



Enduring Questions and the Ethics of Memory Blunting

ABSTRACT: *Memory blunting is a pharmacological intervention that decreases the emotional salience of memories. The technique promises a brighter future for those suffering from memory-related disorders such as PTSD, but it also raises normative questions about the limits of its permissibility. So far, neuroethicists have staked out two primary camps in response to these questions. In this paper, I argue both are problematic. I then argue for an alternative approach to memory blunting, one that can accommodate the considerations that motivate rival approaches even while avoiding the problems these rivals face. In addition to arguing for this primary thesis, the paper also aims to suggest something about neuroethics generally: despite what some neuroethicists claim, new discoveries in neuroscience may not typically upend traditional views of morality. Rather, discoveries in neuroscience often provide us with new occasions to reflect on enduring questions about what it means to be human.*

KEYWORDS: memory, neuroethics, cognitive enhancement, narrative identity, memory modification

It would add much to human happiness, if an art could be taught of forgetting all of which the remembrance is at once useless and afflictive, if that pain which never can end in pleasure could be driven totally away, that the mind might perform its functions without encumbrance, and the past might no longer encroach upon the present.

~Samuel Johnson

It can be tempting to imagine that neuroethics either explores completely new moral territory or that it renders recognizable moral territory suddenly unfamiliar. Call this position, the position that debates in neuroethics have fundamentally changed the moral landscape, Brave New World Neuroethics.

It is not difficult to locate instances of Brave New World Neuroethics. Indeed, Matthew Liao, in his introduction to *Moral Brains: The Neuroscience of Morality*, notes that ‘Many people, including a number of philosophers, believe that

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results from neuroscience have the potential to settle seemingly intractable debates concerning the nature, practice, and reliability of moral judgments' (Liao 2016: 2).

Joshua Greene, for example, argues that neuroscientific discoveries should lead us to favor consequentialist forms of moral reasoning over deontological ones (Greene 2014). Others believe neuroscience may upend traditional moral categories. Martha Farah and Andrea Heberlein, for example, argue that recent discoveries in neuroscience should lead us to conclude 'that personhood is a kind of illusion' (Farah and Heberlein 2007: 45). Generally, proponents of Brave New World Neuroethics claim new neuroscientific developments have radically changed our moral situation and have begun to erode traditional commonsense ways of understanding ourselves as moral beings.

By my lights, however, Brave New World Neuroethics is misguided. I believe debates in neuroethics do not typically change the moral landscape but rather force us to grapple with timeless questions. Superficially these debates may be about new breakthroughs in neuroscience, but beneath the surface they are often about the kinds of question that have always motivated philosophical investigation. Scratch the veneer of many issues in contemporary neuroethics, and you will find questions about what it means to be human, questions about what a well-lived life looks like, and questions about how to reconcile science with common sense. Debates in neuroethics are often not as radical as they are construed to be. Nor are they merely new exchanges in ongoing conversations about applied ethics. Rather, many debates in neuroethics strike to the heart of questions that have always motivated philosophical investigation, even before applied ethics existed as an independent field of inquiry. Call this thesis the No New Questions Thesis.

The No New Questions Thesis is not a thesis for which one can argue in a single paper. The thesis stakes a claim over a whole region of scholarship and a lone discussion could never hope to map its contours. Still, one must begin somewhere. If the No New Questions Thesis has any merit, it holds true of a wide range of debates. The best way to begin establishing the thesis thus is showing how it applies to specific debates, how specific problems in neuroethics are not so much about new neuroscientific breakthroughs but are rather about enduring philosophical questions.

That is what I do in this paper. In what follows, I present a case study that counts in favor of the No New Questions Thesis, an ethical issue that has emerged from a biomedical innovation called memory blunting. In the past two decades, neuroscientists have, to put it roughly, discovered how to blunt the emotional salience of memories artificially. In response to this innovation, neuroethicists have staked out two camps, but I will argue that both are problematic. I will then argue for an alternative, less problematic response, one that is able to accommodate the considerations that motivate rival responses even while avoiding the problems these rivals face. Finally, I will situate my argument against the backdrop of the No New Questions Thesis. The ethics of memory blunting presents a striking example of an issue in neuroethics that is not fundamentally about a breakthrough in neuroscience. Rather, the breakthrough provides a new occasion to reflect on enduring questions about what it means to be human.

I. Memory Blunting Introduced

A foundational study conducted by Cahill and colleagues in 1994 culminated in a conclusion straight out of *Eternal Sunshine of the Spotless Mind*, a film in which characters delete unwanted memories of a relationship gone awry (for a collection of philosophical essays on the film, see Grau 2009). In the study, one group of subjects took propranolol, a beta-blocker typically used to treat cardiovascular disease and migraine headaches, while a control group took a placebo. The study found that after reading emotionally arousing and emotionally neutral stories the propranolol subjects remembered the neutral stories at similar rates to placebo subjects but the emotional stories at significantly lower rates than the placebo subjects (Cahill et al. 1994). Propranolol, the study concluded, can affect one's emotionally charged memories. This conclusion prompted a whirlwind of research. And what neuroscientists discovered was even more surprising: the administration of propranolol can decrease the impact of emotional memories, both before *and after* they are formed (see Lonergan et al. 2013 for a review).

