

Extended Mind and Identity

Robert A. Wilson and Bartłomiej A. Lenart

[8000 word limit; 7478 in v 3.0]

Abstract

Dominant views of personal identity in philosophy take some kind of psychological continuity or connectedness over time to be criterial for the identity of a person over time. Such views assign psychological states, particularly those necessary for narrative memory of some kind, special importance in thinking about the nature of persons. The extended mind thesis, which has generated much recent discussion in the philosophy of mind and cognitive science, holds that a person's psychological states can physically extend beyond that person's body. Since "person" is a term of both metaphysical and moral significance, and discussions of both extended minds and personal identity have often focused on memory, this article explores the relevance of extended cognition for the identity of persons with special attention to neuroethics and memory.

Authors' contact info: Department of Philosophy, 2-40 Assiniboia Hall, University of Alberta, Edmonton, Alberta, T6J2E5, Canada. rwilson.robert@gmail.com , b.a.lenart@gmail.com

Related entries:

Neuroethics and identity (section intro)

Ethics of pharmacological mood enhancement

Impact of brain interventions on identity and authenticity

Neuroenhancement

Personal identity and narrative identity

The new cognitive neurosciences and practical identity

1. Personal identity

Philosophical work on personal identity has involved answering two related questions: *what is the nature of persons?* and *what criteria identify a person over time?* Answering this second question, the question of *diachronic identity*, presupposes an answer to the first question. We need to know what persons are in order to identify them over time.

Standard views of personal identity have tended to assume, following John Locke's watershed work on personal identity in *An Essay Concerning Human Understanding*, that defining the nature of persons (or "personhood", as philosophers are apt to say) requires understanding the nature of the self, where the self is constituted by a unified continuity of conscious states. This assumption about the nature of persons underpins contemporary *psychological accounts* of a person's identity over time, most of which draw on Locke's own appeal to memory. The memory one has of one's self is one's *narrative memory*. Such accounts, sometimes referred to as "neo-Lockean", have held sway as the dominant view of diachronic personal identity throughout the 20th-century.

Locke himself proposed memory as criterial for tracking a person through time because he viewed "person" as

a forensic term appropriating actions and merit; and so [belonging] only to intelligent agents capable of a law, and happiness and misery. This personality extends itself beyond present existence to what is past, only by consciousness; whereby it becomes concerned and accountable, owns and imputes to itself past action, just upon the same ground and for the same reason that it does the present. (Bk. II, Ch. XXVII, §26)

That is, for Locke, the term "person" functions to allow us to praise, to assign blame, and to hold individuals accountable for what *they* have done in the past.

As the passage makes clear, for Locke the designation of personhood is one that is to be attached to a self. Given Locke's earlier discussion of the identity of the same substance, same human being, and same person over time (II:xxvii.6), it is clear that Locke takes this self to be something other than a substance or a kind of living organism. For Locke, the self is distinctively individuated over time by some kind of psychological continuity, one in which memory plays a key role.

One influential argument that Locke provides for this view turns on his introduction of a now-famous example. Imagine a prince and a cobbler, with their very different personalities, characteristics and memory, waking up one day with the minds of each of them switched into the body of the other (II:xxvii.15). If these mind-body pairs were switched, Locke explains, then the personality and memories of the prince would be transferred into the cobbler's body. This would be a case, Locke argues, in which *the prince* now exists in the cobbler's body, and *the cobbler* in the body of the prince. The reason for this is that memory and the cognitive capacities required for memory serve the forensic function Locke attributes to personhood. Locke writes: "whatever past actions it [the person] cannot reconcile or appropriate to that present self by consciousness, it can be no more concerned in than if they had never been done" (II:xxvii.26).

Despite the dominance of Lockean and neo-Lockean views of persons and their identity over time, they are not the only game in town. Theories proposing a *biological* criterion for diachronic identity discount the importance of psychological continuity, looking instead to the structural integrity of an organism as the basis for an individual's identity through time. Proponents of the biological criterion take an essentialist approach to the problem of identity by pursuing the question of what kind of thing humans are, basing their account of personal identity on the persistence conditions of that thing. For instance, Eric Olson (1997, 2003) argues that human beings are essentially biological organisms or human

animals. Thus for Olson, tracking the identity of a person has nothing particularly to do with that person's mental states. Instead, it is sufficient to know the persistence conditions of human organisms and to apply them to a person of interest in order to identify or re-identify him or her over time.

Morally speaking, we ought to feel apprehensive about a view that would be willing to hold a person accountable even if its mind were unaware of the body's previous activities and, in fact, cognizant of entirely different actions. The full weight of this implication is apparent if we imagine an assailant and his victim switching brains. According to the biological approach, the assailant's body should be punished for the crime despite the fact that the experience of the punishment is to be added to the victim's already emotionally traumatized conscious states; the victim would remember being assaulted and then would be punished for his or her assailant's actions. Thus, if we are to preserve both the connection between person and moral blame that Locke made in viewing "person" forensically and our intuitions about this particular case, we seem drawn from the biological to the psychological criterion.

