




Toward a Neuro-ethics in Islamic Philosophy: Trauma, Memory, and Personal Identity

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Abstract

This study deals specifically with one of the most relevant issues in neuro-ethics, namely the philosophical classification of so-called memory dampening, which refers to the attenuation of traumatic memories with the help of medication. Numerous neuroethical questions emerge from this issue. For example, how is a person's identity affected by using such drugs? Does one still remain the same person? Would propranolol, for example, as a memory-dampening agent lead to a fundamental change in one's identity? Are not a person's negative memories also part of their identity and present personality? These questions are examined from the perspective of the seventeenth-century Islamic philosopher, Mullā Ṣadrā. The goal is to shed light on the neuroethical foundations of memory dampening and personal identity from an Islamic philosophical perspective.

Keywords Memory · Personal Identity · Trauma · Parfit · Locke · Mullā Ṣadrā · Neuro-ethics

Introduction: Trauma, Memory Dampening, and Neuro-ethics

This article explores the issue of 'memory dampening' in neuro-ethics through an interdisciplinary and cross-cultural philosophy approach (Faruque, 2021). Our aim is to initiate a conversation between neuroscience and philosophy, which can be both practical and fruitful. More generally, this study explores the nature of neuro-ethics in Islamic philosophy, involving many critical questions regarding trauma, consciousness, and personal identity. Some of these questions have already been addressed from the perspective of Christian theology, but the matter has not been treated as far as Islamic philosophy is concerned (Messer, 2017). One key issue in

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neuro-ethics, i.e., the philosophical status of the so-called memory dampening,¹ refers to the attenuation of traumatic memories with the help of drugs. An example of such a drug is propranolol, which is a beta blocker (Debiec, 2012; Gardmer & Griffiths, 2014; Schwabe et al., 2012, 2013; Wichert et al., 2013). Propranolol blocks long-term potentiation (LTP) in the amygdala (Pitman et al., 2002). Propranolol has been introduced to the wider public through the following *The Telegraph* report: ‘Scientists Find Drug to Banish Bad Memories’ (Gray, 2007). Propranolol dampens the link between memory and emotion related to a traumatic event by erasing the emotional part of a memory while leaving the cognitive part intact. Propranolol is effective not only when used during or shortly after a traumatic event, but also after reactivating the memory of a past traumatic event.² Such interventions are called memory modification technologies (MMTs) (Adamczyk, 2020). Emotional memory attenuation technologies are emerging technologies that can reduce the negative impact of emotionally charged memories. Such technologies currently appear particularly promising in helping people suffering from post-traumatic stress disorder (PTSD) to alleviate their suffering by reducing the extreme emotional arousal associated with their traumatic memories.

Post-traumatic stress disorder is a serious mental disorder, and de-emotionalization and attenuation of appropriate memory traces can prevent the later onset of PTSD. For PTSD prevention, medication-based memory modification is generally to be welcomed, but these should only be done through clinical trials and by licensed clinics (Guth & Jox, 2014). Memory modification techniques that would cause one to lose positive memories are not desirable any more than techniques that would cause one to remember everything with the greatest accuracy (Liao, 2017, p. 375; Michaelian, 2011). This is because the effect of propranolol in human beings has resulted in fragmentation of the undesirable memory, leading to the difficulty of accessing the memory, minimal or absent distress, and a feeling of emotional distance, as if it were a normal, non-traumatic memory, or as if the event had happened to someone else (Chandler et al., 2013; Menzies, 2009). Further, in addition to ameliorating the event and decreased emotional distress, patients reported a significant reduction in the quality and quantity of the integrity of their traumatic memories. Propranolol proved to be an effective, rapid, safe, and inexpensive treatment for patients suffering from traumatic memories and their associated psychological distress (Menzies, 2009). It also reduces the integrity of these traumatic memories, resulting in some degree of amnesia for the traumatic event.

However, a more speculative possible future use of memory attenuation technology lies in the emotional attenuation of non-traumatic, ordinary narrative

¹ Although the main issue in this study is ‘memory dampening,’ hence the reader may expect an exploration on the issue of memory from different perspectives, the focus of this study will be personal identity and selfhood in relation to memory. This is because the ethical issue of ‘memory dampening’ as such will require an independent investigation.

² Not only in science, but also in movies, the topic of memory manipulation has become a significant theme. For example, the 2004 film *Eternal Sunshine of the Spotless Mind* is a thought experiment about memories and people, with implications for personal identity. The film suggests that real experiences are more valuable than the illusory scenario of memory erasure.

memories, such as the emotional memories of a bad breakup. The ethics of memory attenuation technology has been and continues to be the subject of much debate (Kolber, 2006; Kolber, 2011; Wasserman, 2004; Robillard & Illes, 2016). The issue of propranolol use and memory erasure was under investigation in the President's Council on Bioethics (2003). The Council (2003) sounded the alarm on memory erasure from a human welfare perspective. But the Council was also criticized by some, claiming that the effects of propranolol were overinflated and exaggerated, which would prevent people from using propranolol appropriately (Henry et al., 2007). Levy (2007) mentions the ethical and philosophical problems posed by propranolol use. For example, there is the ethical question of the permanence of a person's personal identity after using such medication: does one still remain the same person as a result? Would propranolol as a memory-dampening agent lead to a fundamental change in one's identity? Are not a person's bad memories also a significant part of their identity and current personality? Furthermore, it should be mentioned that propranolol does not erase the content of the memory but can only dampen the emotions associated with it. Therefore, to the saying 'Those who cannot remember the past are condemned to repeat it,' one should also add that 'false memories' could also have behavioral consequences for the future (Nash et al., 2016; Santayana, 2011).

