personhood. “Personhood” is distinct from biological and bodily features as in Locke’s prince/cobbler example in which ‘person’ goes with consciousness. Locke was interested in identifying what was essential to forensic considerations about moral (and criminal) responsibility, and acknowledged that ‘person’ was distinct from the whole self or the human being. (Locke, 1975, II, xxvii, 15.) Subsequently, psychological theories have taken consciousness to be necessary and sufficient for identity over time or the persistence of the person. There is a voluminous literature on what features of consciousness would ground such identity or persistence, whether loss of memory means that someone is no longer the same person, whether there can be two or more persons in one body, whether one person (consciousness) can divide or be replicated and continue as two (or more) persons, whether the brain is necessary or could the contents of consciousness be copied and encoded in

another medium, and so on.<sup>2</sup> In general, psychological theories allow for the persistence of the person through location in different bodies, continuity of personhood in more than one body, and the “housing” of more than one person (consciousness) in one body. The core idea is that psychological states such as (personal and not only semantic) memory, intentionality, self-awareness, capacity for self-reference, capacity for second-order reflection on or awareness of (e.g., awareness of oneself as desiring) first-order states (e.g., desires) are the distinguishing features of personhood. The absence of these (or some threshold of these) means the absence of personhood.

Animalist theories, on the other hand, argue that the person is the body, the biological organism as a whole. These theories see persons as embodied, functional organisms, just like other animals, and distinguished by their distinctive functions and capabilities.<sup>3</sup> For the animalist, a person is identified as a particular and a distinctive kind of organism, not merely a consciousness that could, at least theoretically, be embodied in different organisms or physical containers. A defender of the psychological view could argue that while ‘person’ goes with the psychological features, those must be embodied. Parfit (2016), responding to animalist views that embodiment is essential, defended an “embodied person view” (EPV). EPV maintains that persons are identified with psychological features that are *also* embodied in an organism. EPV would allow for brain transplants whereby the person is identified with psychological features, “goes with the brain” but inhabits a new human organism. Animalist views do not endorse EPV; doing so would mean that a person could be two different human organisms, and according to animalism, a person *is* the human organism.

These are very rough and ready approximations. I have not done justice to the complexities and sophistication of arguments given for each of these approaches and in proponents’ engagement with one another’s views. My interest is in identifying an underlying problem and why we should move beyond these approaches for a better understanding of what selves are. Consideration of one type of thought experiment often used in this literature will provide a basis for giving a more pointed statement of the issue.

<sup>2</sup> For example, S. Shoemaker (1984a), Lewis (1983), Parfit (1986), Perry (1975). Some of these give a materialist account of consciousness, i.e., as the brain.

<sup>3</sup> Animalists include Olson (1997, 2007), Snowdon (1990, 2014), Blatti (2012).

Recall the Lockean prince/cobbler thought experiment. Parfit proposes a contemporary variation of consciousness transfer<sup>4</sup> with a teletransportation example. One enters a teletransporter, all information about oneself is copied, the original self is destroyed, and an exact replica, made of all new material emerges in a new location. Parfit first suggests that in such a case, the self seems to be preserved, even though it is an entirely new physical thing. He then imagines a case of teleporter malfunction that fails to destroy the original. There are two qualitatively identical emergents, one in the original location, one in the target location. This, he argues, shows that there isn't personal identity even in the first case, but only continuity. A person (consciousness) can split or be replicated, and continue as two persons living two different lives; therefore, there isn't personal *identity* at all, but personal continuity. Similarly, in brain-transplant cases, psychological approaches argue that personhood of the brain-donor is preserved and that such cases support the thesis that personhood is best understood in psychological terms. Consider Shoemaker's comment (where a brain transplant is thought of as "body-change"):

in this society going in for a body-change...All of the social practices of the society presuppose that the procedure is person-preserving. The brain-state recipient is regarded as owning the property of the brain-state donor, as being married to the donor's spouse, and as holding whatever offices, responsibilities, rights, obligations, etc., the brain-state donor held. (Shoemaker, 1984a, 109)<sup>5</sup>

Animalist approaches, on the other hand, argue that in the teletransportation experiment if the original person is destroyed by the teleporter, then the emergent is a new, different organism and therefore person, however qualitatively similar it may be to the original self. If the teleporter fails to destroy the original person, and there are two emergents, then the original is the same person (same organism) and the other emergent is a new self. In brain transplant cases, animalist approaches would argue that the body-recipient, an ongoing,

<sup>4</sup> Consciousness transfer, branching and brain transplant thought experiments abound in the analytic philosophy literature on personal identity. For example, Lewis (1976) on branching and fusing selves, Parfit (1986) on teletransportation, Shoemaker (1976) on the idea that the physiological core of personhood is the brain that could theoretically be disembodied or embodied in different bodies.

<sup>5</sup> See also Shoemaker 1984b, and Quinton's claim about a six-year girl displaying *Winston Churchill's* character, meaning that Churchill's brain and psychological content is embodied in a six year old girl such that *Churchill* is preserved (Quinton, 1962).

living organism, continues to be the original person identified as that organism, now with a new “organ,” the brain.

These thought experiments show that the psychological and animalist views have too narrow a view of selves. Consider the two teleporter emergents – on the psychological view, they are alleged to be qualitatively identical (psychologically). However, is either, both or neither the spouse, parent, writer, citizen, and so on that the previous self had been? The same questions could be asked in the brain transfer case – in that case, the resulting self is genetically and socially related to two prior selves, neither of which had all those relations. Such relational traits are not merely incidental to who each self is, but are constitutive of the identity of each self as that particular self and they are wholly ignored by the psychological view. *Being* a spouse or a parent, is not merely a psychological state; it is itself a relationally constituted trait of a self. Considering the animalist view, the wholly new psychological states of the body with the new brain cast doubt on the idea that it is the same person just because it is the same organism. And, like the psychological view, the relational traits (spouse, parent, citizen, and so on) are not considered at all.

I am not suggesting that normally selves don't involve psychological states and bodies. My point is that conceptualizing the self only or primarily in terms of mind/body or psychological states/human organism, or even an amalgamation of both is too limited. Even amalgamation would still omit social relations (spouse, parent, citizen, and so on) as constitutive of the self. It might be argued that those are accidental social relations or can be decided through social practices and conventions (as the Shoemaker allusion to social practices in the earlier quote perhaps suggests). However, such a treatment of social relations does not do justice to the ways in which they are constitutive of selves and as the particular selves that they are. I suggest that a more comprehensive view is needed, one that gives a fuller view of what is constitutive of a self. Even if having psychological capacities and experiences and being an organism of a particular kind identify common, noncontingent features of any self, and perhaps even necessary conditions for being a person at all, still a philosophical theory of persons or selves should be more comprehensive and include a wider range of capacities and social relations as constitutive of what persons or selves actually are.