Another essentialist alternative to neo-Lockean views postulates a continuing mental substance, the identity of which may be independent of either psychology or biology. Although some version of a substantive view of personal identity may be widely accepted by the general public, such views are at best marginally represented among philosophers. The problem making this approach philosophically unpalatable is this: if the substance is not altogether lacking in psychological and biological traits, then its identification will inevitably be based on those traits, which will in effect amount to a trimmed (and likely a somewhat insubstantial) psychological or biological view. Thus, such a view, in order to represent a distinctive alternative, would have to postulate a featureless substance. However, as David Shoemaker argues, "[w]e cannot track immaterial egos floating free from any particular psychological properties, so on this view we would never be justified in claiming to have re-identified anyone" (2012, section 2.5).

The neo-Lockean focus on consciousness and memory continues a long philosophical tradition of defining persons in terms of what differentiates humans from non-human animals and plants by appealing to the nature of their mind or soul. Aristotle famously argued that although humans share in the nutritive and perceptive capacities of plants and non-human animals, the *rational soul* is unique to human beings. Although Locke eschews a commitment to any kind of substance as the grounds for his account of personal identity, Locke's views do reflect the ratio-centricity that one finds in this Aristotelian tradition, as well as a certain kind of individualism about the nature of persons and their identity over time. This is because certain rational cognitive capacities are required for an individual to be able to remember, and those capacities are conceptualized as depending solely on aspects of that individual him or herself. These forms of ratio-centricity and individualism remain features of neo-Lockean views of persons in the contemporary literature.

There are morally troubling results of both the ratio-centrism and individualism of neo-Lockean views of personal identity, especially in combination. First, such views seem to imply that individuals with certain cognitive limitations cannot claim the right-conferring status of personhood. This resultant de-personalization of the "mentally deficient" amounts to their subhumanization and with it an abandonment of the universal ascription of fundamental human rights. Second, as a consequence of the inherent individualism of neo-Lockean views, external resources—such as other people, environments, or technologies—that may be intrinsic to certain cognitive (and other) capacities, are viewed as extrinsic to an individual's status as a person. Such external resources may in fact be precisely what could increase the cognitive capacities of an individual who would otherwise fall below the cognitive threshold for full personhood set by neo-Lockean views. Despite this, such external resources cannot promote the moral status of individuals who, in virtue of their limited intrinsic cognitive capacities, fail for neo-Lockeans to qualify for full personhood.

While the links between narrative memory, rationality, and the self make the ratio-centric and individualistic biases in psychological accounts of identity of persons over time and thus the nature of persons readily identifiable, such biases are also implicit in biological accounts of persons. Faced with the problem of specifying which of the many kinds of unified, living, persisting organisms are *persons*, proponents of biological views also tend to fall back on appeals to the kinds of consciousness and rationality possessed by typically *human* organisms. Thus, when lines must be drawn, rationality and one's intrinsic capacities become the historically authoritative boundary markers for personhood.

2. The empirical study of mind and personal identity

For the most part, traditional work on personal identity in philosophy has proceeded with little reference to, let alone sustained discussion of, empirical work in the clinical and cognitive sciences. There are at least three areas, however, in which such work has been seen to be relevant to ongoing philosophical discussions of personal identity, particularly by those influenced by neo-Lockean, memory-based criteria for personal identity. These focus on clinical phenomena that in certain respects parallel fictional and philosophical fantasies, such as Dr. Jekyll and Mr. Hyde, or Locke's own "day man" and "night man", in raising questions about the relationship between persons, minds, and bodies, as well as about the identity of persons over time. Similar questions are nascent in more recent discussions of enhancement technologies.

Split-brain cases. These are chiefly examples in which patients have undergone the surgical procedure of *commissurotomy*, which severs the *corpus callosum* that provides the primary neurological channel connecting the left and right hemispheres of the brain. Commissurotomy as a surgical technique was first performed on patients with severe forms of epilepsy featuring gran mal seizures in 1940. Split-brain cases were initially described by the Nobel Prize winning neuropsychologist Roger Sperry (1966,

1968a, 1968b), following work that he had undertaken with the neurosurgeon James Bogen at the California Institute of Technology. Sperry's characterizations provoked much discussion in the philosophical literature on personal identity in the 1970s and 80s (see Marks 1986, Dass 1995).

The initially surprising finding was that patients who had undergone commissurotomy manifested recognitional behaviours that differed markedly, depending on how those behaviours were elicited. For example, when presented with a visual stimulus shown tachiscopically for 150-200 milliseconds in the left of the visual field, and asked both if they had seen anything and to describe what they had seen, patients showed no awareness of these stimuli; when probed to draw or guess at what was presented, however, such patients performed significantly better than chance. The explanation for this perhaps innocuous-sounding discrepancy is that the left visual field, which is processed in the right hemisphere, has a functional specialization for imagery and non-verbal processing. Since the primary signaling channel between the hemispheres is absent following commissurotomy, there is information available to the right hemisphere that is isolated from the left hemisphere, which has a functional specification for language and categorization. Hence, a probe that draws on the left hemisphere, which lacks information about the stimulus, will elicit non-recognitional behaviours; a probe that draws on the right hemisphere, which does possess that information, elicits recognitional behaviours. Further discrepancies found between how patients reported information acquired through tactile and visual modalities could be explained in a similar manner.