Consider some of the studies that have led researchers to this conclusion: Kindt and colleagues (2009) exposed subjects to a set of fear-relevant stimuli and conditioned them until the stimuli elicited involuntary fear responses. These responses were measured using the eye-blink startle reflex, a reliable indicator of fear-conditioning (Davis 2006). Next, subjects were given either propranolol or a placebo and presented with the stimuli again. Finally, after a waiting period, subjects were presented with the stimuli one last time. On average, subjects who had taken propranolol exhibited diminished fear responses when compared to controls.

In another study (Brunet et al. 2008), subjects who had witnessed a traumatic event were asked to describe it and then given propranolol or a placebo. A week later, the subjects were asked to call to mind the same traumatic event while researchers measured their fear responses: heart rate, skin conductance, and facial frowning. The results Brunet and colleagues saw mirrored those Kindt and colleagues had found. Subjects who had received propranolol exhibited significantly diminished fear responses when compared with controls.

Obviously, there are limitations to the current research on memory blunting. Most important, it is not clear that the psychological states the research describes as 'memories' map neatly on to our everyday concept of what a memory is. In fact, there is good reason to think the concepts differ significantly. The studies I just described target very specific psychological states, but memories are complex. My fear of snakes cannot be reduced to an isolated psychological state for this fear is given its distinctive character by a range of cultural, religious, and metaphorical meanings. The studies, moreover, gauge emotional responses by studying physiological responses, and there are good reasons to think emotion is more than mere physiology (see de Sousa 2014 for an overview).

Still, I believe the research merits careful reflection. It suggests that a pharmacological intervention can make memories less emotionally powerful and promises more sophisticated forms of memory modification to come. As with many biomedical breakthroughs, however, a host of normative questions trail behind the discovery. The most pressing: to what extent and in what circumstances is it morally

permissible to engage in memory blunting? That is the question I will be addressing in what follows.

Before I turn to it, however, I want to set aside some issues I will not be discussing. First, there are several other memory-modifying technologies currently being tested in the neuroscientific community and debated in neuroethics circles. For example, neuroscientists have made strides in enhancing memory and inducing false memories (see Liao and Sandberg 2008 for a discussion). Each of these developments raises important normative questions. I will not, however, be addressing them here. Likewise, there is a practical side to memory blunting: no matter what one may say regarding its permissibility, there are questions about who should have access to it, how access should be granted, what safety precautions should be implemented, and so on. Again, these are important debates, but I will not consider them here. To return to the question at hand: in what circumstances is it morally permissible to blunt someone's memory?

2. The Conservatives

Neuroethicists have staked out two primary camps in response to questions about the permissibility of memory blunting. According to the first, memory blunting is rarely if ever morally permissible. Some members of this camp have argued memory blunting is never permissible (President's Council on Bioethics 2003); others have argued that while memory blunting may at times be permissible, we have *prima facie* moral reason not to do it (Erler 2011). All proponents of this position, however, claim that there is something morally wrong with memory blunting *per se*, that memory blunting is *prima facie* morally suspect. Since proponents of this position deny the permissibility of memory blunting in a wide range of circumstances, I will call anyone who endorses it a conservative.

Conservatives typically defend their position by advancing one of two considerations. The first stems from a concern with safeguarding authenticity. Memory blunting, conservatives claim, is impermissible in a wide range of circumstances because it may lead us to live inauthentic lives. There is a vast literature devoted to authenticity (see Varga and Guignon 2016 for an overview). Erler (2011), however, helpfully identifies three main models of authenticity: the wholeheartedness model, the existentialist model, and the true self model.

I will consider the wholeheartedness model first. Proponents of this model take their cues from Frankfurt (1971) and claim authenticity consists in lining up one's second-order desires with one's first-order desires (Litton 2005; Christman 2009; Cottingham 2010). On this model, then, when my second-order desire to live in a healthier way clashes with my first-order desire for a third donut, I act inauthentically when I reach for the donut. Proponents of the existentialist model, by contrast, claim that one acts authentically when one acts autonomously and honestly; otherwise, one acts with bad faith (Sartre [1943] 2003, 1965; DeGrazia 2005). Consider Sartre's notorious example of the waiter who is too 'waiter-esque'. According to Sartre, such a waiter's actions are inauthentic because his actions are not his own; rather, they follow a pattern

that has been predetermined for him in his role as waiter (Sartre [1943] 2003: 82–83).