First, a more comprehensive theory of the self would provide a better understanding of the self as a knowing, cognizing subject and as the subject of ethical, political, scientific inquiry. In a related vein, Schechtman (2008, 2014)

suggests that issues of “practical” significance are relevant to metaphysical understandings of persons and personal identity:

facts about personal identity are incredibly important in our day-to-day lives. This does not mean that this is all there is to our lives, or that everything about our identities can be learned by looking at judgments of practice and value. But it is a strong indication that we should not simply ignore the practical in understanding what we are and how we continue (Schechtman, 2008, p.52).

Second, the assumptions animating the psychological and animalist views are limiting in other ways. While psychological views have been more widely held than animalist views (although that may be changing somewhat with the resurgence of animalism<sup>6</sup>), there are three limiting assumptions expressed in both: (1) a container view of the self; (2) a tendency to identify distinctive human functionality in terms of “thinking”; and (3) ignoring social locatedness and relation as in any way constitutive of the self in its most fundamental terms.

(1) Both approaches tend to think of the self in “container” terms – it is “in the head (or brain) or body,” as bounded by the boundaries of the brain or the bodily organism. However, perceiving, thinking, cognition itself, could be thought of in more relational, or extended terms, rather than as something that just takes place “in the head or brain.” Moreover, if social relations are *constitutive* of selves, they are not “in” the mind or the body.

(2) The capacity for reasoning, for thinking and for conscious self-awareness is given primacy. Even among animalists there is sometimes an emphasis on the capacity for thought: humans are “thinking animals.” But, human selves have many distinctive capacities, involving, for instance, emotion, perception, modes of bodily engagement, without which many distinctive experiences would be impossible and unrecognizable, such as art, politics, sport and athletic prowess and performance, dance, communication (much of which is not necessarily linguistic utterance), religious experiences, care of and coordination with others, political affiliation, to name but a few. Feminists have argued for the importance of embodiment for conceptualizing human experience.<sup>7</sup> Care ethicists have argued for the importance of emotion and of

<sup>6</sup> See note 3.

<sup>7</sup> From Simone De Beauvoir’s seminal *The Second Sex* (1949; first published in English in 1982) and Shulamith Firestone’s *The Dialectic of Sex* (1970) to analyses of reproductive rights to discussions of sex and gender, pornography, and violence against women, to

interpersonal relations (also in connection with number 3 below).<sup>8</sup> Others have sought to broaden the recognition of human capacities, for example, as tool users<sup>9</sup>, as “doers and makers,” not only “thinkers”.<sup>10</sup> The range of human capacities also involves selves as artists and politicians, and not only as knowers, as philosophers and scientists.

(3) In both approaches there is little to no recognition of the ways in which human selves are also constituted by social relations, understanding “social” to include interpersonal, as well as many other kinds of relations (political, cultural, institutional, professional, and so on).

Feminists and communitarians<sup>11</sup> have called attention to the social embeddedness and relatedness of selves. Communitarians criticize the individualism of liberal political theory for overemphasizing the value of

theorizing the body as a site of power relations (often drawing on Foucault), to more recently the BUMP project on the Better Understanding of the Metaphysics of Pregnancy (<https://www.southampton.ac.uk/philosophy/research/projects/bump.page>) and the rapidly expanding literature on transgender experience – the body and the experience of embodiment have been central in feminist thinking. From the vast feminist literature on these subjects here are some necessarily selective classic and representative works: Bordo 1987, 1993; Jagger & Bordo 1989; Young 1980, 2005; Gatens 1996; Spelman 1982; Pateman 1988; MacKinnon 1989; Dworkin 1987; Butler 1990; Braidotti 1994; Fausto-Sterling 1992, 2000; Grosz 1994; Lane 2009; Hines 2010; Varden 2012. The body and embodiment have also been the subject of extensive work in phenomenology. Merleau-Ponty’s *Phenomenology of Perception* is the work with which I have some familiarity. But, since I do not work in that area, I do not venture to identify the most appropriate sources to consult.

<sup>8</sup> The work of Gilligan (1982) and Chodorow (1978) were influential for ethicists in considering the role of a “care perspective” in contrast to a “justice perspective” in normative ethics. See, for example, Noddings (1984, 2013), Held (1993, 2006), Tronto (1993, 2005), Tong (1998), Ruddick (1989), Kittay (1999), Feder & Kittay (2002); for critiques of care as reinforcing oppressive and subordinating views of and roles for women see, for example, Card (1996), Hoagland (1990), Moody-Adams (1991); for views situating “feminine” concerns independently of a contrast with “masculine” see, for example, Irigaray (1985), Harding (1987), Bartky (1990).

<sup>9</sup> E.g., Heidegger (1962) and the analysis of readiness-to-hand.

<sup>10</sup> Here I am thinking of (a) the American pragmatist philosophers, and Dewey in particular who argued that knowing is a transactional experience between organism and world and that “doing” and “problem-solving” were central to intelligence (see Dewey 1981, 1984, 1986); and (b) Buchler (1985) who argued for a tripartite theory of judgment, consisting of (1) assertive, (2) active and (3) exhibitiv judgment.

<sup>11</sup> From the extensive literature in these areas I mention only a few well-known works. For communitarians, see Kymlicka (1989); MacIntyre (1984); Sandel (1998); Taylor (1989); Walzer (1983). For feminists, see Alcoff (1988); Brison (1997); Crenshaw (1991); Freeman (2011); Friedman (2003); Mackenzie and Stoljar (2000); Meyers (2000); Witt (2011).

individual liberty at the expense of community and social connections and responsibilities. Feminists, many of whom have also been concerned with political assumptions and theories, have also focused on reconceiving the self. This is in part because many of the concerns of feminists go to the heart of what it means to be a self. Emotion is as fundamental to personhood as thought. So too, is bodily experience, and in particular experience entwined with the bodies of others (in sex, reproduction, and nurture); care is a basic human relation, and is essential not only to becoming a person, but to responding to the vulnerability characteristic of the human condition. Sex and gender (as bodily and socially constructed) are fundamental to self-identification. If selves are fundamentally socially (and bodily) related to other selves, then the meaning of liberty and autonomy needs to go beyond individualistic conceptualization. Feminist theories have been an inspiration and catalyst for my work, although my cumulative network model of the self is intended as a general theory of the self.<sup>12</sup> I take feminist insights as instructive not only about women, but about any self<sup>13</sup> and the cumulative network model is intended as a general theory of the self.