Sperry claimed that results such as these suggested that “the surgery [commissurotomy] has left these people with two separate minds, that is, two separate spheres of consciousness” (1966, 299). Reports of these findings of split-brain cases were thus sometimes interpreted as cases in which there were two persons in one body, with the Canadian philosopher Roland Puccetti arguing further that this is the proper way to think about persons and their bodies more generally (Puccetti 1973a, 1973b, 1981).

Psychiatric disorders involving the disorder of the self. Perhaps the most prominent of these are dissociative disorders, including multiple personality disorder, which was recognized in the Diagnostic and Statistical Manual of Mental Disorders (DSM) in both its second and third editions, published respectively in 1972 and 1980. This medical conception of the nature of the disorder, which built on the popular idea that a given human body may well possess more than one personality, and that these personalities may govern the behaviour of that body in very different ways, comported with the kind of speculation fueled by the work on “split-brain patients” in that it seemed also to lend itself to a philosophical gloss of there being at least “two persons in one body”, each causally responsible for directing the behaviour of that body at different times (cf. Braude 1991). The substantial reconceptualization of MPD as “dissociative identity disorder” in DSM-IV (1994) as requiring “the presence of two or more distinct identities or personality states” that alternately control the individual’s behavior, and that manifest relatively cohesive narrative memories that are isolated from one another, in effect suggests that disintegration of the self, rather than its multiplication, is at the heart of the condition. Perhaps “multiples” have less than, rather than more than, one self (see Hacking 1995).

Memory loss over time. The third cluster of empirical phenomena that philosophers thinking about personal identity in the neo-Lockean tradition have appealed to concern cases of extreme, even if gradual, memory loss over time, such as one finds amongst Alzheimer’s patients and others suffering from age-related forms of dementia. Central to such afflictions is the loss or severe diminution of memory, not simply narrative memory of one’s past, but of the ability to recognize one’s family or close friends and one’s even quite recent interactions with them, as well as the abilities to remember and act on one’s own plans and expressed desires, and procedural memory for sometimes even simple action or “know how”. As such abilities decline, so too does one’s capacity for a cohesive mental life, calling in

to question the relationship between one's self at distinct times, such as the past and present, or the present and future (de Grazia 2005: ch.5).

Enhancement technologies. More recently, some discussions of personal identity have shown sensitivity to developments in the clinical sciences concerned with cognition and the mind that focus not so much on traditional pathologies but on enhancement technologies. For example, Carl Elliott (2003) has discussed the variety of ways in which technologies—ranging from accent reduction training and other forms of voice modification through to the psychopharmacological mood adjustments induced by drugs such as Prozac that lead some users to describe themselves as feeling “better than well” or as finally being able to “be themselves”—have been developed and used to influence one's sense of narrative identity over time. Some such technologies, such as cochlear implants and prosthetic limbs, literally augment the brain and body of a person in ways that either restore missing or lost capacities or enhance such capacities beyond those possessed by the fictional normal persons. Although these discussions have been typically cast in terms of the cultural and scientific significance that such technologies have for conceptions of the self, public policy, and individual lifestyle, they remain relatively undigested in the literature on personal identity. Likewise, consider the more science fictional projections of transhumanists who are focused on the possibility of substantial life span extensions that involve technologies allowing for the downloading of human minds into new bodies, or even non-biological forms of instantiation (Kurzweil 2005, Agar 2010). Both the presumptions of and implications for such possibilities vis-à-vis personal identity have received some recent discussion (Schneider 2009).

3. Extended cognition and extended minds

The empirical work drawn on in discussions of personal identity recounted above has tended to reflect the predominance of psychological and more particularly memory-based views of personal identity. Such views have taken the brain and neural activity to be distinctive, vis-à-vis personal identity, from

merely bodily activity. In this section we turn to views of cognition, including of memory, that question whether neural activity itself is sufficient for cognitive processing of particular kinds, or even for having a mind. According to proponents of the extended mind thesis (Clark and Chalmers 1998), or the hypothesis of extended cognition (*sensu*_Rupert 2009), the answer to these questions is “no”.

The extended mind thesis holds, perhaps counter-intuitively, that cognition does not take place exclusively in the head of the cognizer. As such, it is a form of *externalism* about the mind or cognition that developed in the 1990s as part of a longer dialectic between individualists (Fodor 1987, Segal 1989) and their externalist critics (Burge 1979, Shapiro 1993, Wilson 1994). In contrast to the debate between individualists and externalist to that point, which had focused on the notion of mental content or representation, proponents of the extended mind argued that minds or cognitive systems themselves were not fully located within the bodily envelope of the individual (Wilson 1995, Clark and Chalmers 1998). On this view, features of, or structures in, an organism’s environment could in principle be, and sometimes in practice were, physical constituents of that organism’s cognitive systems. Such cognitive systems are extended in that they do not begin and end at the skull or even body of the individual cognizer.

The extended mind thesis can be readily motivated theoretically, as well as by reflection on everyday ways in which we rely on and even come to incorporate parts of our artifactual environment into our cognitive activities.