The wholeheartedness and existentialist models of authenticity provide an important background to the conservative criticism of memory blunting. Most conservatives, however, focus their criticism on the third model of authenticity: the true self model. According to the true self model, authenticity is ‘the quality of being faithful to a “true” self that is to some extent given to us, rather than being solely the product of our own choices, even honest and autonomous ones’ (Erler 2011: 238; see also Taylor 1991: 25–29 and Elliott 1998: 49–52). The true self model is thus grounded in what I will call the true self thesis. According to the true self thesis, each of us has a core set of features that are definitive of who we are and that make us recognizable to ourselves and others. Some of these features are products of our own choices (say, my cultivated love of Westerns); others are not (say, my naturally curious disposition). On the true self model, authentic actions are therefore actions that remain faithful to these features, while inauthentic actions are actions that betray them.

It is important to note here that the true self thesis is not concerned with *personal identity*, with what makes one person numerically the same person at different periods of time. Rather, the true self thesis is concerned with *narrative identity*, the core set of features that make us recognizable to ourselves and others (see Schechtman 1996: 73–86 for a discussion). The true self thesis is not so much a metaphysical thesis as it is a psychological thesis.

An example might help draw out the difference between personal and narrative identity: Phineas Gage, a notorious case from the history of neuroscience, had a metal rod driven through his head as a result of an accident. He survived, but the rod destroyed a large portion of his brain’s frontal lobe. Gage was never the same. His personality after the accident differed significantly from his personality before the accident. Of course, Gage was *numerically* the same person before and after the accident. That is what makes his case interesting. But there is also a sense of ‘person’ in which it is accurate to say that Gage’s accident made him a *different* person. It seems plausible to say that the airborne metal rod did not take Gage’s life but that it did take those features that made him recognizable to himself and others. What Gage’s case draws out is thus that we use the word ‘person’ to refer to both personal and narrative identity: Gage was numerically the same person before and after his accident even though the accident turned him into a different person in the narrative sense. In advancing the true self thesis, conservatives are therefore not committing themselves to an account of personal identity. Rather, they are warning that memory blunting has the potential to undermine our narrative identities and in doing so lead us into inauthentic lives.

Why do conservatives think this? The reason is straightforward: if we have true selves, memories make up an important part of them. Consider a discussion Descartes has in a letter to Mersenne: Descartes wonders why ‘what makes one man want to dance may make another want to cry’ (Descartes 1991: 20). For example, why should one person dance and another cry upon hearing ‘Hey Jude’? Descartes’s answer: whenever one man hears the song, ‘some affliction [befalls] him’, and so he cries ‘because [the song] evokes ideas in [his] memory’ (Descartes 1991: 20).

According to Descartes, it is the man's memories—and specifically, the emotional salience of these memories—that make him react differently than others. Someone who used to cry at 'Hey Jude' but then no longer does has lost an important part of his identity. Generally, Descartes's illustration shows that memories make up an important part of our true selves.

If that is the case, then on the true self model memory blunting has the potential to lead us into inauthentic lives. It has the potential to betray those features that make us recognizable to ourselves and others. Erler offers the hypothetical case of Elisabeth, who has endured bullying in high school and now as an adult wants to lessen the emotional weight of those memories even though they have been formative to her character (Erler 2011: 236). According to Erler, were Elisabeth to blunt her memories, she would be unfaithful to her true self and therefore, on the true self model, act inauthentically. Generally, conservatives claim that blunting the emotional timbre of our memories places our true selves, and thereby our authenticity, in danger. That is not to say inauthenticity is always bad. A serial killer may have an evil true self, and it would no doubt be good for such a person to abandon this true self in favor of a better one. Likewise, someone with an unhealthy narrative identity may be well-served by ridding himself of it (Ballantyne and Tosi 2015). Still, living a more authentic life is at least *prima facie* valuable. It is ultimately the threat of an inauthentic life that lies at the heart of conservatives' construal of memory blunting as almost always impermissible.

Conservatives also defend their position by advancing a related consideration. I will call it the 'value of bad memories'. Conservatives argue there is something valuable about precisely those memories that would be targets of blunting. Recall the first time someone close to you died. No doubt, the memory is unpleasant; it is the sort of memory you might want blunted. But at the same time, that memory may have played an important role in life. It may have helped you deal with subsequent losses, affected the way you understand yourself and others, or helped you reprioritize your life goals. There is something valuable about this memory, and it is valuable because and not in spite of its being bad.

Consider likewise an example from history: the childhood memories of Martin Luther King Jr. King's childhood was marked by bad memories tied to his race, and these memories played a role in inspiring him to fight for civil rights. Just imagine then that King had blunted these memories, that he had come to think of episodes from earlier in his life as *not all that bad*. That is a sobering scenario to consider because then King might not have become the great person we know him to be. Blunt one person's bad memories, and the world might become worse for it.