Moreover, while it may seem tempting to lessen the emotional impact of one's memories or erase them altogether in order to alleviate the present suffering, this seems to provide only a short-term solution, ultimately blocking opportunities for personal growth and leading to greater unhappiness in the long run, as one fails to make necessary changes in one's life (Zawadzki, 2021). Instead, this approach only helps to maintain the problematic current situation. One should also ask if there is a possibility of self-harm from using MMTs. In addition, there is also the possibility of fraudulent use of various memory modification techniques or drugs. For example, a criminal may commit a crime and administer a drug to their victim, so that their victim cannot identify or accuse them, because they do not even remember the crime. Or a sadist could administer this kind of memory-enhancing drug to someone they have tortured so that the person will remember in great detail exactly the ordeal perpetrated on them by the sadist. Or an unscrupulous government might use drugs on its population, creating a chaotic situation in the process (Liao, 2017, p. 375).

Moreover, just as with other forms of modern technology, MMTs could lead to injustices in society, since some would have the privilege to use and buy it, while others would be excluded from this privilege. In this respect, it may widen the gap between the rich and the poor. In brief, the ethical dilemmas based on the use of propranolol can be summarized into three areas: (1) happiness should be pursued in the context of moral well-being, (2) living with painful memories and learning lessons from those painful memories is part of human well-being, (3) given (1) and (2), memory erasure by propranolol is ethically problematic (The President's Council on Bioethics, 2003; Kabasenche, 2007). From a moral perspective, it is possible that propranolol may threaten to permanently cutoff access to the emotions experienced at the time of the trauma, leading to a dulling of moral capacity (Hurley, 2007). Also, it has been noted that propranolol use could impair post-traumatic growth (PTG) (Warnick, 2007).

From another angle, it can be argued that historical facts that depend on individual memories have universal value to all people, so we have a responsibility to preserve our memories, even if they are unpleasant (The President's Council on Bioethics, 2003). Levy (2007) argues that erasing a memory can harm someone who shares it. If this is the case, then deleting memories is not permissible under the harm principle. The Science Council (2003) states that we should not be unaware of potentially immoral uses by others and/or the management of biotechnological interventions that alter our remembering and forgetting. Because of overmedicalization, our memory may fall prey to acquisitive medicine (Henry et al., 2007). In these cases, informed consent becomes important. For instance, Kolber (2006) argues that we have both 'the right to dampen memories' and 'the right to enhance memories or memory performance' (Kolber, 2006).

Now, from an ethical perspective, the problem of personal identity due to memory erasure is significant. But discussions of the crisis of personal identity are sometimes confusing because two aspects of personal identity—the criterion of numerical personal identity and the sense of a unitary self—are placed on the same table. These two aspects of personal identity should be examined separately. Taking propranolol may compromise the sense of a unified self and the authenticity of our lives. In this case, it is important whether memory is altered rapidly or slowly. Rapid alteration of memory can disrupt the sense of the unity of the self, which is an aspect of personal identity. But the disturbed or altered personal identity is qualitative, not numerical. The sense of a unified self or qualitative personal identity is based on the criterion of numerical personal identity. So, the criterion of numerical personal identity sets a limit to memory manipulation. If psychological continuity or memory continuity between time A and time B is lost, then the numerical personal identity between A and B is no longer present (Parfit, 1984).

Taking propranolol does not erase a memory but dampens a link between a memory and the emotions attached to it. It affects only the emotional aspect of a memory. So, it does not threaten psychological continuity and numerical personal identity. In this respect, then, it could be said that the use of propranolol is harmless from an ethical perspective. However, it should be added that new technologies such as U0126, ZIP, and the increase of transgenic α CaMKII threaten personal identity, although they may help PTSD patients in the future (Eisuke, 2009).

This study explores the question of whether such interventions should also be performed beyond clinical examinations, even for a better life, and whether or not people's personal identity is altered in the process. The questions we seek to address are the following: Will erasing memories strengthen or weaken one's identity? Is it permissible to take such medication even for non-traumatic memories, or would a person's identity change as a result? And what exactly is personal identity? We would like to answer these questions from the perspective of Islamic philosophy and offer solutions on how to get rid of negative memories without changing one's personal identity. In other words, we will argue that painful memories are not necessarily bad, rather they can be seen as trials from God, and therefore should be viewed as something good. But to address these issues from the perspective of Islamic philosophy, it is first necessary to provide an overview of personal identity and how it is understood in Western philosophy.

In what follows, we will first provide an overview of the current theories of personal identity in Western philosophy. After that, we will analyze the issue from the perspective of the seventeenth-century, Persian philosopher Mullā Ṣadrā (d. 1640), who synthesized different strands of Islamic philosophy up to his time. We will examine how he treats the problem of personal identity, and it is against this background that the question of whether interfering with human memory and erasing certain memories would affect selfhood will be explored.

Personal Identity in the Western Tradition

Philosophers as well as neuro-ethicists have extensively studied the relationship between personal identity and neuroethical issues (Baylis, 2015; Brand, 2009; Chandler, 2015; Wilson & Lenart, 2015). In philosophy, the traditional problem of the self is sometimes presented as the problem of personal identity. For instance, the Stanford Encyclopedia of Philosophy, under the entry ‘self,’ simply says ‘see personal identity.’ Regardless, the problem of personal identity is the problem of specifying the criteria and characteristics by which we identify someone as the same person despite changes over time (Searle, 2005, pp. 7–19). In dealing with personal identity, one often comes across the example of Phineas Gage, so much so that it is even said that he ‘survived as [a] different man’ (Tobia, 2016). According to neuroscientists, the new Gage was ‘no longer Gage’ (Damasio et al., 1994; cf. Harlow, 1868). Is the identity of a person reducible to their physical or mental characteristics? While some philosophers take the position that the identity of a person is not reducible to certain physical or mental properties, others argue that the identity of a person is linked, for example, to the identity of their body or certain parts of their body—especially the brain (Chisholm, 2002; Shoemaker & Swinburne, 1984). A typical representative of this position is Thomas Nagel, who sums up his view with the quip, ‘I am my brain’ (Nagel, 1986, p. 40). Others complicate this picture by adding how the brain does not exist in a disembodied state; hence, Northoff extends this statement and says, ‘I am my embodied brain in a certain environment’ (Northoff, 2001, p. 416). So, there is little doubt that the body is significant as one of the sources of personal identity at the same time as its object. It is the basis of what Damasio calls the ‘proto-self’ (Damasio, 1999, p. 154). Moreover, the body is the object of self-experience and self-identification, and in the case of neurological disorders can become the object of misidentification (Stier, 2006, p. 56).