Theoretically, the possibility of extended cognition follows from functionalism in the philosophy of mind, where what matters for cognition is not the *what* or the *where* but the *how* of cognition. For at least a sophisticated form of functionalism, cognitive processing is, in essence, a matter of a certain kind of *structural* and *dynamic* functional organization. Given the commitment to materialism shared by

most functionalists, that functional organization is physically realized and so physically located. But *what* does the realizing, and just *where* that matter is located, is of secondary importance. Networks of neurons organized in certain ways can realize particular cognitive systems, but so too might silicon chips so organized. And the physical stuff realizing such networks are often located inside a skull, but it may also be distributed between head and world. Thus, certain kinds of *parity considerations* lie at the theoretical heart of the idea of extended cognition, ones that appeal to functionalist commitments that we view as running deep in the cognitive sciences (Clark and Chalmers 1998, Wheeler 2010, Wilson in press).

In terms of reflection on everyday cognitive activities, consider our systematic reliance on pen-and-paper calculation in order to solve even minimally complicated multiplication problems. Here we store intermediate solutions on the paper, using perception and action to mediate information flow between the symbols stored in our heads and those stored on the paper. The cognitive process of *solving a multiplication problem*, in this case, involves integrated information processing both inside and outside of the person's body. Moreover, as the workload involved in many cognitive tasks increases—more information to store and track, higher attentional demands, more levels to decision-making—the corresponding cognitive processing comes to systematically depend on the smooth integration of in-the-head cognition with cognitive tools and structures outside of the head. Proponents of extended cognition take such examples of *cognitive offloading* to point to how extended cognitive systems have been shaped evolutionarily, developmentally, and culturally for everyday cognitive tasks (Clark 2008, Wheeler 2005, Wilson and Clark 2009). Cognitive scientists adopting a “situated cognition” perspective on a variety of topics, such as problem solving (Kirsh 2009), learning (Sawyer and Greeno) and rational decision-making (Brighton and Todd 2009), continue to explore systematically the role that such offloading plays in everyday cognition.

A more precise statement about extended cognition that concerns *particular cognitive activities* and that makes explicit the idea of an extended cognitive system summarizes this overview of the extended mind thesis:

A cognitive activity is extended just if it is generated or sustained by the activity of one or more extended cognitive systems.

A cognitive system is extended just if it contains, as physical constituents, one or more processing resources that are not contained inside the head or body of that individual.

Multiplication performed by a person using pen and paper involves extended cognition, provided that (a) the pen and paper function as processing resources that are (b) not contained inside the head or body of that person, and (c) are physical constituents of a cognitive system which (d) generates or sustains that activity. Those resistant to the idea of extended cognition and the extended mind can be viewed as rejecting one or more of these provisos, most commonly (a) or (c) (Adams and Aizawa 2008, Rupert 2009).

Although the extended mind thesis was originally articulated as a merely possible alternative to the view that cognition takes place entirely in the head, the thesis has come increasingly to be defended as a plausible view of much actual cognition. As such, it has appealed to ongoing work in the cognitive sciences in support of this claim (Wilson 2004, Clark 2008, Wilson and Clark 2009, Wilson in press), including the use of gesture for linguistic communication (Clark 2008), action-guided views of perception (Wilson 2010), and memory (Wilson 2005). Given that memory has played a prominent role in discussions of both the extended mind and personal identity, we make that our focus below.

External memory storage for problem solving, planning, and decision-making features in both the multiplication example we have discussed as well as Clark and Chalmer's (1998) classic Otto-Inga thought experiment in which one person, Otto, compensatingly comes to rely on and utilize a notepad as

effectively as another person (Inga) uses internal memory storage for finding one's way to a particular location in a city.

The kind of parity considerations in play here can be used to motivate a broader rethinking of the kind of memory central to personal identity. While there are many ways in which memory has been conceptualized—short-term vs long-term, episodic vs semantic, procedural vs declarative, iconic vs linguistic—as we have seen, it is *narrative memory* that is most directly relevant to discussions of personal identity. The sense of having a continued psychological existence over time, such that one can remember oneself having done certain things in the past, matters to us and is what allows us to guide our current actions and plan our futures in light of *who we are*. The framework of extended cognition is well-suited to apply to narrative memory, a point we can illustrate by drawing on an early discussion of Daniel Dennett's.

In “Making Things to Think With”, Dennett illustrated our habit of offloading cognitive tasks into the environment itself with the example of elderly people who are incapable of recalling simple daily routines and suffer from other memory-related deficiencies once they are housed in institutions such as nursing homes (1996, pp.134-139). Many such signs of dementia are less pronounced or disappear altogether once people are returned to their own homes where they have offloaded many of their daily routine schedules (such as taking their medications) on items or places that *remind* them of what they have to do, how they ought to do it, and other kinds of pertinent information.

Even though narrative memory has typically been conceptualized individualistically as the story that each of us tells about oneself, it can come to integrate aspects of familiar environments (as in Dennett's example) and also can be shared and co-constructed by two or more individuals. Both of these

dimensions to narrative memory are readily interpreted within the framework of the extended mind, but also introduce complications of their own.