King's case thus suggests that bad memories are valuable not just for individuals but also for societies. Consider 'the case of a person . . . with firsthand experience of the Holocaust' (President's Council on Bioethics 2003: 228). The President's Council on Bioethics suggests that 'the life of that individual might well be served by dulling such bitter memories, but such a humanitarian intervention, if widely practiced, would only seem troubling' (President's Council on Bioethics 2003: 228). A society that had lived through the Holocaust but was numb to its painful history would be a poorer society, not a richer one.

But how does the value of bad memories support the conservative position that memory blunting is rarely if ever morally permissible? And why are some bad memories valuable? There are at least two reasons. The first is linked to the true self thesis. We have seen that bad memories help constitute our true selves. Blunting these memories thus risks doing violence to our true selves and undermining our authenticity. The second reason, I have suggested, has to do with the social dimension of memory blunting. Bad memories can apparently play the role of leading to a distinctive social good. It is important for us collectively to retain certain bad memories even when those memories may be painful for the individuals who retain them. The President's Council on Bioethics puts the same point more strongly, describing this social good as an obligation: 'as a community there are certain events we have an obligation to remember—an obligation that falls disproportionately, one might even say unfairly, on those who experience such events most directly' (President's Council on Bioethics 2003: 229). For both these reasons, conservatives thus construe the value of bad memories as supporting their position. Taking this together with the true self thesis, conservatives conclude we have good reason to think twice before popping propranolol.

I am sympathetic to the considerations conservatives advance. But ultimately I find the position they defend unsatisfying. For example, consider some cases that do not fit well with the conservatives' position. Consider a soldier returning from war with debilitating posttraumatic stress disorder (PTSD), a soldier who can neither function in society nor lead a productive life. Or take the case of someone who has witnessed a violent crime and must live with a life-altering memory simply because she was in the wrong place at the wrong time. According to conservatives, these people have moral reasons to retain their memories.

To my mind this verdict is problematic. For is it not unsympathetic to deny memory blunting to people weighed down by memories that will never burden the rest of us? Is it not hasty to dismiss memory blunting across the board without acknowledging the complex situations human beings find themselves in? Conservatives advance what I grant are important considerations, but I worry that if we lean too hard on these considerations, we will also come down too hard on cases where memory blunting is permissible.

3. The Liberals

For those who share this concern, there is a second camp that has emerged among neuroethicists, one that is more open to memory blunting. Members of this camp argue that memory blunting is morally permissible just in case it does no harm to oneself or others (see, e.g., Liao and Sandberg 2008; Kolber 2006, 2014; see also Levy 2007: 177–81). Of course, there is room for debate about what constitutes harm, and so there is room for debate among proponents of this camp about precisely when memory blunting is permissible. But since most advocates of the position will allow for memory blunting in a wider range of cases than conservatives, I will call anyone who endorses it a liberal.

Liberals find their primary motivation in precisely the cases that can give conservatives trouble. They point to soldiers with debilitating PTSD, victims of traumatic violence, and patients with other pathologies rooted in the past (Liao and Sandberg 2008: 94; Kolber 2006: 1567–71). Phobias, anxiety, depression, obsessive-compulsive disorder—arguably, these all have roots partly in memory (Heim and Nemeroff 2001; Gershuny et al. 2008; Spinhoven et al. 2010). Liberals thus argue that the well-being of these patients and others must factor into our analysis of memory blunting. In fact, liberals tend to adopt the classic Millian position that considerations of well-being should be the *most* important considerations when evaluating the rightness or wrongness of the practice. They thus side with proponents of enhancement generally, who regularly claim that considerations of well-being should be the focus of our analysis of novel interventions (see, for example, many of the pro enhancement articles in the collection edited by Savulescu and colleagues 2011).

Well-being, however, is particularly relevant to our analysis of memory blunting. The reason is that we could ostensibly improve well-being for many people by modifying their memories. The cases I have just mentioned—patients with PTSD, victims of traumatic violence, and so on—are the most obvious. But consider also less extreme cases. Take the case of Elisabeth, the woman who had endured bullying in high school and now wants to lessen the emotional weight of those memories. Or take the case of someone accidentally witnessing a violent crime. Both could improve their well-being by blunting these bad memories. Of course, it may also be valuable, as conservatives contend, to incorporate bad memories into our life narratives. But not everyone can do this successfully. Would it not be better, then, for these people to modify their memories for the sake of their well-being (Kolber 2006: 1600)? Generally, liberals argue that we can improve well-being by modifying memories and that this must play a central role in our evaluation of memory blunting. I will call this consideration the ‘value of well-being’.

In addition to the value of well-being, liberals advance a second consideration in favor of their position and in response to concerns about authenticity raised by conservatives. I will call the consideration the dynamic self thesis. According to this thesis, our identities are constantly being reinterpreted and are often dependent on factors outside our control (Liao and Sandberg 2008: 91–92; Kolber 2006: 1610). Note that like the true self thesis, the dynamic self thesis is concerned with narrative identity, not personal identity. In endorsing the dynamic self thesis, liberals are not claiming that our numerical identity is up for grabs. Rather, they are claiming that the features that make us recognizable to ourselves and others are malleable.