## 2. The Cumulative Network Model of the Self (CNM)

In a discussion of thought experiments in the personal identity literature, Gendler (2002) comments,

Recent philosophical discussion of the nature and value of personal identity, however, have tended to treat these ‘facts of life’ as *provincial* truths – as facts about persons-as-they-happen-to-be, not facts about persons-as-they-really-generally-are (pp. 34-35).

Gendler argues that ‘facts of life’, even if contingent in their particularity, are not merely provincial, but are fundamental to understanding what selves generally really are. The cumulative network model of the self (CNM) proposes that ‘facts of life’ include not only organismic and biological constitution and

<sup>12</sup> A communitarian emphasis on preserving existing social and cultural traditions is at odds with feminist critiques of the effects of many such traditions on women and the two approaches are not necessarily philosophically allied. For discussion of tensions between communitarianism and feminism see Barclay (2000).

<sup>13</sup> Nedelsky (2011) suggests that relationships are “equally constitutive of males and females” (p. 33). Similarly, the network model of the self is characteristic of any self, not only of females, or of “intersectional identities” such as being black and female (Crenshaw, 1991).



psychological experiences, but that a self is a relational network of biological and psychosocial traits and process, a particular history, character, biological, social, semantic (that is, meaning-laden) trajectory, a particular (changeable) personality with habituated (but changeable) ways of acting, communicating and judging.

The mind/body framework regards selves as self-contained units. The problem then is to explain how selves are related to, interact with, and “distribute” in some way in the world. In contrast, conceptualizing the self as a network of traits, that is also processual (a *cumulative* network) builds relationality and some, albeit not unlimited, distribution spatially and temporally (as well as socially), into the very nature of the self. This may mean that boundaries of the self are neither precise, nor epistemically precisely specified. But that is not necessarily a decisive defeater of the theory. It might be an ineliminable aspect of the complexity of selves, and from the point of view of explanatory value an acceptable feature if the theory opens up productive ways of understanding the self as a socially constituted, embodied being that interacts with and extends into the physical and social world in which it moves, judges, perceives, experiences, cognizes, makes and acts.

I will now outline the cumulative network model. Rather than engage in detailed arguments on the merits of CNM versus the psychological or animalist theory of persons, my goal is to articulate the model, contrast it with the psychological and animalist views of selves, and indicate some “practical” applications of the model.

On CNM, the self is a network of traits and relations. Consider the following hypothetical example<sup>14</sup>: Lindsey is mother, novelist, English speaker, Irish-Catholic, feminist, professor of philosophy, automobile driver, psycho-biological organism, introverted, prone to a cheerful disposition, fearful of heights, brown-eyed, myopic, left-handed and so on. (Not an exhaustive set, but a selection of traits in order to convey the general idea.) Traits are related to one another to form the network of traits that is the self, Lindsey. The self as a whole, *Lindsey*, is an inclusive network, a plurality of locations related to one another such as to constitute a whole self. The overall character of a self is constituted by the unique interrelatedness of its particular relational traits (psycho-biological, social, political, cultural, linguistic, physical, and so on).

<sup>14</sup> This example and discussion is taken from Wallace 2019, Chapter Two.

Traits may form sub-clusters of traits within the network. For example, the body itself is a network of traits (genetic, molecular, cellular, organismic, and so on), a “hub” or “sub-network” of the more comprehensive network that is the self.<sup>15</sup> However, clusters or sub-networks are not isolated, self-enclosed “hubs.” Any trait may be related to any other trait, such that a particular “bodily” trait and a particular “social” trait may be relevant to one another. For instance, being a language speaker entails neurophysiological relations and brain structures (biological, bodily traits), as well as relations to vocal possibilities, other speakers (social traits), to semantic and grammatical structures, and so on; being an offspring entails (biological) genetic relations and (social) kinship relations in a network of relations. Suppose Lindsey were a genetic carrier of Huntington’s Disease. The trait “Huntington’s Disease Carrier” – a biological trait constituted by genetic, molecular and biochemical relations that will be expressed in grosser bodily deterioration, both mental and physical – is also related to family and other social traits, that are related to one another. Suppose the carrier status is known and Lindsey joins a support network of carriers and their families. Psychological relations and social relations to other carriers and familial and medical communities are related to the genetic traits and to how together they are constituents of the self qua Huntington’s Disease carrier. Some traits may be more dominant or organizing than others; for instance, being a feminist may be strongly relevant to the overall character of a self (as well as to specific other traits, such as being a mother and a spouse) whereas being a cousin may be weakly relevant (or, vice versa).

It is contingent for each particular self exactly how the network of traits is organized and structured. But, what is not contingent is that any self *is* a network of traits, some clustering of traits, bodily and biological, psychological, social, semantic, and so on.

Relations between traits are not necessarily mereological, that is, not all are whole/part relations. It may make some sense to say that a limb is *a* part of a body.<sup>16</sup> But, even with the body a whole/part relation may not fully capture ways

<sup>15</sup> In network theory, one might characterize the body as a “hub” of a complex network (Barabási, 2002).

<sup>16</sup> In mereological terms, a limb would be a proper part of a whole body. Scibb (2009, 2015) makes a distinction between “being *a* part of” and “being part of” and argues that the latter is helpful in analyzing processes, where “being *a* part” doesn’t seem to do the work required. Since I also argue that the self is a process (a *cumulative* network), this distinction could turn out to be useful although I don’t develop that point here.

in which, for example, a limb constitutes a self. A limb may also be the condition for possibilities of movement, and the loss of a limb may alter those possibilities and constitutive “identities” of the self.<sup>17</sup> For instance, a dancer may lose the “identity” of being a dancer in virtue of limb loss.<sup>18</sup> A limb may be a part of the body, but it is also a relevance condition of other constituting features of the self (e.g., a distinctive gait, being a dancer). The trait “being a mother” (like “being a dancer”) is a relevance condition of the integrity of the particular self of which it is a trait. (By “integrity” I mean the overall characteristic determinateness of a self.)