Here we need to distinguish between the ideas of extended memory and *collective* memory, the latter of which has received much discussion in the humanities and social sciences in Holocaust and trauma studies (Olick, 2011; see also Wilson 2005, Theiner 2008, in press). Integrating things in one's immediate environment to form an extended memory system is a form of extended cognition utilized by people with Alzheimer's disease and other neurodegenerative conditions affecting memory. Here it is *the individual* who remembers, but the activity of remembering is extended. In contrast, in cases of collective memory it is some kind of collective or *group* that remembers, distributing the task of remembering between different individuals within a group. Public commemoration, where we together and between us remember a significant event, person, or political cause, typically involves collective remembering.

The relationships between extended and collective memory remain largely unexplored. One general claim that has been made about "group minds" that may prove relevant here is that many putative examples of collective cognition are more plausibly viewed as cases in which the extended cognition of the individual involves a social environment involving other people. This *social manifestation thesis*—"the idea that individuals engage in some forms of cognition only insofar as they constitute part of a social group" (Wilson 2005, 229)—can be applied to memory and viewed as offering both a challenge to proponents of group minds and potentially, at least, an expanded role for the extended mind thesis (see also Wilson 2004, chapters 11-12; Barnier et al. 2008). That expanded role contains implications for personal identity.

4. Extended personal identity

An externalist neo-Lockean account of identity is not as puzzling as it may initially sound, especially given that the psychological account appeals so directly to narrative memory. As Alasdair MacIntyre (1984) has observed, people are essentially storytelling animals. The narrative tools we employ to make sense of our identities arise in cultural, historical, and institutional settings. When we take memory seriously in the context of personal identity, it becomes clear that individual identities, just like individual memories, are realized within the context of collective narratives. Individual memories may well serve as the vehicles for individual identities. But such memories are influenced by collective narratives, thus making individual identities heavily reliant on the collective or social contexts within which individuals exist. An appreciation of this relationship between individual rememberers and the collective narratives in which they are immersed should not only compel us to rethink our understanding of memory, but should also inform our conception of personhood.

The intimate connection between individual and collective remembering has been noted by researchers studying memory since the 1930s. For example, F. C. Bartlett (1932) argued that interests, in the broad sense, taken to mean the development of a person's mental life, are responsible for what a person remembers. Moreover, Bartlett argued that interests themselves have a social origin (p.256) in customs, institutions, and traditions, which constitute a lasting social schema (p.264). Rephrased in the language of the social manifestation thesis, Bartlett's argument is as follows: remembering is private and subjective insofar as the individual doing the remembering does so privately. However, all remembering is made possible and is shaped by the social constructions and contexts in which the remembering occurs.

This kind of relationship between individual narratives and collective remembering suggests that the extended mind thesis may be well positioned to augment traditional neo-Lockean views of personal identity. Suppose that the cognitive capacities involved in remembering are not intrinsic to the

individual whose identity is being tracked, but are *socially manifested* capacities. This would imply that a person's identity has a wide realization. Tracking a person's identity over time, on this view, would involve many minds, including the mind of the individual who is tracked. But since "the characterization of wide realizations preserves the idea that properties with such realizations are still properties of individual subjects" (Wilson 2004, 141), this externalist view of personal identity does not entail that the individuals who are persons are themselves "wide" or "extended" subjects.

Combining a psychological account of personal identity with the extended mind thesis in this way provides one with the resources to avoid the problems facing standard neo-Lockean views stemming from the individualistic ratio-centrism of such views that we identified earlier. It does so by recognizing narrative-based criteria for personhood based on more than just the intrinsic cognitive capacities that underpin the remembering of the normally abled. Recognizing a socially extended realization base for personal identity comports well with some recent work.

For example, Hilde Lindemann (2010) argues that a person's identity is both shaped and preserved by others via the complex interactions between, and varied intertwining narratives remembered and transmitted within, families and other groups. Lindemann echoes Dennett on the environmental offloading of cognitive tasks by proposing that places as well as people can hold individuals in their identities. Lindemann writes:

It's not just other people who hold us in our identities. Familiar places and things, beloved objects, pets, cherished rituals, one's own bed or favorite shirt, can and do help us to maintain our sense of self. And it is no accident that much of this kind of holding goes on in the place where our families are: at home. (Lindemann 2010, 162-163)

Thus, externalism does not merely change the way we understand the mind; it also affects how we define and track personhood. *Selves* are a product of both individual and communal processes, and thus

personhood cannot be defined in solely individualistic terms. To think of personhood as purely individualistic and private is as much a mistake as thinking of memory in such terms.

Maurice Halbwachs once mused that in order to experience private remembering that is minimally influenced by social contexts, we should look to our dreams, which “are composed of fragments of memory too mutilated and mixed up with others to allow us to recognize them” (1941, 41). Persons, whose identity is strongly tied to memory, must have widely realized identities that emerge in a social context. They are formed by, held in, and tracked via the memories of others, which themselves are shaped by the collective memories of the various social groups to which these individuals belong.