Why should we think our identities (and specifically, the memories that help compose our identities) are dynamic? Consider first that *the way* you remember something can be influenced by who you are and by the person you become. Liao and Sandberg put the point more elegantly: ‘our memories are constantly reinterpreted in an ongoing project to construct a self’ (Liao and Sandberg 2008: 91–92). Thus, while you may remember a lecture as insignificant, one of your colleagues may remember it as a pivotal moment in her research. Likewise, you may remember your sixth birthday as a crucial scene from your childhood or you may remember it as relatively inconsequential.

Consider likewise the ways our identities can be influenced by factors outside our control. The witness of a horrific crime may form a memory that becomes an important part of his identity even though his presence at the crime scene was accidental. Or take a case of moral luck, where two people drive while being drunk, but by pure chance, one causes an accident while the other does not (Nagel 1979: 29). The driver who causes the accident may be haunted by her memory in a way the other will not even though both made equally poor decisions. Both these cases suggest that our identities can be influenced by factors outside our control. Taking this together with the cases above, liberals therefore provide good reason to accept the dynamic self thesis. Our identities are malleable and can be influenced by a variety of factors both within and outside our control.

If the dynamic self thesis is true, however, the concerns conservatives raise about authenticity lose their bite. For consider: if the dynamic self thesis is true, our true selves, those features that make us recognizable to ourselves and others, are already the result of a range of factors. We do not think of these influences, however, as undermining authenticity. If I have chosen to overemphasize the memory of my sixth birthday, we do not think of this decision as inauthentic. Likewise, if I leave work early and miss witnessing a murder on my regular commute, we do not think this undermines the true self I might have become. Memory blunting, however, is apparently just another factor that can contribute to the ongoing construction of our selves. It is difficult to see how the decision to blunt one's memories differs importantly from the decision to overemphasize or forget scenes from one's narrative history. And if that is the case, the dynamic self thesis implies that we need not worry about falling into inauthentic lives by blunting our memories. Or that is what liberals contend. Taken together with the value of well-being, the dynamic self thesis therefore makes it tempting to think memory blunting offers an opportunity for moral improvement.

I am sympathetic to these considerations. My reaction to liberals, however, is much like my reaction to conservatives. I am ultimately unsatisfied with the position they defend. For example, consider some problematic cases for liberals. Take a teenager in the wake of her first relationship gone wrong. Or call to mind some sore memory from your daily life: an awkward conversation with a colleague, a less-than-pleasant lunch in the cafeteria, a harried commute home. Blunting these memories would ostensibly contribute to overall well-being. Moreover, there is no obvious way in which blunting them would cause anyone harm. Thus, it follows from the liberal position that it is permissible to blunt these kinds of memories.

But is there not something unsettling about this implication? And is it not unsettling precisely because of the considerations conservatives raise? Consider the angsty teenager. It may be possible to ease her pain today without explicitly harming her by blunting her memories, but this comes at the cost of sacrificing aspects of her narrative history that may be valuable to her personal and social development. Moreover, no matter how dynamic our identities are, do we not risk losing ourselves if we blunt too many of our memories? If I remembered but did not care about the losses in my life, I am not sure that I would recognize it as my life anymore. Likewise, I am not convinced my life would be richer if I were to dull the memory

of every marginally uncomfortable experience I have had. It may well be poorer. The considerations liberals advance should factor into our normative analysis of memory blunting. But I worry that if we allow these considerations to obscure those advanced by conservatives, we risk blotting out important aspects of human life. In sum: while conservatives cast too narrow a normative net in their analysis of memory blunting, liberals ultimately cast too wide a net.

4. Treatmentalism

I would like to propose an alternative approach, one that navigates a middle way between the conservative and liberal positions by appealing to a common bioethics distinction: the distinction between treatment and enhancement. For my purposes, I will follow Juengst and Moseley (2016) and define enhancements broadly: as ‘biomedical interventions that are used to improve human form or functioning beyond what is necessary to restore or sustain health’. By contrast, treatments are biomedical interventions that are used to restore human form or functioning to what is necessary for sustaining health.

Of course, distinctions are often a locus of controversy, and the distinction between treatment and enhancement is no exception (see Juengst and Moseley 2016). For my purposes, it will be helpful to highlight two challenges facing anyone who would adopt the distinction: first, the challenge that the distinction cannot be traced with precision and, second, the challenge that the distinction is morally irrelevant. Let us consider these in turn.

4.1. Challenges to the Treatment/Enhancement Distinction

Consider first the challenge that the treatment/enhancement distinction cannot be traced with precision. This challenge grows from the definitions I have provided. These definitions specify only that enhancements improve human functioning while treatments restore it. It is not clear, however, precisely what constitutes improving or restoring. Indeed, there are at least three ways to account for the difference (Juengst and Moseley 2016).