In contrast to those philosophers such as Wiggins (1980) who hold a body-based criterion for personal identity, other philosophers believe that the identity of a person is rather determined by their psychological characteristics. One proponent of this view is John Locke, whose views will be briefly introduced later in this study. Some philosophers, such as Bernard Williams, hold that personal identity lies somewhere middle between physical and psychological criteria; that is, personal identity is tied to the body but is not necessarily reducible to that body either (Williams, 1970, 1973). According to Williams, the total disregard of the body in personal identity is depriving that identity of some of its contents.

Some are of the opinion that with the identity of the physical body, material identity is meant, because I am the same person as the person who bore my name decades ago because my present body is spatiotemporally continuous with the body that existed under my name at that time (Searle, 2005). However, it should be added that none of my molecules have remained the same, so one wonders how it is that I am still the same ‘me’ as I was 20 years ago, when all my microparticles have changed within me? (Searle, 2005, p. 8). So, the identity of the body is not sufficient to prove personal identity, because one can also imagine oneself in another body, as in Locke’s prince in the cobbler’s body or Kafka’s story about the transformation, in which the protagonist Gregor Samsa was suddenly transformed into vermin, but still remained himself (Searle, 2005, p. 9).

Let’s now turn to John Locke’s views, who wondered whether an intervention into memory and the erasure of some memories would disturb the identity of the human being. Locke was one of the first philosophers to deal explicitly with the question of the identity of a person in the Western tradition. He formulates the problem of personal identity as follows:

Another occasion the mind often takes of comparing, is, the very being of things, when considering anything as existing at any determined time and place, we compare it with itself existing at another time, and thereon form the ideas of *identity* and *diversity*. When we see anything to be in any place in any instant of time, we are sure, (be it what it will) that it is that very thing, and not another, which at that same time exists in another place, how like and undistinguishable soever it may be in all other respects: and in this consists *identity*, when the ideas it is attributed to, vary not at all from what they were that moment, wherein we consider their former existence, and to which we compare the present (Locke, 1997, p. 296).

Locke was one of the philosophers who also opposed the Cartesian idea that the soul constitutes the identity of the soul. He holds that personal identity is a matter of memory-psychological continuity (Locke, 1997). That is, the same consciousness of a person, as well as his identical memories of an action, constitutes the identity of the person. In other words, the sameness of a person consists in having the same memory-consciousness (Thiel, 1983, p. 55). Whereas for Descartes the soul as a mental and thinking substance constitutes the identity of the person, Locke considers consciousness itself, and not substance, as the sole bearer of personal identity (Hauser, 1994, p. 34). The unity of consciousness—rather than that of substance, as in Descartes—is for Locke what sustains identity. But modern philosophers such as Parfit (1995) argue that we do not need such a strong notion of personhood as Locke does. For Locke, self-consciousness and memory form the basis that allows a person to extend their identity beyond the present. As he writes, ‘as far as this consciousness can be extended backwards to any past action or thought, so far reaches the identity of that *person*’ (Locke, 1997, p. 302). For Locke, then, the identity of a person is the ‘sameness of a rational being’ (Locke, 1997, p. 302), which is based on memories. In this respect, Locke’s criterion of consciousness is often referred to in the literature as a criterion of memory (Portenhauser, 2020, p. 51). Thus, for Locke, a memory manipulation would constitute an alteration of a person’s identity.

Memories, however, as will be shown later, cannot be held as a criterion for personal identity.³ Locke argues that a loss of consciousness leads to a loss of personal identity because consciousness constitutes personal identity. Overall, for Locke, both memory and consciousness are involved in the formation of personal identity (Thiel, 2011, p. 124). Locke claims that personal identity is dependent on consciousness which is inseparable from thinking and thinking itself is identified with the self (Locke, 1997, p. 296).

Many philosophers claim that memories are part of personal identity because one retains memories. On the other hand, there are philosophers who deny memories as a sign of personal identity and think that they merely belong to a person's past (Nichols, 2017, p. 178). Locke was criticized by Thomas Reid, who asserts that memory is not crucial for personal identity (Maslin, 2001, pp. 385ff.).

Objections to the personal identity-forming characteristics of memories are as follows: the lack of transitivity, the circularity objection, and easy identity (Maslin, 2001, pp. 385ff.). The circularity objection is about the need to distinguish between true and false memories, because many memories that are thought to have occurred did not actually occur. To address this circularity objection, as well as other problems posed by Locke's identity thesis, a proposed solution is offered by Derek Parfit, which is called quasi-memory (q-memory). The concept of quasi-memory is broader than the concept of classic memory. That is to say, one remembers oneself as another person performing an action (Parfit, 1999, p. 219). Thus, whereas 'normal' memory statements about an event presuppose that the speaker experienced that event themselves at an earlier time, statements based on quasi-memories imply only that someone experienced the earlier event. Quasi-memories are memories of events that occurred in the past, but which need not necessarily have been experienced by the (quasi)-remembering person himself. Moreover, remembering, even in the weak variant of q-remembering, can be shown to be an instance of mental continuity that is essential for personal identity (Crone, 2016, p. 108). Modern successors to Locke's approach see the connectedness and continuity of mental states as guarantors or sources of personal identity.

With Locke's theory of personal identity now presented, Parfit's thesis will be briefly examined below. The English philosopher Derek Antony Parfit is, without exaggeration, the leading contemporary analytic personal identity theorist. For him, personal identity plays no relevance in relation to the subject (Parfit, 1971, 1984). The irrelevance of identity is Parfit's core thesis. To prove his point, Parfit refers to the well-known Fission Case, which involves the paradoxical situation of two transplants of brain hemispheres that would result in the survival of the same person. Parfit's claim is that we should take a reductionist approach to personal identity. The reductionist approach states that personal identity is not a deep fact, but that 'the fact of a person's identity over time consists only in his having certain more particular facts' and that 'these facts can be explained in an impersonal way' (Parfit, 1984, p. 210).