5. Concluding thoughts

The extended mind thesis makes the claim that minds extend beyond the skull. Analogously, the externalist account of personhood might be taken to make the claim that persons themselves are extended in just this way. Although some proponents of the extended mind thesis may indeed be taken to advocate or welcome such a claim (see Clark 2001, 2003; cf. Clark and Chalmers 1998), we have sketched a somewhat less radical view. On our view, what is extended or widely realized is the identity of persons while *persons* themselves, as the subjects of identity over time, are not extended or wide. An individual’s personal identity is, to be sure, an important property of that individual, and it is not determined solely by properties or capacities intrinsic to the body of that individual. But like other properties that individuals have that require external resources to be realized, this extended property is still a property of that spatio-temporally located individual.

All persons can and do rely on others to maintain a cohesive narrative identity. Individuals with cognitive limitations that create difficulties for them in tracking their own identities, thus magnifying the problems that we all face in preserving a coherent conception of ourselves, may depend on others more

deeply to maintain such cohesive narratives. This provides one way in which an externalist view of narrative identity allows individuals who have traditionally been barred from the status of personhood, namely those with severe or increasing cognitive disabilities and limitations, to manifest personhood. And it does so without viewing their status as persons as different in kind from that of others: like the regularly cognitively enabled, their personal identities are socially manifested properties, albeit ones that are more deeply reliant on their social context..

Consider persons who slip gradually, over time, into ongoing states of dementia. On an externalist account of personhood, such persons need not forfeit their identities as their minds and memories deteriorate. This is because even though they gradually lose their capacity for individual memory, their identities are realized in the collective remembering of others. Because the externalist account of personhood does not share in the ratio-centrism that individualistic variants of the psychological approach manifest, it has a greater potential to recognize full personhood in such cases.

The shift from an individualistic to an extended mind view of a person's psychology also loosens the ratio-centrism of neo-Lockean views. One reason why ratio-centrism is so deeply embedded in the psychological account is that most variants of the neo-Lockean approach focus solely on memory as a criterion for diachronic identity. Persons, and more specifically, personalities, however, are constituted by more than merely episodic memories. Robert Nozick (1981), for example, states that "[f]or a life to have meaning, it must connect with other things...or values beyond itself" (Nozick 1981, 594). Some examples of such meaningful and valuable external relations are relationships with other people, continuing and advancing a tradition, children and families, etc. What all such externally valuable relations have in common is that they are saturated with emotive states. Emotions not only colour memories, but make some more significant than others. What we remember about ourselves or others,

the very narratives that constitute identity, are shaped and made more or less meaningful and thus significant by our affective states during memory formation and recollection.

Emotions, like memories and identities, should be understood externally. As Sue Campbell has pointed out, affective states, must be expressible in order to be individuated (1997, 66). Campbell's view that what we feel is largely determined by what we express leads to the worry that some individuals can be quite vulnerable to being controlled by others. Campbell explains: "One of the most obvious ways in which our feelings are controlled through their expression is by the power of interpreters to view the occasions of our lives and respond to our expressive acts" (1997, 135). Such control over affective states can be easily carried over to controlling large portions of someone's narrative and thereby shaping and constructing an inauthentic identity (see Levy 2007a, 2007b).

Issues of authenticity also emerge in the context of extended identity. Levy argues that an acceptance of the extended mind thesis voids the distinction between neurological interventions "by way of psychopharmaceuticals, transcranial magnetic stimulation, or direct brain stimulation" (2007a, 7) and more traditional methods of altering mental states, such as using psychological practices like talk therapy or even enhancing one's nutrition or education (2007a, 9). This dissolves Carl Elliott's (1998) worry "that if antidepressant use alters my personality traits, it [my personality] is inauthentic, inasmuch as these personality traits cannot be a genuine reflection of who I am" (Levy 2007a, 7) since, according to the extended mind thesis, both internal and external interventions are regular occurrences, which contribute to what we consider to be our authentic selves.

The question of authenticity, however, crops up again in the context of an externalist account of personal identity since other people have the power to interpret narratives that constitute a person's identity because "identity maintenance also involves weeding out the stories that no longer fit and constructing

new ones that do” (Lindemann 2010, 163). Not all such weeding and rewriting of narratives is going to be authentic since facts can be carelessly, as well as purposefully, misinterpreted by others. The worry Campbell raises regarding the power interpreters have over the narratives they interpret is recognized by Lindemann, who argues that it is certainly possible to hold someone’s identity wrongly or at least clumsily. Narratives must be truthful if they are to genuinely track someone’s identity, meaning that the backward-looking narratives that constitute a person’s identity must pick out something about that individual that is saliently true. For example, “[i]f you never went to med school, aren’t licensed to practice, and don’t see patients, then you aren’t a doctor, and neither I, nor your doting mother, nor God himself can hold you in that identity” (Lindeman 2010, 164).

Since inauthentic narratives fail to track individuals genuinely, in effect they mutilate a person’s identity and thereby devalue the personhood of the individual whose identity is thus misinterpreted. The externalist account of personal identity reveals a fragile side of personhood that remains hidden on the individualistic variants of the neo-Lockean approach. Understanding the sensitivity of narratives to interpretative interventions deepens our understanding of what it means to treat people with dignity. Whereas traditionally, dignity was almost exclusively tied to rationality and autonomy, the externalist account of personhood sees narrative integrity as an essential constituent of dignity.