Professional-domain accounts, in the first place, claim our concepts of improvement and restoration should take their cues from the medical community; on these accounts, enhancements are interventions the medical community sees as beyond its scope of practice while treatments fall within this scope (Kass 1985; Engelhardt 1990; Good 1994). Normal function accounts, by contrast, define improvement and restoration in reference to species-wide norms. According to these accounts, treatments restore individuals to a species-wide standard of normal functioning while enhancements take individuals beyond this standard (Daniels 1985, 2000; Buchanan et al. 2000). Finally, disease-based accounts claim restorations aim at diseases while improvements aim at healthy systems; on disease-based accounts, treatments cure disease while enhancements bolster already healthy systems (Berger and Gert 1991; Juengst 1997; Gert, Culver, and Clouser 2006).

The account one adopts here may affect how one understands certain specific interventions. For example, how should we understand vaccines? Normal function accounts may construe vaccines as enhancements because they take individuals beyond normal healthy functioning. Disease-based and professional-domain accounts, by contrast, may construe vaccines as treatments because they are aimed at diseases and fall within the scope of medical practice. Generally, because professional-domain, normal function, and disease-based accounts define improvement and restoration differently, they may differ in whether they construe certain interventions as treatments or as enhancements.

Each account of the distinction, however, faces important challenges. Professional domain and disease-based accounts must contend with the fact that there are competing theories of health care (Levy 2009: 94–96). Because there is no agreed-upon standard of what health care should be, it is not clear what falls under someone's scope of practice or what counts as a disease. Normal function accounts, by contrast, depend on a potentially problematic metaphysical view that assumes species-typical function (Levy 2007: 97–99) and that does not allow for the different ways members of a species can flourish (Silvers 1998, Asch and Block 2011). It is not clear, then, which account of the treatment/enhancement distinction is superior. The upshot? It is not always clear which interventions are treatments and which are enhancements—the treatment/enhancement distinction apparently cannot be traced with precision.

This is indeed a challenge for anyone who would adopt the treatment/enhancement distinction to sort through the ethics of memory blunting. That said, I believe the challenge can be set aside for my purposes. This is because while the three accounts I have introduced may disagree on whether borderline cases count as treatments or enhancements, they agree on certain paradigm cases. Proponents of each account would agree that a round of antibiotics prescribed for strep throat counts as a treatment and that steroids used for body building counts as an enhancement.

The good news, then, is that there are also paradigm cases of memory blunting being used as both a treatment and enhancement. When a soldier suffering from PTSD blunts her memories, that is a treatment on each of the accounts I have discussed. And when I blunt my memory of yesterday's tedious budget meeting, that is an enhancement on each account. There are, of course, borderline cases of memory blunting as well, and I will touch on some below. But primarily, I will focus on the paradigm cases and allow these to guide my discussion. The downside of this approach is that the account I develop may not trace the treatment/enhancement distinction with the precision it deserves. The upside is that in sacrificing precision, the account I offer gains broader appeal. And by my lights, that is an even trade-off.

I turn then to a second challenge facing those who would adopt the treatment/enhancement distinction in their approach to memory blunting, namely, the challenge that the distinction is morally irrelevant. This challenge has been advanced by several critics (Harris 2007, 2011; Levy 2007), but I will focus on Levy's version. According to Levy, we should adopt some version of an ethical parity principle according to which our response to novel interventions should mirror

the responses we have already taken to similar interventions (Levy 2007). If we accept an existing intervention *A* as morally permissible and a novel intervention *B* is sufficiently like *A*, the ethical parity principle suggests that we should accept intervention *B* as morally permissible as well.

This principle raises problems for those who would construe the treatment/enhancement distinction as morally relevant because certain enhancements are not ostensibly morally problematic. For example, consider the following:

ALICE'S GLASSES: Alice's glasses allow her to see things that you and I cannot see. Nothing too drastic. They simply allow her to see at slightly greater distances than you and I can. Alice can recognize a friend approaching about 10 yards before you or I could.

PHIL'S NIGHT OUT: Phil has had a rough week at work. So he goes out with some friends and has some drinks. As a result, the worst parts of his week lose their edge, and he wakes up the next day feeling significantly better about his life.

The interventions described in both **ALICE'S GLASS** and **PHIL'S NIGHT OUT** count as enhancements (albeit unimpressive ones) on each of the models I have discussed. They are also apparently morally unproblematic. If that is the case, however, and if the ethical parity principle holds, it is not clear why an intervention should be morally suspect simply in virtue of being an enhancement. It is therefore unclear how the treatment/enhancement distinction could give us traction in our analysis of memory blunting. Or so an objection might run.