Every trait is a relevance condition (although some may be trivial, or “weakly” relevant). Some traits may be parts, such as body-parts; being *a* part is one kind of trait. Even a trait that is in one respect *a* part, could in another respect be a different kind of relevance condition. Being a dancer is partly constituted by the body even though the body is not *a* part of being a dancer. Being a parent in virtue of genetic, familial, legal, and other social relations to a child is not *a* part of a self. Many parental relations to a child are bodily and constitutive of oneself as parent (gazing, holding, soothing, nursing, feeding, tickling, tumbling with, or other bodily modes of interacting with the child). Neither self (network) is *a* part of the other self.<sup>19</sup> But the relations (genetic, familial, legal and social, bodily) are relevance conditions that constitute each particular self as parent, as child.

<sup>17</sup> See Russell 2012, Part 3. Thanks to Amy Shuster for bringing Russell’s work to my attention, and for helpful discussions on this point.

<sup>18</sup> The term ‘identity’ here is not the formal notion of being one and the same thing, identical with itself. Rather, ‘identity’ means a characteristic determinateness of the self in some respect; let’s call that identity-c, following Schechtman (1996, p. 2). The usage of ‘identity’ as meaning identity-c could be broad, as in one’s overall sense of who one is; I call this the “integrity” of the self. Sometimes identity-c is meant more specifically, as in “an identity” of the self, e.g., as dancer, or in a social and/or political sense, e.g., as black, as a woman, a usage found in the literature on intersectionality (e.g., Crenshaw 1991).

<sup>19</sup> The discussion here is about uncontested individuals, whether child or adult. A fetus is sometimes characterized as being a part of, or alternatively, as not a part but just contained in, a pregnant woman. The metaphysics of pregnancy is quite complicated and I will not address that other than to say (1) that pregnant woman-fetus relation is different from mother-child relation, and (2) that a mother-child relation need not involve genetic relations or a pregnant woman-fetus relation (as in adoption or surrogacy). See the Research Project on Better Understanding of the Metaphysics of Pregnancy (BUMP): Organisms, Identity, Personhood and Persistence. <https://www.southampton.ac.uk/philosophy/research/projects/bump.page>

Traits – whether they are parts, such as a body-part, or whether they are *other* kinds of relevance conditions, such as being a mother or being a philosopher – are changeable; a trait itself may change or a self may lose some and acquire new traits. However, some cluster of traits constituting the integrity of the self must persist, although there may be no single trait or cluster of traits that is necessary.

The question naturally arises whether there is a threshold to the amount or kind of change that a network can absorb or endure beyond which it is no longer a network, or no longer that particular network.<sup>20</sup> The threshold question arises also for other approaches to the self. The psychological and animalist approaches discussed in the first part of the paper attempt to identify necessary and sufficient conditions for personhood. Psychological approaches do so by specifying continuity of certain kinds of psychological states, although there is debate about exactly which kinds and, in particular cases, about whether a particular self has those or not. If memory is essential, what kind of memory? does a dementia self cease to be a self, and if so, when? Animalist approaches argue that a self is identical with a particular kind of animal, namely, human and it has the unified functionality characteristic of that kind. Here, too, there are “borderline” cases, for example, dicephalic conjoined twins where there is a largely single organ body system, but two heads that appear to have distinct personalities and preferences.<sup>21</sup> – One organism and two persons? One organism, one person? Two organisms, two persons?

For the network self, the threshold question may also suffer from imprecision at the margins where there may be borderline cases. While the question can't be fully addressed without considering the *cumulative* aspect of the network self, discussed in Section 3, what can be said is that normally, bodily integrity, psychological capacity and continuity, and many social relations persist through many changes. However, a self may undergo radical self-transformation (e.g., a conversion experience, a transgender experience) or severe disability, and still persist as that self. Losing limbs, becoming a quadriplegic after an accident, or becoming immobilized due to multiple sclerosis are experiences of that self, not the creation of a new, different self.

<sup>20</sup> I would like to acknowledge the very helpful comments from an anonymous referee in pushing for clarification.

<sup>21</sup> There may be some multiple organs and then fusion and a single organ system as in the case of the Hensel twins, Brittany and Abigail.

While the bodily movement capacities and even some organic functionality are diminished, there is still a sufficient cluster of organismic, psychological and social traits that sustain it as a and that self. The self may not be able to initiate self-motion and self-care, and others may help to sustain it as self (the example of the severely disabled physicist, Stephen Hawking is illustrative of the point). Similarly, a self that experiences severe amnesia or dementia is still that self, disabled or diminished in other ways. In this case, while the psychological traits and the communicative and judicative capacities dependent thereupon are diminished, there is still a sufficient cluster of organismic, bodily, and social traits that sustain it as a and that self. The self may not be able to self-identify, but others help to sustain it as a self. In each of these types of cases, constitutive social relations (parent, spouse, citizen, musician) persist *and* other selves continue to enact and enable to the extent possible, those identities of the self. On the other hand, a self who experienced such severe disablement in a context in which there were no medical, technological and social means available might simply die and thus, in ceasing to exist, cease to be a self. I'm not sure that there is a clear threshold, other than death, between if or when a self ceases, or when a protracted process of diminishing capacities and loss of function and relatedness is best described as that self dying.

I will return to these examples (and consider the radical transformation example), but for now, the main point is that the self network can persist and retain its integrity as long as some sufficient cluster of integrity sustaining traits persists. A self doesn't persist if all that remains of the self is a limb; a limb cannot instantiate or realize the characteristic determinateness of a self network. A maimed (living) body, on the other hand, may realize the characteristic determinateness of a self network; a recluse or castaway self (suppose a Robinson Crusoe type fate) may still constitute a self, this one truncated socially, rather than physically as in the case of limb loss. In each case, there is still a sufficient cluster of traits that allow for identification of the self as that self.

I come to this "sufficient cluster" approach from several sources: Gendler (1999, 2002) on thought experiments, and property cluster views in philosophy of biology.<sup>22</sup> Gendler (1999) argues that thought experiments in the personal identity literature, while we can make sense of them and of the conceptual separability of features of persons (such as consciousness; body),

<sup>22</sup> See next paragraph. Cluster property theory is also appealed to by Schechtman (2014) in her person life view of persons.

may not provide a firm basis for judgments about selves as they generally really are (p. 450). Rather, selves as they generally really are are not produced by fusion or fission (staples of thought experiments about personal identity), but “by well known sequences of biological and social processes” (Gendler 2002, p. 34). And these, for any particular self, are somewhat variable and contingent. If that is so, then there may not be a reliable basis for singling out a necessary and sufficient condition for any self to be and to persist as a self and as that self.