Consequently, extended personal identity not only restores the dignity of individuals with severe cognitive disabilities as well as people who struggle with self-governance (i.e. children, addicts, etc.), but it also generates a moral imperative toward truthfulness in treating, transmitting, interpreting, and holding of person-tracking narratives.

Extended personal identity acknowledges a variety of *people*. That is, to the question “what sorts of people are there?”, the extended neo-Lockean view points to many more *kinds* of people than do more

traditional accounts. On the extended account, individuals who were traditionally not accorded one of the more important perks of personhood, namely dignity, have access to it without the individualistic notion of autonomy or the ratio-centric focus on intelligence and cognitive capacity. Moreover, the extended account of personal identity morally obliges us to protect the rights and dignity of persons not merely via acknowledgment, but *actively* (via actual conduct). A person's dignity, like a person's identity, is something we must respect in practice, and not just in theory, since we are directly and genuinely responsible for both.

6. Bibliography

- Adams, F. and K. Aizawa. (2008). *The Bounds of Cognition*. New York: Blackwell.
- Agar, N., (2010), *Humanity's End: Why We Should Reject Radical Enhancement*. Cambridge, MA: MIT Press.
- American Psychiatric Association Taskforce on Nomenclature and Statistics. 1980. *Diagnostic and Statistical Manual of Mental Disorders*. 3rd ed. Washington, DC: American Psychiatric Association.
- American Psychiatric Association Task Force on Nomenclature and Statistics. 1968. *Diagnostic and Statistical Manual of Mental Disorders*. 2nd ed. Washington, DC: American Psychiatric Association.
- Barnier, A., J. Sutton, C. Harris, R.A. Wilson. (2008), "A Conceptual and Empirical Framework for the Social Distribution of Cognition: The Case of Memory", *Cognitive Systems Research*, 9 (1-2) March 2008, pp.33-51.
- Bartlett, F.C. (1932). *Remembering: A Study in Experimental and Social Psychology*. London: Cambridge University Press.
- Braude, S.E. (1991). *Multiple Personality and the Philosophy of Mind*. New York: Routledge.
- Brighton, H. and P.M. Todd. (2009). "Ecologically Rational Decision Making with Simple Heuristics", in P. Robbins and M. Aydede (eds.), *The Cambridge Handbook of Situated Cognition*. New York: Cambridge University Press, 264-306.
- Burge, T. (1979). "Individualism and the Mental." *Midwest Studies in Philosophy* 4 (1), pp.73-122.
- Campbell, Sue. (1997). *Interpreting the Personal: Expression and the Formation of Feelings*. Ithaca, NY: Cornell University Press.
- Clark, A. (2008). *Supersizing the Mind*. New York: Cambridge University Press.

- Clark, A. (2003). *Natural-Born Cyborgs: Minds, Technologies, and the Future of Human Intelligence*. New York: Oxford University Press.
- Clark, A. (2001). "Reasons, Robots and the Extended Mind." *Mind and Language* 16, 121-145.
- Clark, A. and D. Chalmers. (1998). "The Extended Mind." *Analysis* 58, pp.7-19.
- Dass, S.. 1995. *Commissurotomy and Personal Identity*. MA thesis, Philosophy, Queen's University, Kingston, Ontario, Canada.
- DeGrazia, D. (2005). *Human Identity and Bioethics*. New York, NY: Cambridge University Press.
- Dennett, D. (1996). "Making Things to Think With." Ch. 4 *Kinds of Minds: Toward An Understanding of Consciousness*. New York, NY: Basic Books, pp.135-147.
- Egan, F. (1991), "Must Psychology Be Individualistic?," *Philosophical Review* 100, 179-203.
- Elliot, C. (2003). *Better Than Well: American Medicine Meets the American Dream*. New York: Norton.
- Fodor, J.A., (1987). *Psychosemantics: The Problem of Meaning in the Philosophy of Mind*. Cambridge, MA: MIT Press.
- Hacking, I. (1995). *Rewriting the Soul: Multiple Personality and the Sciences of Memory*. Princeton, NJ: Princeton University Press.
- Halbwachs, M. (1941). *On Collective Memory*. Ed. & Trans. Lewis A Coser. Chicago, IL: University of Chicago Press.
- Kirsch, D. (2009). "Problem Solving and Situated Cognition" in P. Robbins and M. Aydede (eds.), *The Cambridge Handbook of Situated Cognition*. New York: Cambridge University Press: 264-306.
- Kurzweil, R. (2005). *The Singularity is Near: When Humans Transcend Biology*. London: Penguin.
- Levy, N. (2007a). "Rethinking Neuroethics in the Light of the Extended Mind Thesis." *The American Journal of Bioethics*, 7(9), 3-11.
- Levy, N. (2007b). *Neuroethics: Philosophical challenges for the 21st century*. New York: Cambridge University Press.