The most straightforward rejoinder here is to note that according to the ethical parity principle, our responses to novel interventions should mirror our responses to other interventions only insofar as the latter are akin to the former. Perhaps **PHIL'S NIGHT OUT** shares some important features with memory blunting. And so I will be considering this case more carefully below. **ALICE'S GLASSES**, however, has little in common with memory blunting. In directly and explicitly targeting memories using pharmacological means, memory blunting seems to differ in important ways from quotidian forms of enhancement. Levy himself agrees, acknowledging that 'the problems [new memory modification technologies] pose would indeed be unprecedented' (Levy 2007: 171). If paradigmatically unproblematic cases of enhancement are sufficiently different from memory blunting, however, the ethical parity principle fails give us guidance in our approach to it. The treatment/enhancement distinction may not be morally relevant generally, but it may still be morally relevant to our analysis of memory blunting.

More could be said about the treatment/enhancement distinction. But this will do for my purposes. In what follows, my discussion is limited in scope and does not depend on how particular debates about the treatment/enhancement distinction turn out. Rather, I hope to show how the distinction can serve as a starting point for an approach to memory blunting, one that is superior to the positions defended by conservatives and liberals.

4.2. Treatmentalism Introduced

Here is a first pass at a criterion for memory blunting based on the treatment/enhancement distinction:

The Treatment Criterion for Memory Blunting (TC): memory blunting is morally permissible just in case it is used as a treatment.

According to TC, memory blunting is morally permissible just in case it restores an individual's psychological functioning. Call anyone who defends TC a *treatmentalist*. I will be working out the details of treatmentalism in [section 5](#). For now, I want to suggest that we have prima facie reason to side with treatmentalists. The reason is that treatmentalists can accommodate the considerations that motivate conservatives and liberals even while avoiding the problematic cases these rival theorists face.

First, compare treatmentalists to conservatives. Recall that conservatives advance the value of bad memories and the true self thesis to motivate their position. According to conservatives, memory blunting threatens authenticity and risks undermining the personal and social goods that can be derived from bad memories. Treatmentalists, however, can accommodate these considerations as well. If memory blunting is permissible only when memories impede psychological functioning, we will not be justified blunting any old bad memory we happen to form. Now, as we have seen, the details about which interventions count as treatments will sometimes depend on the account of treatment and enhancement one endorses. Moreover, it likely would not be up to *philosophers* to decide which memories are worth blunting. Philosophers may have things to say about problematic psychological functioning, but clinical psychologists are better equipped to recognize cases of it and to identify which treatments may be appropriate. Still, it seems safe to say that treatmentalists will not allow for the blunting of quotidian painful memories. These memories rarely impede psychological functioning, and so blunting them would rarely count as a treatment, no matter which account of treatment one adopts. Generally, treatmentalists will not endorse the blunting of bad memories *just because* they are bad and can therefore preserve the personal and social goods protected by the value of bad memories.

Treatmentalists can also protect the true self that concerns conservatives. If memory blunting is used to restore psychological functioning, we need not worry about memory blunting violating authenticity. Much the opposite. Memory blunting may bolster authenticity by helping our true selves shine through more brightly. Consider an analogy: after a nasty flu prompts you to make grandma's chicken noodle soup, you may say it helped you feel like yourself again. We can similarly imagine someone who has blunted a traumatic memory saying the treatment helped her feel like herself again. Memory blunting may help a soldier with PTSD recover her love of Beethoven and her inquisitive disposition. Generally, treatments do not endanger the features that make us recognizable to ourselves and others. They help us recover these features. And in doing so, they help us live more rather than less authentic lives.

Treatmentalists can therefore accommodate the considerations that motivate conservatives. But they can do so while avoiding the problems conservatives face. Recall that according to conservatives, memory blunting is always *prima facie* morally suspect. Not so for treatmentalists. Because treatmentalists endorse memory blunting in cases that restore psychological functioning, they can wholeheartedly approve of memory blunting for paradigm cases of treatment. Treatmentalists may disagree about certain borderline cases, depending on the account of the treatment/enhancement distinction they endorse. For example, they may disagree about how to evaluate the case of Elisabeth, who suffered from bullying as a teen and now wants to rid herself of these memories through blunting. But on the paradigm cases—soldiers suffering from PTSD and patients with pathologies rooted in memory—treatmentalists will wholeheartedly endorse memory blunting. And more important, it is these paradigm cases (and not the more contentious borderline ones) that give conservatives trouble.

Turn now to the liberals. Treatmentalists can accommodate the considerations advanced by proponents of this camp as well. Treatmentalists, in the first place, can accommodate considerations highlighted by the value of well-being. Treatmentalists endorse memory blunting in cases that restore psychological functioning, and psychological functioning is inextricably tied to human well-being. A patient whose well-being is impeded by his memories will not function properly, and a patient who deals with his memories in unhealthy ways will have diminished well-being. In allowing for memory blunting in cases of treatment, treatmentalists recognize the potential it has to improve well-being for a variety of individuals. It is important to note, though, that treatmentalists will not stress well-being to the extent that liberals do. We have seen that advocates of memory blunting and of human enhancement generally often emphasize well-being to the neglect of other concerns. According to treatmentalists, by contrast, the value of well-being must be tempered by other considerations, including the value of bad memories and the preservation of authenticity. There may therefore be circumstances in which treatmentalists do not approve of memory blunting even though it demonstrably improves well-being,