Boyd (1991) proposed that biological natural kinds be conceived as clusters of properties, the homeostatic property cluster (HPC) view. He subsequently extended the concept to biological individuals (Boyd 1999). Natural kinds are contingently clustered families of properties that may change over time and no one of which may be necessary for kind membership. Similarly, an individual may consist of a contingent cluster (or clusters) of properties that change over time and no one of which is necessary for persistence as that individual. Boyd identified properties in terms of similarity, causal and spatio-temporal relations that are objective and not merely conventional. Slater (2015) loosened some of the causal requirements of HPC and developed what he called a Stable Property Cluster (SPC) view. The difference between the two in philosophy of biology is not germane to my purposes. Rather, borrowing the idea of property clusters I suggest that we think of selves in a similar way. While this might mean, as noted earlier, that boundaries of a self are not precise, and that there is some ambiguity in classificatory practice, the advantage is that this approach recognizes the complexity, contingency, and variability in selves as “they generally really are” and in their persistence conditions.

### 3. Self as *Cumulative* Network

Now I turn to the *cumulative* aspect of the cumulative network model. Here, the idea is that the self should also be thought of as a process, incorporating the notion that the self is its history and, at least while living, incomplete and projecting into the future.

One obstacle to conceptualizing the self as a process is if we think of processes only as a succession of events. Perry (1975), for instance, rejects the idea that selves could be processes: “there is no one natural way to break up a person’s life into discrete events” (p. 10). But, processes are not just events. Objects, too, because they change, can be thought of as processes. Four-

dimensionalists<sup>23</sup> argue that persons are a succession or “spread” of temporal parts or stages (they would say objects are spatio-temporal regions, not processes). A spatial analogy captures the basic idea – just as physical objects are spread out in space, they are also spread out in time; just as your body is in two different places at the same time because parts of it are in two different places (e.g., your feet are on the floor and your head is at the height of the top of the blackboard), you are spread out temporally and the (temporal) parts of you are different spatio-temporal regions (e.g., the 10 year old part of you is a 1982 region and the 40 year old part of you is a 2012 region). The ordinary person that one encounters at a time is a person-part or a person-stage of a person-career. The whole person is the spatio-temporal region that spans birth to death.<sup>24</sup>

While I agree with the four-dimensionalist view of objects as spatio-temporally spread out, I have reservations about the static and fractionated view of temporal parts or stages. As noted previously, the notion of parts is too restrictive a way of understanding constituents of a self. Temporal parts or stages are time-slices, smaller regions of a larger region, something like the static frames in a film strip. They entail that there are many persons (person-stages or person-parts) and that at any time, a whole person is never present but only a person-part or stage is, or that there are many persons (person-stages). This has very odd consequences for some practical aspects of persons, such as responsibility (if at any time, it is a different person [stage or part], how is one person responsible for the deeds of another person?).<sup>25</sup>

Embracing the idea that a self is a process, I propose that we conceptualize the self at any time not as simply a time-slice, but as the cumulative upshot of what the self has been up to that time. This means that the past of the self is not just a sequence of discrete time slices, but is a constituent, a relevance condition of the self as it is up to that time. The past is not literally present, but is relevant to what the self is now and in that sense is a constituent of the self. To illustrate,

<sup>23</sup> Four-dimensionalism or perdurantism arises out of concerns about how to account for the persistence of objects through change.

<sup>24</sup> Scratching the surface of the literature in this area with some representative examples: Sider (2011) is a stage theorist; Lewis (1976, 1986) articulates what a temporal part is; Braddon-Mitchell and Miller (2004) defend a version of temporal parts theory.

<sup>25</sup> To be fair, four-dimensionalists argue that causal, contiguity, counterpart and other relations between stages account for the unity of stages and hence, appropriate identification.

consider an analogy to a chess game.<sup>26</sup> Chess games are often reported as a sequence of discrete moves. That is an elliptical representation of each stage of the game and presupposes the constituting conditions of a chess game (e.g., arrangements of pieces on a board, rules of movement, and so on). At any time the game is a configuration of the chessboard that was determined by the preceding sequence of moves and that presents possibilities for subsequent moves as governed by the rules of chess. The previous configuration and play of the game is relevant to the next configuration *as a stage of the game*. Another way of putting it is to say that the configuration at any time overlaps with a previous configuration and maps onto the subsequent configuration following the next move.

As a process a self exhibits a similar structure. Any stage of the self is what it is and has possibilities going forward at least partly in virtue of what it has been and now is. The integrity of any stage overlaps with the integrity of previous stages and maps onto the integrity of subsequent stages. Recalling the Lindsey example, when Lindsey is a graduate student, Lindsey *is* the self who is the daughter of p, went to college c, performed well on GRE test, and so on, even though she is not now, while in graduate school, also an undergraduate in college c or taking the GRE.

The chess game analogy is admittedly limited, and may make it seem as if a self process is a prescribed or mechanical sequence of stages, or that a self process doesn't allow for radical transformation or unexpected disruptions in the development of a self.<sup>27</sup> The chess analogy is meant only to introduce the idea of something being a process whereby the "thing" (e.g., game) is identifiable as that processual "thing". However, selves are not chess games, even if both are in some sense processes. A self process may undergo unexpected changes, for example, being radically altered in a severe accident, or radical transformation, for example, "renouncing its past" through religious conversion or a transgender change involving sex-change surgery and other radical social transformations (including, sometimes altering or severing of family or other social ties).

What the cumulative network model says is that even in these cases, the self is still the self it has been. Many of its specific traits persist; for example, its genetic structure; many bodily features, even when some are altered; that it is

<sup>26</sup> I use the chess analogy also in Wallace 2019, Chapter Two, section 4.2.

<sup>27</sup> Thanks to an anonymous referee for raising this point.



the offspring of particular parents, even if family ties are severed; usually, that it is a particular language speaker; that it is a citizen of some country (unless the transformation involves, for example, immigration and renouncing citizenship).

In addition, and this is the point of the idea of the *cumulative* nature of the self, it is still *its* history. The self who undergoes radical religious conversion doesn't just lose their past; it is the self who had professed some other (or no) religious affiliation. Indeed, renouncing or regretting a past presupposes its continued relevance in some sense. The person who undergoes transgender alteration doesn't cease to have been the self who experienced a mismatch between assigned gender and their own sense of self-identification. The immigrant doesn't cease to be the self whose history includes having been a resident and citizen of another country. Moreover, while many traits of a self's history may cease to be relevant in the present (while remaining constitutive of the self's history, which is relevant), some traits may continue to be relevant albeit in different ways. Thus, the self who immigrates may renounce citizenship, but its social, familial, cultural, linguistic traits may still be relevant to how the immigrant experiences and is constituted by its new social locations. In saying that the integrity maps onto the next phase of the self, CNM is not asserting that the self remains the same, or that the process is prescribed to go in a particular way. It is saying that the self is also its history and that maps onto self stages, even if there are many aspects of its history that a self disavows going forward and even if the way in which its history is relevant changes.