³ In this context, one should mention different types of memory, such as the episodic or the autobiographical memory. The discussion becomes more nuanced with these internal variations of memory.

Parfit's argument bears some similarities to Locke's position, but the conclusion of his identity theory is more reminiscent of David Hume (Portenhausner, 2020). Parfit understands personal identity primarily as numerical identity, i.e., as sameness, as diachronic identity, as remaining the same over time. For Parfit, the terms 'person' and 'identity' have thus moved into the background; the psychological relation in which two persons find themselves is now in the foreground. This 'relation R' is the decisive factor and it consists in 'psychological connectedness and/or continuity, with the right of cause' (Parfit, 1984, p. 215). Parfit wants to show that the search for unique identity criteria is irrelevant for persons. Identity is not necessary for survival. Persons, according to Parfit, cannot be bodies. Rather, according to Parfit, psychological continuity is essential for persons. That is, present psychological states are said to be causally related to past or future psychological states. Parfit draws from this argument the conclusion that a person's identity should not matter to us, but only psychological continuity (R), regardless of what causes it. Parfit's argument can be summarized as follows: There is no independent entity like that of a soul on which identity is based; the relations that are crucial for the continued existence of a person are a matter of degree. The question of a person's identity cannot always be determined by yes or no, and identity is not a prerequisite for psychological continuity (Stier, 2006, p. 44). According to the psychological criterion, it is the continuity and connectedness of mental states that guarantee personal identity.

Parfit emphasizes that psychological connections are more than memories. Memories constitute only one kind of psychological connectedness (PV); the formation of an intention, the execution of a wish, and character traits over time are other kinds. The personal identity generated by episodic memory is not dependent on *strong connectedness*. So it is said: 'Strictly speaking, personal identity is based on the relation of continuity rather than connectedness. Parfit maintains that connectedness pertains to "what matters" (in our self-regarding and other-regarding interests) and is not equivalent to identity' (Galon, 2019, p. 62). Put another way, a single memory connection is not sufficient for identity. According to Annet Dufner, those who propose a purely psychological continuity theory of numerical personal identity are dualists by definition. They hold that the human organism as a physical entity has nothing in common with the psychological person and that the latter has its own personal identity conditions (Dufner, 2018, p. 75).

Does the persistence of identity, also referred to by Parfit as the psychological continuity view, remain the same for a person? This particular version of the psychological continuity view focuses on memories, or more specifically, quasi-memories, as the basis for psychological continuity between persons at different times, resulting in a person's persistence over time (Parfit, 1971). But what does identity mean, anyway? If we probe the matter, we see that a distinction can be made between personal identity and narrative identity. Narrative identity is 'the internalized and evolving story of the self that a person constructs to make sense and meaning out of his or her life' (McAdams, 2011, p. 99). In other words, identity to some degree is a product of choice. We choose the events that we think are most important in defining who we are and that give some semblance of unity and meaning to our lives (McAdams, 2011, p. 110; MacIntyre, 1985).

Locke and Parfit are representatives of the reductionist model of personhood based on the psychological criteria. Parfit is a radical reductionist, since in his view, a description of reality is possible without the concept of a person. For him, the only decisive relation is that of psychological connectedness or continuity, which is understood reductively as a causal relation. Although he offers no theory on the mind–body problem, a physicalist or functionalist view undoubtedly underlies his arguments.

To take stock of things so far, the various views on personal identity can be divided into the reductive (in which personal identity is reduced to the material body) and the non-reductive views (in which personal identity is not reduced to the material body). The reductive view tries to reduce the personal identity of a person to their memory, material body, and psychological continuity, whereas the non-reductive view follows a different path. In the non-reductive view (which we did not elaborate), personal identity is not related to the material body, but to the self or the ‘I, which is seen as a separate entity.’ In the Western tradition, Hume, Locke, Ayers, Gricce, Maccie, Perry, Lewis, and Parfit represent the reductive view, while Butler, Reid, Chisholm, and Swinburne represent the non-reductive view. Having briefly explored personal identity in the Western tradition,⁴ and in particular Locke’s and Parfit’s views on personal identity, we will now investigate the matter from the perspective of the Islamic philosopher Mullā Ṣadrā.

Selfhood and Personal Identity in Islamic Philosophy

Before explaining Mullā Ṣadrā’s views on personal identity as a step toward his solution to traumatic memories in the context of Muslim mental health, it is necessary to briefly explain his ontology. His views on personal identity and trauma can only be understood within the context and background of his transcendent philosophy (*al-ḥikma al-muta’aliya*).

Ṣadrā’s ontology is based on the primacy of being (*aṣālat al-wujūd*) in which existence (*wujūd*) precedes essence (*māhiyya*). Mullā Ṣadrā’s doctrine of the primacy of being is based on the Sufi-metaphysical doctrine of the unity of being (*waḥdat al-wujūd*) (Meisami, 2013). For Mullā Ṣadrā, as for those who espouse the doctrine of the unity of being, God is Absolute and Pure Being, while everything else borrows their being from God (Chittick, 1989). In other words, being is identity and difference at the same time. Beings are differentiated because being or *wujūd* is differentially present in them.⁵ Central to Mullā Ṣadrā’s ontology, moreover, is a

⁴ Needless to say, we do not claim to present here a complete survey of ‘personal identity’ in Western philosophy, for this would be too far afield. Rather, the philosophical consideration of personal identity against the backdrop of the neuroethical question of memory dampening is intended to provide a better understanding of the issue. The idea is to shape a dialogue between Western philosophy (in particular Locke and Parfit) and Islamic philosophy.