- Lindemann, H. (2010). "Holding One Another (Well, Wrongly, Clumsily) in a Time of Dementia." *Cognitive Disability and Its Challenge to Moral Philosophy*. Ed. Eva Feder Kittay and Licia Carlson. Malden, MA: Wiley-Blackwell. 2010, 161-168.
- Locke, J. (1690). *An Essay Concerning Human Understanding*. New York: Oxford University Press.
- MacIntyre, A. (1984). *After Virtue: A Study in Moral Theory*. Notre Dame, IN: University of Notre Dame Press.
- Marks, C.E. *Commissurotomy and Consciousness and Unity of Mind*. Cambridge, MA: MIT Press.
- Nozick, R. (1981). *Philosophical Explanations*. Cambridge, MA: The Belknap Press of Harvard University Press.
- Olick, J. (2011). *The Collective Memory Reader*. New York: Oxford University Press.
- Olson, E. T. (2003). "An Argument for Animalism." Author manuscript available at: <http://eprints.whiterose.ac.uk/archive/00000734/> [Accessed: September 2, 2009]. Also published in: Olson, E.T. (2003). "An Argument for Animalism." In: Martin, R. and Barresi, J., (eds). *Personal identity*. Blackwell readings in philosophy (11). Blackwell, Oxford, pp. 318-334.
- Olson, E.T. (1997). *The Human Animal: Personal Identity without Psychology*. New York, NY: Oxford University Press.
- Puccetti, R., 1981, "The Case for Mental Duality: Evidence from Split-Brain Data and Other Considerations", *Behavioral and Brain Sciences* 4, 93-123.
- Puccetti, R., 1973a, "Brain Bisection and Personal Identity", *British Journal for Philosophy of Science* 24, 339-355.
- Puccetti, R., 1973b, "Multiple Identity", *The Personalist* 54, 203-215.
- Rupert, R. (2009). *Cognitive Systems and the Extended Mind*. New York: Oxford University Press.
- Sawyer, R.K. and J.G. Greeno (2009). "Situativity and learning" in P. Robbins and M. Aydede (eds.), *The Cambridge Handbook of Situated Cognition*. New York: Cambridge University Press, 347-367.

- Schneider, S. (2009). "Mindscan: Transcending and Enhancing the Human Brain", in S. Schneider (ed.), *Science Fiction and Philosophy: From Time Travel to Superintelligence*. Oxford: Wiley-Blackwell.
- Segal, G. (1989), "Seeing What is Not There", *Philosophical Review* 98: 189-214.
- Shapiro, L. (1993). "Content, Kinds, and Individualism in Marr's Theory of Vision", *Philosophical Review* 102, 489-513.
- Shoemaker, D. (2012). "Personal Identity and Ethics." *Stanford Encyclopedia of Philosophy*. Ed. Edward N. Zalta. <http://plato.stanford.edu/entries/identity-ethics/>
- Sperry, R., (1966). "Brain Bisection and Mechanisms of Consciousness", in J. Eccles (ed.), *Brain and Conscious Experience*. New York: Springer-Verlag, 298-313.
- Sperry, R. (1968a). "Mental Unity Following Surgical Disconnection of the Cerebral Hemispheres", *Harvey Lectures* 62, 714-722.
- Sperry, R. (1968b). "Hemisphere Deconnection and Unity in Conscious Awareness", *American Psychologist* 23, 723-733.
- Theiner, G. in press. "Onwards and Upwards with the Extended Mind: From Individual to Collective Epistemic Action", in L.R. Caporael, J. Griesemer, and W.C. Wimsatt (eds.), *Developing Scaffolds in Evolution, Culture, and Cognition*. Cambridge, MA: MIT Press.
- Theiner, G. 2008. *From Extended Minds to Group Minds: Rethinking the Boundaries of the Mental*. Ph.D. thesis, Indiana University.
- Wheeler, M. (2010). "In Defense of Extended Functionalism", in R. Menary (ed.), *The Extended Mind*. Cambridge, MA: MIT Press.
- Wheeler, M. (2005). *Reconstructing the Cognitive World: The Next Step*. Cambridge, MA: MIT Press.
- Wilson, R.A. (in press). "Ten Questions Concerning Extended Cognition", in a special issue of *Philosophical Psychology*, edited by T. Sturm and A. Estany.

- Wilson, R. A. (2010). "Extended Vision", in N. Gangopadhyay, M. Madary, and F. Spicer (eds.), *Perception, Action and Consciousness*. New York: Oxford University Press, 277-290.
- Wilson, R. A. (2005). "Collective Memory, Group Minds, and the Extended Mind Thesis." *Cognitive Processing* **6**, 227-236.
- Wilson, R. A. (2004). *Boundaries of the Mind: The Individual in the Fragile Sciences*. New York, NY: Cambridge University Press.
- Wilson, R. A. (1995). *Cartesian Psychology and Physical Minds: Individualism and the Sciences of the Mind*. New York: Cambridge University Press.
- Wilson, R. A. (1994). "Wide Computationalism", *Mind* 103, 351-372
- Wilson, Robert A., and A. Clark. (2009). "How to Situate Cognition: Letting Nature Take Its Course", in P. Robbins and M. Aydede (eds.), *The Cambridge Handbook of Situated Cognition*. New York: Cambridge University Press, 55-77.