*Identity* over time is not the right concept for capturing the relation between stages of the self. Identity in the formal sense means sameness or indiscernibility. As a process a self changes; it does not have the same traits at one time as it has at another. Therefore, the self as it is at one time is not identical with the self as it is at another time. In one sense this point is no different than the nonidentity of spatial parts qua distinct parts of an object – a transmission is not identical with a windshield, and neither is identical with a car as a whole. Each is a constituent of the car, forming, along with other parts, a unified whole, the car, that one thing, which is identical with itself just as each part is identical with itself. While each part is distinct qua that part, insofar as each is a part of and contributes to the integrity of the car as a whole, each is “constituent of the car” and has relevance relations to other traits and parts of the car.

The relevant concept is numerical unity, rather than identity. The question, is this self the “same” as a previous self, is not asking whether this self is exactly similar to a previous self; it is not. Rather, it is asking whether this self *is* the self

that was previously differently, even radically differently, constituted. Here the analogy to spatial parts falls away. The self as it is at a time is not like a spatial part because the self *is* also its past; its history is not a distinct part (like the transmission being a part distinct from the windshield of the car), but is an ongoing, changeable constituent of the self at any time. This means that the self at a time includes as one of its constituents its previous cumulative stage. And this is the case for each stage. Figure 1 is an approximation of the idea:

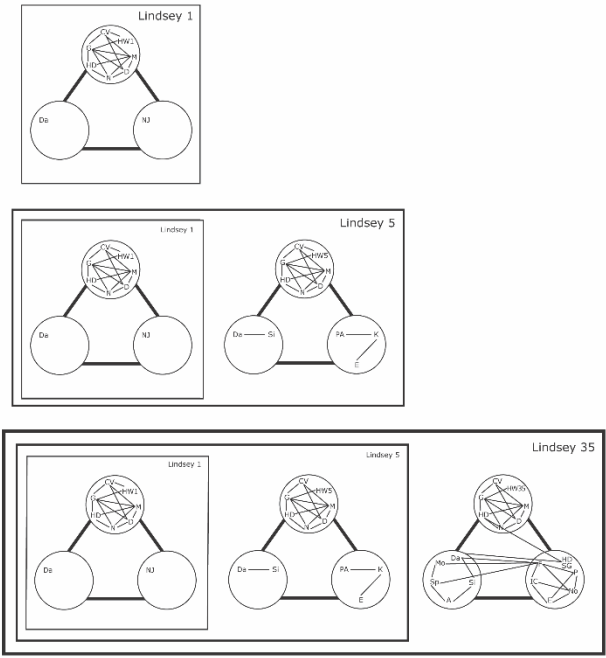


Figure 1. represents Lindsey as cumulative, structured subclusters of traits at a few different temporal cross-sections or stages, Lindsey one, Lindsey five, Lindsey thirty-five.

Abbreviations: A = Aunt; CV = cardiovascular system; Da = daughter; D = digestive system; E = English speaker; F = feminist; G = genetic structure; HD = Huntington Disease Carrier; HDG = member Huntington Disease Support Group; HW = height/weight at a phase; IC = Irish Catholic; K = Kindergarten; Mo = Mother; M = musculoskeletal system; N = neurological system; NJ = resident of New Jersey; No = Novelist; P = philosopher; PA = resident of Pennsylvania; Si = Sibling; Sp = Spouse.

Figure 1<sup>28</sup> is oversimplified and leaves out many intervening stages. It only illustrates the idea that Lindsey at 35 is the way the process, Lindsey, is at that time, not just as an isolated stage or time-slice, but as a cumulative upshot of the process at that time. Any stage of the self includes relations to its previous stages. The way the self was at a previous stage doesn't change, but how it is relevant to (how it constitutes) subsequent stages may change, whether change is gradual or radical. Being an English language speaker (E) constitutes Lindsey at 35 differently from how it constitutes Lindsey at 5. The relevance of a particular trait may cease at a subsequent stage; that Lindsey at 1 was a resident of New Jersey ceases to be relevant to Lindsey at 35; it was relevant (even if only weakly) to Lindsey at 1, *and* Lindsey at 1 is a constituent of the past of Lindsey at 35; *and* Lindsey's history is relevant to, constitutive of Lindsey 35.<sup>29</sup>

Recall the threshold question in Section 2. There I said that normally, a sufficient cluster of organized bodily traits (and not just a limb) is required to meet the threshold of continuing to be *that* self. But so, too, is its history. Even when a self radically rejects its past, that past is still constitutive of it as the whole process that is the self. With a new self-identification a self may radically alter direction and the course of its life, abandoning and adding social relations, altering *its* body, and so on. But, its prior relations and bodily forms are still what *it* has been. Recognizing its history as a constituent of a self allows us to account for why radical transformation is *of* a self (not the creation of a new self) and to account for responsibility attribution even when a self undergoes radical change, either by choice or conversion, or because of age and dementia (see Section 6). Moreover, conceptualizing the self as a process avoids the problem of many selves or only a part of a self being present at a time. Rather, the self at any time just is the self as it is up to that time.

With this rough outline of the cumulative network model of the self, I want to draw some contrasts with the psychological and animalist views. Doing so will help to show the interpretive possibilities of CNM and how it moves beyond individualistic and atomistic views of the self.

<sup>28</sup> Wallace 2019, Figure 2.9, p. 54.

<sup>29</sup> This is not to say that the place of one's birth couldn't be relevant to later stages or contexts, e.g., eligibility for being President of the United States.

#### 4. Contrast Between CNM and Psychological and Animalist Views of Selves

As mentioned earlier, the personal identity literature is rife with thought experiments involving fusion and fission of persons. These start with Lockean type thought experiments (whereby a consciousness is transferred to another body) that have evolved into many variations, including brain transplant, duplication (fission) of consciousness and in some cases duplication of whole brain/body (for instance teleporter) thought experiments. While I am dubious that these thought experiments tell us about how selves actually are, they do help to illuminate differences between psychological and animalist theories and CNM.