⁵ Thus, the formulation *waḥdat al-wujūd* must not be understood as postulating an identity between the world and God as in classical pantheism, for God is never to be equated with the world in Islamic thought. Rather, the phrase *waḥdat al-wujūd* refers to the participation of all beings in the mystery of God’s being (Rustom 2006).

particular conception of *tawhīd* that stems from the Qur'an: 'He is the First and the Last, the Outward and the Inward' (Q 57:3).⁶ According to the doctrine of the unity of being, the world is conceived as the self-disclosure (*tajallī*) of Absolute Being (*al-wujūd al-muṭlaq*) in various guises (Şadrā, 2002). Mullā Şadrā explains the emergence of the world and consequently of its multiplicity as a result of an inner divine impulse and describes it as an ontological graduation of being itself:

All distinctions and all diversity are but apparent facets of the reality of "Existence." Diversity is nothing more than the process of self-gradation of "Existence" (*tashkīk al-wujūd*), in which "Existence" manifests itself in a number of ways and gives rise to multiplicity (Kamal, 2012, p. 401).

From a certain point of view, Mullā Şadrā's transcendent philosophy revolves around the idea of the development of potentiality toward actuality in the material world.⁷ Everything is in a state of potentiality and is continuously moving toward the pure, perfect, and actual being (Hajati, 2021, p. 924). The telos is that the names and attributes of God, which exist in a state of potentiality in various entities, are translated into actuality. For instance, a perfect human (*al-insān al-kāmil*) has already actualized these names and attributes, while other human beings are still on the path toward actualization.

In Islamic metaphysics, the world consists of a descending arc (*qaws al-nuzūl*) and an ascending arc (*qaws al-su'ūd*). The descending arc symbolizes the world created by God (top-down), while the ascending arc refers to the movement of all living beings toward God (bottom-up). In this sense, everything that exists in the created world must also exist in the ascending arc, and according to this theory, everything created then moves toward its origin, that is, God (Sabzawāri, 2004, pp. 69, 529, 529). The endpoint of the descending arc is the beginning of the ascending arc. Regarding the two types of movement that take place in these semicircles, there is both the movement of creation (*takwīn*) emanating from God and of the conscious, worshipful observance of the Shariah, i.e., the movement of legislation (*tashrī'*), which is only possible for human beings due to their freedom of will (Şadrā, 2008: I, 522; III, 279; Sabzawāri, 2004, p. 435). In addition to this movement created specifically for human beings, there is also a non-human mode of worship of God in nature (*'ibādat al-takwīn*), i.e., the movement or praise of all living beings in the entire universe created by God. With the help of the substantial motion (*al-ḥaraka al-jawhariyya*), the multiplicity and the change (*taghayyur*) of the world can be explained in view of the unity of being. Through the substantial motion, everything is brought to its completion. The 'I' remains identical in spite of the constant process of movement or development because only the form of life changes, but not identity (Hajati, 2021, pp. 941ff.). According to Mullā Şadrā, the self has one identity (*huwiyya wāḥida*) consisting in several modes of being (*nasha'āt*) (Mullā Şadrā, 1990: VIII, 154). That is to say, the *nafs* (soul/self) has different functions,

⁶ All the translations of the Qur'an are from Pickthall (1996) with our modifications.

⁷ Potency (Lat. *potentia*) and *in actus* are central concepts in Aristotelian and Scholastic philosophies. Potentiality is the possibility of something occurring, while actuality is the realized possibility.

but nevertheless it remains a unit. In this respect, the human being does not come from a higher level by a linkage with qualities of the lower level. Rather, it is about the perfection of the self (*istikmāl al-nafs*), which shows a plurality in unity and a unity in plurality (Mullā Ṣadrā, 1990: VIII, 221).

As a recent study points out, for Mullā Ṣadrā, selfhood is a multidimensional entity, and the goal is to transform the self toward its perfection. Selfhood is an ongoing and ever-changing manifestation of the divine names and qualities, and the full actualization of this reality is seen as demanding a disciplined body, mind, heart, and spirit (Faruque, 2021, p. 233). The idea of the self as a multidimensional being, which has different modalities, containing both negative (*al-nafs al-ammāra* or the evil-inciting self) and positive (*al-nafs al-muṭma'inna*) dimensions, stems from the Qur'an (Faruque, 2021, pp. 233–34). Moreover, like selfhood, consciousness also is a multimodal phenomenon having non-reflective, reflective, and intersubjective modes. Unlike materialistic or neurobiological theories of consciousness, which neglect the multimodal structure of consciousness comprising reflective, non-reflective, and intersubjective modes, Mullā Ṣadrā affirms what Faruque (2021) calls 'non-reflective consciousness,' which is more fundamental than our reflective and intersubjective consciousnesses. Following Suhrawardī and Avicenna, Mullā Ṣadrā calls our attention to such a degree of consciousness by pointing to phenomena including dreamless sleep, coma, and intoxication. The concept of 'non-reflective consciousness' challenges us to revise our conception of personal identity in light of it. This is because consciousness is a first-person phenomenon, and such phenomena are irreducible to the third-person objectivist stance that characterizes various reductive or functional theories of consciousness (as in Parfit, for instance). Moreover, since consciousness is the very essence of human subjectivity, there is no way to step outside consciousness in order to peek into it, as it were. In other words, since the starting point of philosophy is reflective judgement, it already presupposes the subject-object structure as well as non-reflective consciousness at the most foundational epistemic level. And as alluded to earlier, it is non-reflective consciousness that grounds reflexivity, and not vice versa. The non-reflectivity of consciousness implies that the moment we try to grasp it through our mind we find an 'objectified' image of our consciousness therein rather than consciousness itself (Faruque, 2021). More importantly, since non-reflective consciousness is the ever-present reality of the self, escaping duality and reflection, memory-dampening process would only partially affect one's identity. This is because our selfhood and identity transcend reflective consciousness, along with memories that appear at this level of awareness.

In Mullā Ṣadrā's philosophy, the creation of human beings consists in several stages (*marātib*). These stages of being are described in the doctrine of substantial motion as follows: that of inanimate matter (*martabat al-jamād*), that of plants (*martabat al-nabāt*), that of the animal world (*martabat al-ḥayawān*), and that of the human beings (*martabat al-insān*). An embryo contains the state of plants in actuality (*fi liyya*) and carries the potentiality (*quwwa*) of the sentience of an animal. However, it also already contains the other, higher stages potentially. Shortly before birth, it actualizes the stage of sensation, which is also found in animals, and carries the potential of the human being within itself. With the development toward a mature human being, the child actualizes the abilities given to her by the thinking

soul. According to this theory, when the human being reaches the ability of higher thinking, she further develops the stage of *'aql bi-l-fi'l* or the actual intellect. This is the intellect that has been activated and no longer dwells at the level of potentiality.