According to CNM, the self is the network. Fusion and fission cases destroy the network such that that self would no longer exist and a new self (or, in fission, selves) would have been created. In a brain transplant case, the body of a brain-dead self receives the brain (consciousness) of another self. (Alternatively, a conscious brain receives the body of another self, absent its brain.) The newly created self is, according to psychological theories, the self of the brain (consciousness) because self (person) goes with consciousness. An animalist theory would have to say that the body recipient, a still living organism, is the self with a new brain (consciousness).<sup>30</sup> In contrast, according to CNM, the new self would be the fusion of subnetworks of two selves (body of one, brain and psychological states of another) and the creation of a new network. The fused self would have partially fused social and kinship relations and would have to develop new self-understandings of this fusion. In terms deployed earlier, the cumulative network of each prior self does not map onto this new self. The new self *is* neither the history of only one of the prior selves, nor of both; rather, it has continuity relations to aspects of the histories of two prior selves. It doesn't seem to make sense that *that* constitutes a history *of* the new self since that new, fused self did not exist as the experiencer of that past *as its*. Rather, the new fused self is starting its own, new process and history.

Cognition as embodied, experiential, and enactive would not only be different but self-referentially different. Contrast that with a self who is faced with a dramatic change in the self's bodily capacities due, for example, to the effects of an accident, disease, or sex-change surgery. In the latter cases, self-reference is still to the whole, albeit radically altered self; "the architectural

<sup>30</sup> The variety of different animalist interpretations and responses to the "remnant person" problem (Johnston 2007) – that is, who or what is the brain between removal and transplant? – are not important for my purposes here.

background that supports ‘I-use’ of the temporally extended self remains intact (Ismael 2007, p. 185). In the fusion case, self-reference is not to either previous network, since neither network qua that network persists. The psychological theory would say that self-reference is to the I of the consciousness, and that that remains the same. But, I am arguing, it does not. The direction of fit concept is applicable here. Self-identification goes from self to self-conception (“‘I’-thoughts”), not the other way around (Ismael 2007, p. 191). Brain transplantation disrupts the normal configuration of self-reference such that ‘I’-thoughts no longer reliably track the referent. An ‘I’-thought such as “I am experiencing pain” may reliably refer to the pain-experiencing subject, where the referent is an otherwise unspecified subject of present experience. However, the “architectural background that supports ‘I-use’ has been broken and thus ‘I’-thoughts do not track the I as a self with a persisting integrity, e.g., as spouse, sibling, parent, employee, etc. of either previous self. Fusion represents the start of a new cumulative network. CNM does not endorse the container transferable view of the self as found in the psychological view – as a consciousness that can be transferred to another “container” (body). Rather, fusion is the creation of a new network, not a continuation *of* one or the other of the prior selves.

Similarly with fission. Recall the teletransportation example<sup>31</sup> whereby one self enters a teleporter, but the teleporter malfunctions and two bodies emerge. Parfit (1986) argued that the self who entered the teleporter continues as two selves. The psychological theory says that duplication allows for double instantiation of the original self (identified with consciousness) that is presumed to be exactly the same. The two new emergents will go on to lead two different lives, but on the psychological theory each is a continuation *of* the prior self.<sup>32</sup>

CNM argues that these are two new networks, neither of which is a continuation *of the prior self*. This is so not only because of the singularity of the body in self-constitution, but because the network is constituted by many social relations, and those have not been duplicated. According to CNM, the self is not just a consciousness with psychological states and beliefs about who it is (spouse, sibling, employee, citizen, etc.). Rather, the self *is* those relational traits. For duplication to actually be duplication of a *self*/the whole self network would have to duplicated and that is not the case with the malfunctioning teleporter.

<sup>31</sup> Discussed in Section 2.

<sup>32</sup> For animalist theories, only the original body (organism) could be said to be and continue as the self.

This is a very condensed and simplified rendering of the many variations on and treatments of fusion and fission thought experiments and much more could be said.<sup>33</sup> The point here is just to indicate that adoption of the view that the self is socially and cumulatively constituted carries commitments about the persistence conditions of a self that are different from those of psychological (and animalist) theories. According to CNM, the distributed and extensional nature of the self as network entails recognizing the complex particularity of selves, and that particularity does not survive in fusion and fission thought experiments.

### 5. Subjectivity and First person Perspectives

One question that might arise, is how to understand subjectivity on the cumulative network model of the self. The self as network has multiple constituents. Lindsey is mother, daughter, aunt, sibling, spouse, philosopher, English language speaker, feminist, Irish Catholic, novelist, left-handed, myopic, and so on. Is Lindsey as a subject the whole that is an integration of all these multiple constituents? Is there a perspective that is independent of these locations, that constitutes an “I” the experiencer of the self in its different respects or as a whole that can self-observe, evaluate, or judge itself? Is subjectivity an aspect of the self that is distinct from its locations?

People sometimes say things such as: “that isn’t really me” or “I don’t identify with that aspect of me” or “I endorse (or don’t) my own choice or behavior.” One might argue that there is an “I”, a controlling, or judging aspect of the self distinct from specific constituents of the self.<sup>34</sup> On CNM, however, a capacity to distance or judge oneself would itself have to be relationally constituted. When a self judges “I don’t identify with that aspect of myself” the self is judging an aspect (trait) of itself from another perspective of itself (or from what the self takes as a perspective of another self). I am suggesting that the relational constituents of the self may also function as I-perspectives, for example, I-as-mother, I-as-daughter, I-as philosopher, I-as-English-language-speaker, and so on. I-perspectives can be localized, or global, I-as-a-whole-self. Self-recognition, self-assessment, self-endorsement, self-disavowal would always be from some perspective. Traits functioning as perspectives engage in a

<sup>33</sup> For a much fuller treatment of these cases see Wallace 2019, Chapter 4.

<sup>34</sup> Frankfurt style notions of the I as endorser (or not) of first-order desires might be an example of such an idea (e.g., Frankfurt, 1971).

process of reflexive communication, wherein each of the involved I-perspectives communicates with other(s) and takes an other I-perspective as a source of meaning.

To illustrate: suppose Lindsey is considering whether to have another child. According to CNM, the self-evaluating process would involve perspectives of Lindsey communicating with one another, perhaps something like the following. I-as-philosopher, I-as-mother, I-as-spouse, I-as-feminist reflexively communicate with each other, considering, perhaps issues such as “how would having another child affect my ability to do philosophical work?” “how would it alter my relations to my current children? to my spouse?” “how important is it that my child have a sibling?” “what will be the caretaking responsibilities and will they be equitable between me and my spouse?” The “I” as subject is multiple perspectives and these perspectives may unite to form an integrated perspective, an I who is the cumulative whole self. Perspectives are not merely psychological states insulated from social and cultural influences. I-as-spouse, I-as-feminist, I-as-mother, each of these perspectives is a trait constituted by social and cultural relations. In functioning as perspectives that communicate with each other, each trait, and hence, perspective, continuously interacts with the social and cultural structures and pressures that shape (both positively and negatively) the trait/perspective and possibilities for the self.

Reflexive communication may extend into and be (partially) constituted by the subjectivity of particular others as well as by other social, cultural, political structures. A self’s communicative relations with a spouse may partially constitute the self’s communicative relations with itself, and hence, its own subjective perspective. (This can be autonomy enhancing as much as it could be inhibiting.) Each self’s perspective may be shaped by wider social structures and locations such that communication may not be fully transparent; it could express power relations embedded in structures. Additionally, communicative processes need not take place in language. Action and behavior shaped by intertwined social structure and individual capabilities may be modes of communication inter- and intra-personally. Communication may also be affective and emotional. An anxious child may communicate that anxiety to the parent, whose own subjective experience comes to be (partially) constituted by the child’s anxiety, as parent of an anxious child and experiencing itself as such.

The concept of reflexive communication needs to be fleshed out.<sup>35</sup> Here, I am only concerned to introduce the idea of subjectivity as socially, relationally constituted, as I-perspectives. This approach suggests that experiences of a “divided self” (as in akrasia, or in dissociative states) are on a continuum with ordinary, “normal” subjective experience. In addition, the distributed nature of subjectivity suggests that at least some aspect of subjectivity may be sustained through relations with others, an example of which I discuss in the next section.

## 6. Applying CNM

Now, I want to briefly gesture towards two implications or applications of CNM: (1) the role of embodiment and social constitution in the persistence of the self, even in the face of diminishment and disability; and (2) the processual nature of the self for purposes of reidentification of the self, often important for responsibility attribution.

Embodiment and social constitution. Consider an amnesia or dementia afflicted self. Such a self is sometimes characterized as being no longer the same person. It is less common to so characterize the quadriplegic, missing limb person, or MS or Huntington Disease disabled person. That this is so reflects the importance and value we assign to cognitive, communicative and other psychological capacities, and how those are relevant to the capacity for choice, autonomy, responsibility. This also reflects some version of the psychological view of persons, whereby radical alteration or discontinuity in psychological states would imply that it is no longer the same person.

On the cumulative network model of the self, each, psychological or physical disability, is a kind of diminishment or disablement of important capacities and aspects of a self. The amnesiac or the dementia afflicted person is not a *different* self. It is *that* self, now disabled or diminished (and in some cases, possibly in a process of dying, just as is possible with the physically disabled person). This is because there are still many other integrity sustaining traits of that self – who is still the spouse, parent, sibling, offspring, cousin, still the living biological organism even if altered, still speaker of language L, still citizen of country C, still left-handed, still of cultural, religious, or ethnic heritage, still its history, even if the self can no longer enact or fulfill the normal expectations of those relationships and capacities. Some of these traits and

<sup>35</sup> While I was not able to fully address the helpful comments of anonymous referees in the space allowed, I do so in much greater detail in Wallace 2019, Chapter 5.



relations are sustained (as fully as they can be) through the contributions of other relata (persons) to the relation. And even when they can't be the tragedy of it is that it is diminishment, perhaps the dying, of that self. Baylis's (2017) discussion of her mother's dementia poignantly illustrates this point.<sup>36</sup> That the self can no longer self-identify may be extremely unfortunate. The network may be constituted by a shrinking of its capacities. On CNM, that diminishment is happening to, is *of* that particular self. This is no different in principle than physical diminishment. The self who loses a limb may no longer be a dancer, but the self is the self who was a dancer, and the loss of that capacity and "identity" in the current configuration of the self is a constituent of the diminishment.

The processual nature of the self and responsibility attribution. There are at least two different considerations when it comes to responsibility attribution – (1) attribution of responsibility to the correct self; and (2) what responsibility practices are appropriate in light of the character and capacities of the self. Call the first the target identification issue and the second, the capacity issue.<sup>37</sup>

When a self experiences dementia, amnesia or some other form of significant psychological discontinuity, the psychological view might argue, as noted previously, that the self is no longer that person, and therefore is no longer the correct target of responsibility attribution for some action that the self would be responsible for absent the memory loss. But, on CNM the self at any time, even with such psychological impairment, is still the correct target because the self is a process, the cumulative self up to that time and it is not defined solely or primarily in psychological terms. That the self has no conscious access to or capacity for self-identification as the doer of a deed may be relevant to the *second* consideration, namely, what responsibility practices are appropriate in light of diminished capacity. It does not, however, mean that it is no longer that self, the self whose history includes its prior deeds and whose cumulative present character is constituted by that history, whether the self has conscious access to it or not. The psychological view appears to lead to a conflating of the target identification and capacity issues. In contrast CNM can coherently distinguish the two. That distinction seems important in a number of practical contexts, such as in criminal justice contexts, or in the assessment of pre-commitment devices (such as "living wills" or advance

<sup>36</sup> Baylis defends a relational theory of the self, although hers is an explicitly narrative self theory, which CNM is not. See Baylis (2012, 2017).

<sup>37</sup> The latter includes social conditions and determinants; I am collapsing such considerations into "capacity" for the sake of simplicity and space in distinguishing it from "target identification."

directives), or in recognizing the significance of regret, change of heart and forgiveness, experiences which presuppose the processual nature of the self, that a self is constituted by its own past.

## 7. Conclusion

I have been arguing that to take seriously the idea that the self is socially constituted we should abandon the traditional mind/body framework (or psychological/animalist theories) of the person and reconceptualize the self as a network. A self is relationally constituted in all dimensions, social, psychological, physical and biological, cultural, semantic, cognitive, and temporal. In this paper, I have focused on sketching out the model and showing its implications for addressing some philosophical issues about personal identity that motivated the view, issues concerning (a) the importance of social relatedness as constitutive of self and as sustaining of identity in the face of impairment and disability; and (b) temporality and the persistence of self and how that bears on issues of identification of the self through time and hence, responsibility attribution. While I have not done so here, the cumulative network model of the self may also be a fruitful way of framing the ways in which cognition itself is distributed. Briefly, in so far as the psychological (and animalist) view conceives of the self in self-contained ways, it would not be natural to think of cognition as distributed. But, if relationality is built into the model of the self from the very beginning, then the extensionality and relatedness that seems to be required for distributed cognition is a feature, not a “bug”. The cumulative network model of the self allows for recognition of this and a wide range of capacities of selves that, I have been suggesting, provides a better account of selves as they “generally really are” than either the psychological or animalist approaches to the self.

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