There is a graded relationship between the stages of the soul and the powers or abilities associated with them: each level of the *nafs* is related to a human power or ability. The rational soul of the human being is therefore connected with the thinking ability or the intellect (Sabzawārī, 2004, p. 84). At a lower level is the world of the imagination. The lowest level of the *nafs* is the world of sensory perception. Through substantial movement, the soul can complete different stages of development until it reaches the last and highest stage, which is the stage of the intellect (Sabzawārī, 2004, pp. 69ff.). The human being thus does not have a certain concrete level of identity, like other beings. Furthermore, regarding its inner growth, it has different forms (*ṣuwar*) in tune with the various stages of being (Mullā Ṣadrā, 1990: VIII, 3). Regarding personal identity, the 'I' of the human being does not have a concrete level and station. Rather, the human self has different levels and dimensions (*maqāmāt wa-darajāt*), and it has both antecedent and subsequent modes of being (*wa-lahā nasha'āt sābiqa wa-lāḥiqa*), and in each station and world, it takes a different form. As Mullā Ṣadrā himself quotes the following poem of Ibn 'Arabī (d. 1240):

My heart has become capable of every form:

It is pasture for gazelles and a convent for Christian monks. (Faruque, 2021, p. 45; quote taken from Nicholson 1911: XI, 5.67)

This shows that the self is able to hold every imaginable form and thus has different identities in relation to its different dimensions. For example, the constant repetition of an action causes it to become a habit and transforms it into the fixed identity of a person (Mullā Ṣadrā, 1990: III, 297). Thus, a person can constantly change their identity depending on the abilities they acquire and the direction of life they pursue. Their identity is then a manifestation of their human potential. Unlike other living beings who seem to have a fixed identity since their creation, a human being's selfhood is an indeterminate, unfixed potentiality, which has the ability to become anything (it can become lower than the animals, but also raises itself higher than the angels). The true identity of a human being is formed through a combination of *'ilm* (knowledge) and *'amal* (action), and the result of this can be seen in the hereafter (Mullā Ṣadrā, 1981, p. 205).

Through the different faculties of the imagination and reflection (*mutaṣawwira*, *mutafakkira*, *mutakhayyila*), people's identity formation can be influenced. The role of the imagination in the epistemological formation of the human soul is one of the most innovative theories of Mullā Ṣadrā's philosophy, although its precedence can be found in Sufi metaphysics (Chittick, 1989). Mullā Ṣadrā affirms *al-khayāl al-muttaṣil* (contiguous imagination)⁸, and the *tajarrud* (disengagement) of the *al-ṣuwar al-khayālī* (forms of the imagination), which was rejected by Ibn Sīnā, thus

⁸ As opposed to *al-khayāl al-munfaṣil* (discontiguous imagination).

bringing about a fundamental change in the epistemological and anthropological orientation of Islamic philosophy (cf. Ibn Sīnā, 2013, pp. 179, 197, 209).

For Mullā Ṣadrā, there are three different ontological levels in the cosmos: the world of the intellect (*al-‘ālam al-‘aql*), the imaginal world (*al-‘ālam al-khayāl*), and the material world (*al-‘ālam al-mādda*). Similarly, human beings also possess an *al-‘ālam al-khayāl* or an *al-‘ālam al-mithāl* (the imaginal world) within and through themselves, and one can cite examples of dreaming during sleep, as well as the bodily resurrection of the body with the imaginal body (*badan al-mithālī*) after death in the intermediate realm (*barzakh*) (Mullā Ṣadrā, 1990: VIII, 341; IX, 339). As for the term identity or *huwiyya*, Mullā Ṣadrā often uses the concept of appearance (*ṣūra*) in relation to it. Here, he distinguishes between two different versions of *ṣūra*. The first type of identity is related to *al-ṣūra al-naw‘iyya*, which is a common human identity common to all (Mullā Ṣadrā, 1990: II, 71). The other type of human identity is the acquisition of characteristics, which is specific to the individual and is constantly subject to change in the course of their life (Mullā Ṣadrā, 1975: I, 470). Thus, a person can constantly change their identity depending on the skills they acquire and the direction of life they pursue. Their identity is then a manifestation of their human potential. When existing qualities are brought to actuality, it is the manifestation of an action that takes place at every moment. In this sense, a person’s identity formation is basically in a state of flow in which it cannot stop itself. There is a transformation into something at every moment. Human beings cannot change this flow, but they can influence the direction of change. Thus, one cannot separate the identity of a person from the person herself. To give an example, one could say that it corresponds to the relationship between the carpet and the pattern on the carpet.

The fact that for Mullā Ṣadrā the imagination is something conjoined means that in the relationship between human beings and their imagination, the following notion is valid: their existence is equal to their creation. If the self desires something, the imagination already arises, so there is no indirect connection. It is like the relationship between human beings and their shadow. The soul has a conjoined (*ittiṣāl*) relationship with its imaginations (Mullā Ṣadrā, 1987: V, 426). Our imaginations do not have an existence separate from ourselves. They are not identical to us, but they are not completely separate from us either.

For Mullā Ṣadrā, *‘ilm* or knowledge forms a unity with the self. In his epistemology, there is a unity of the self between the imagining self (*mutakhayyil*) and that which is imagined (*mutakhayyal*) (Mullā Ṣadrā, 1990: I, 258–261). During the formation of this unity, an identity of the soul arises since it has formed a unity with the imagination. Both the physical body of the human being and the soul (*nafs*) are subject to change. In the bodily change or alteration, there is no conjunction (*ittiṣāl*). Which is to say that with a new form, the older form and structure pass away. But in the movement of the *nafs*, that is, the human soul, there is a conjunction between different modes of perception, such as *ḥiss*, *khayāl*, and *‘aql*. At each encounter of the soul with one of these perceptual modes described above, the previous form of the soul is also present. That is, the new movement is added to the new form. However, this does not mean a plurality of perception (Mullā Ṣadrā, 1998, pp. 127–28; cf. Jahangiri, 2022).

The timelessness of the imagination also plays an important role in the maintaining and persistence of human identity, and it has the ability to jump from one point in time to another. It is our *imagination* that forms the basis of our identity and sense of self. Through the imagination, we can gain awareness of our perceptions, and it is the imagination that connects our memory, recollections, and mental states to the external world. That imagination and identity have a direct connection with each other means that identity is dependent on the imagination. However, it should also be mentioned that the imagination is also dependent on identity. For example, Mullā Ṣadrā says that a person can only recognize a thing with the help of their own identity (Mullā Ṣadrā, 1990: II, 380). That is, everyone sees the outside world only in accordance with the limitations of their own identity. He further says that whatever one imagines is exactly identical with oneself. Thus, according to Mullā Ṣadrā, identity is changeable in the course of life and does not remain the same. So, human beings have the task of creating their own indeterminate identity in this world. Memory is a faculty that enables us to fix and store the data taken in by the senses and to use them when needed. According to his theory, all physical entities are in constant motion (Mullā Ṣadrā, 1998: I, 554).

It is crucial to highlight that in Mullā Ṣadrā's framework, forgetfulness or Alzheimer's disease is denoted by *nisyān* or sometimes as *dhuḥūl*. Here, *nisyān* is interpreted as a lasting form of forgetfulness, while *dhuḥūl* pertains to a temporary lapse in memory.

The term *nisyān* is the act of forgetting a fact that was previously remembered (Dihkhudā, 1373/2007: 13, 19864). Whereas *dhuḥūl*, means carelessness or inattention (Dihkhudā, 1373/2007, vol. 7: 10251). Indeed, *dhuḥūl* can be interpreted as a form of temporary forgetfulness. In Mullā Ṣadrā's perspective, the term *nisyān* is employed to denote permanent forgetfulness, while *dhuḥūl* is used to describe short-term forgetfulness (Mullā Ṣadrā, 1990: VII, 274ff.). *Nisyān* also has an aspect which arises from a change in the self, wherein the individual is no longer able to connect with the active intellect (*al-ʿaql al-faʿāl*). The distinction between *nisyān* and *dhuḥūl* lies in the fact that in *dhuḥūl*, the self retains the ability over imaginary images without the necessity of acquiring a new sensation. In contrast, with *nisyān*, a new sensation is required (Mullā Ṣadrā, 1990, I: 303). In the case of *dhuḥūl*, the imagination or visualization of images occur, whereas with *nisyān*, this does not take place because *nisyān* is brought about through a shift or change in the forces of perception (Mullā Ṣadrā, 1990, VIII: 214). For memory and recollection, it is necessary to be able to visualize an image. In both cases, however, whether it is the imagination or sense perception, the goal is the attainment of forms. In *dhuḥūl*, the search for image involves one of these aspects, whereas in *nisyān*, images arise in both the common sense (*al-ḥiss al-mushtarak*) and the faculty of imagination (*al-quwwa al-khayāliyya*) (Mullā Ṣadrā, 1990: VII, 275).

Unlike Locke, Mullā Ṣadrā advances a non-reductive view of personal identity. Based on his philosophical ontology and his doctrine of the soul, he sketches an idea of personal identity which is built on the basis of human essence. Personal identity emerges through the elements of habits, imaginations, and actions. The strength of the alignment of these elements with intellectuality (*ʿaqlāniyya*) results in each person having a different personal identity. While there is no fixed and static personal

identity of human beings, the personal identity is a constant reality which has a plural truth within its unity (*wahda*).

From Mullā Ṣadrā's point of view, the personal identity of human beings cannot be comprehended by concept (*mafḥūm*) and cannot be described, but each individual living being has their own specific personal identity according to its individual stage of development. With his differentiated and innovative theory about the human body and the relationship of body and soul comes the problem of the interaction of body and soul, which poses a problem to many philosophers. While the body plays a major role in his theory of personal identity, the problem of the discontinuity of the personal identity or consciousness is not present in Mullā Ṣadrā's writings.

Our initial question was whether taking memory-dampening drugs in order to forget trauma or bad memories would change the personal identity from the viewpoint of Mullā Ṣadrā. Having explained his perspective that there is no fixed personal identity, the response to this question would be: no, it would not change the person's identity. However, in what follows, we try to show how Mullā Ṣadrā would suggest we cope with trauma without the need for drugs under normal circumstances.

Trauma from an Ethical Perspective

Trauma and negative happenings in human being's life can lead to an emergence of spiritual growth (Lala, 2023). As the Qur'an says, God does not require any soul more than what it can bear (Q 2:286). Due to the finiteness and hastiness of human beings, they do not always know what is good and what is evil for them (Q 17:11). From the perspective of Islamic philosophy, everything that occurs in life is good from a universal, cosmic perspective, since existence itself is good (*khayr*).

According to the Qur'an, an evil occurrence can also be regarded as a test (Q 21:35). Every evil is a trial, and the human spirit cannot achieve its level of perfection without such trials (Q 67:2). The Qur'an gives the example of the story of the Prophet Job in which he faces traumatic experiences. The general idea is that when the self becomes complete and strong and reduces its dependency on the body, then the person will return to their origin and find abiding peace and happiness (Mullā Ṣadrā, 1990: VIII, 123–24). So, such trials are not negative at all; rather, they are full of blessings in disguise. There are sometimes events in the lives of human beings which we interpret as negative, but which are in fact good for us (Q 2:216). Sometimes trials also have a training or educational aspect (Q 7:130). There are numerous verses in the Qur'an which talk about the *dunyā* or the earthly life with its 'abode of trials and suffering' and an 'abode of false pleasure.' For instance, Q 1:155 presents a view of life in which trials, disappointments, and suffering are very much the reality of the earthly life: 'And surely We shall try you with something of fear and hunger, and loss of wealth and lives and crops; but give glad tidings to the steadfast, who say, when a misfortune strikes them: Lo! we are God's and Lo! unto Him we are returning. Such are they on whom are blessings from their Lord, and mercy. Such are the rightly guided' (Q 1:155). Similarly, the *dunyā* is presented as a place where people run after vain glory and false pleasure: 'Know that the life of this world is mere play,

and idle talk, and spectacle, and boasting to one another, and rivalry in respect of wealth and children... And in the hereafter, there is grievous punishment, but also forgiveness from God and His good pleasure, whereas the earthly life is but a playful illusion' (Q 57:20). One indirect indication of this is the comparatively higher rates of depression, suicide, and other DSM-5 mental disorders in rich and affluent countries. That is to say, materialism cannot be our answer to peace and happiness. In fact, it leads to both self-alienation and alienation from nature (Rosa, 2019; Ruscio et al., 2017). One may thus grant that evil and suffering in a religious universe can be a source of great spiritual reckoning and spiritual development.

Mullā Ṣadrā combines his metaphysical approach with a practical orientation. He states that since God is the necessary being, He is the absolute good. To answer the question of evil in this world, Mullā Ṣadrā claims that if the world were absolute good, then it would not be physical. Fire, for example, has the property and characteristic to burn, and as such, could not exist without having the property of burning—which can be good or bad (Mullā Ṣadrā, 1990: VII, 78). For Mullā Ṣadrā, the absolute or essential evil (*sharr bi-l-dhāt*) is seen as non-being ('*adam*') (Mullā Ṣadrā, 1990: VII, 63). According to Mullā Ṣadrā, the *māhiyya* or the essence of evil and the answer to the question 'What kind of thing is it?' is the non-being of evil. In Mullā Ṣadrā's view, the side of *māhiyya* that springs from the composite being is the source of evil in the world. Since evil also has no real being, it is '*adam*', which indicates the absence of *khayr* (Mullā Ṣadrā, 1990: II, 359). This does not mean that it does not exist, but rather that evil is the absence of pure being, and thus a deficiency. In other words, it has *wāqi'iyya* (reality), but no *ḥaqīqa* (truth). Ultimately our being, as we are born, is good, according to our pristine, unadulterated nature (*fiṭra*).

Regarding trauma in general, a brief exploration of the emotional aspect and Ṣadrā's theory of pain ('*alam*') and pleasure (*ladhdha*) can shed light on his concepts of human self-growth. Pleasure (*ladhdha*) in a general sense is the harmonious perception (*idrāk al-mulā'im*) of any faculty, while pleasure in a specific sense refers to the attainment of wisdom in observing the work of divine providence. Happiness, according to Mullā Ṣadrā, is the perfection of intellectual perception, and this constitutes authentic pleasure. In Mullā Ṣadrā's perspective, pleasure is the recognition of perfection, and happiness is the recognition of a higher perfection, signifying that everything achieves blessedness upon reaching its perfection. The foundation for defining joy and pleasure lies in each soul's constitutive power of understanding according to its own level (Mullā Ṣadrā, 1990: IV, 119). Following his theory of the unity of the intellect and the intelligible, Mullā Ṣadrā suggests the potential unity of pleasure with the subject undergoing the experience of that pleasure. When the soul is unified with the intellect, then pleasure itself becomes the intellect (Mullā Ṣadrā, 1998: 115), representing the highest form of pleasure. Thus, it can be asserted that as the soul undergoes substantial movement, the experience of pleasure and the perception of pain (*alam*) also evolve, taking on a more noetic character.

Now as regards the relationship between Mullā Ṣadrā's theory of the progress of the self and its substantial motion until it reaches perfection, and its

connection to the problem of evil, negative events, and trauma, one can say that only God is absolute power and absolute goodness. Evil (*sharr*) is in everything other than God, which one should avoid to the extent possible, while goodness or *khayr* is in every mode of perfection, which one should seek. There is nothing in the world (besides God) which is not mixed with evil because everything is seeking its perfection according to its substantial motion, and as long as it has not yet achieved union with its archetypal reality in the spiritual world, it has aspects of non-being, and hence may not be fully good (Mullā Ṣadrā, 1990: VII, 58). Poverty of the soul or imperfection is seen as *sharr*, whereas *khayr* is something that one has a passion for and is eager to achieve (Mullā Ṣadrā, 1990: IX, 241).

In Mullā Ṣadrā's ontology, being (*wujūd*) is the fountainhead of *khayr*, and because God is the necessary being (*wājib al-wujūd*), only *khayr* can arise from Him. Thus, *sharr* comes not from God or being, but from *māhiyya*, which is a deficient state of being. Mullā Ṣadrā's theory of substantial motion suggests that our creation is laden with the blessings of being (*wujūd*) by God. Every human being has their own path to follow, and if human beings can fulfil their duty and move forward according to substantial motion, then the blessings from heaven and earth will become available to them.

Concluding Reflections

To conclude, Islamic philosophers like Mullā Ṣadrā do not ground the identity of the self in memory-consciousness like Locke or Parfit. For Mullā Ṣadrā, identity is intertwined with levels of selfhood and consciousness, one of which is called 'non-reflective consciousness' (Faruque, 2021). This non-reflective consciousness is the ever-present reality of the self, escaping duality, reflection, and such. So, memory dampening with drugs would only partially change one's identity. Moreover, from the perspective of Mullā Ṣadrā, trauma can be regarded as an opportunity for spiritual growth and as an expansion of one's existence (*wujūd*). This view of Mullā Ṣadrā is the opposite of the materialist view, in which the self is reduced to the brain and the brain influences the self. In the reductionist and materialist concept of the human being, it is natural to think of psychopharmaceutical drugs as agents of happiness, pleasure, joy, and relief from suffering. But from Mullā Ṣadrā's standpoint, such drugs are not necessary, though their usage is not rejected when really needed. This last point is worth emphasizing since there might be circumstantial reasons which might necessitate the use of memory-dampening drugs. That is to say, Mullā Ṣadrā's perspective leaves the door open to various possibilities while prioritizing self-development and spiritual growth.

Declarations

Conflict of Interest The authors declare no competing interests.

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