I presume, of course, that the work of identifying these circumstances cannot be done from the philosopher's armchair. Philosophers may be able to think clearly about human psychology, but they are not typically equipped to distinguish between people who are dealing with memories in genuinely unhealthy ways and those who are simply going through a difficult time. Still, it seems fair to assume that treatmentalists will condone memory blunting in a broader range of circumstances than conservatives do. Treatmentalists, after all, harbor no reservations about blunting memories that impede a patient's healthy psychological functioning. And as we have seen, it is precisely these cases that most strongly motivate the value of well-being for liberals.

Finally, consider the dynamic self thesis. Liberals advance this thesis in response to the concerns about authenticity raised by conservatives: the dynamic self thesis says our identities are constantly being reinterpreted and are often dependent on factors outside our control. But if that is the case, we need not worry that an intervention such as memory blunting will undermine authenticity.

Liberals, however, are not alone in recognizing the dynamism of our identities. Treatmentalists, by endorsing memory blunting in cases of treatment, also recognize that aspects of our identities can keep us from healthy psychological function. They recognize our identities can be influenced for the worse by a wide variety of factors both within and outside our control and that our identities can (and sometimes should) be reinterpreted. Treatmentalists therefore recognize that memory blunting need not undermine authenticity. Indeed, we have seen that treatmentalists think memory blunting can sometimes lead people into more rather than less authentic lives. Treatmentalists have sympathy for the accidental witness of a violent crime. They recognize the witness's identity is malleable and able to withstand the blunting of problematic memories. Generally, treatmentalists are sympathetic to cases in which the dynamism of our identities allows memory blunting to restore people to healthy levels of psychological functioning. Unlike conservatives, they temper the value of preserving our true selves with the recognition that these selves are dynamic.

Treatmentalists can therefore accommodate both considerations that motivate liberals. But they can do so while avoiding the problems liberals face. Recall the memories of the heartbroken teenager and your own quotidian painful experiences. Liberals have no qualms blunting these memories and therefore risk blotting out valuable dimensions of human life. Treatmentalists, by contrast, endorse memory blunting only in cases of treatment. Again, the details about which interventions count as treatments will sometimes depend on the account of treatment and enhancement one endorses. Still, it seems safe to say that treatmentalists will not allow the memories of everyday hassles to be blunted. If the memories of your harried commute to work or awkward conversation with your spouse's colleague do not impede your psychological functioning, treatmentalists will not endorse blunting them. For treatmentalists, well-adjusted but angsty teenagers should remain angsty teenagers.

In sum: treatmentalists can accommodate the considerations that motivate conservatives and liberals even while avoiding the problematic cases conservatives and liberals face. This gives us *prima facie* reason to side with the treatmentalists.

5. Refining Treatmentalism

My first pass at treatmentalism was just that: a first pass. There are, however, several challenges to the position that must be addressed lest it be left particularly vulnerable. First then, I return to a potentially problematic case I introduced above:

PHIL'S NIGHT OUT: Phil has had a rough week at work. So he goes out with some friends and has some drinks. As a result, the worst parts of his week lose their edge, and he wakes up the next day feeling significantly better about his life.

PHIL'S NIGHT OUT is potentially problematic for treatmentalists because the scenario shares many similarities with memory blunting (see Levy 2007: 184–85): in both, someone elects to dull a memory using pharmacological means. Most of

us, however, do not think Phil does anything wrong when he goes out with his friends. The problem for treatmentalists is therefore that given the ethical parity principle—which claims we should respond to similar interventions similarly—treatmentalism implies Phil *does* do something wrong when he goes out with his friends. Treatmentalists, after all, allow for memory blunting only in cases of treatment, and Phil is not apparently in need of treatment for anything. In denying Phil his night out, treatmentalists are thus faced with a counterintuitive implication. Or so the objection runs.

Treatmentalists can respond to this objection in several ways. First, as I have mentioned, they can deny that memory blunting is sufficiently similar to PHIL'S NIGHT OUT and thus deny that our approach to the former should guide our approach to the latter. We have seen that Levy himself acknowledges that this strategy may be viable (Levy 2007: 171). Second, treatmentalists can bite the bullet, claiming that Phil *does* do something morally wrong when he goes out. Perhaps the stance treatmentalists take on memory blunting has unforeseen implications for recreational drinking.

Neither of these responses, however, satisfies me. To me, PHIL'S NIGHT OUT seems similar in all the relevant respects to memory blunting. Moreover, it does not strike me as morally problematic for Phil to go out with his friends. Let us consider, then, a different way treatmentalists can respond to the scenario. In particular, consider Phil's *motives* for drinking. Suppose Phil goes out to wind down after a long week. Nothing wrong with that. But suppose, by contrast, that Phil drinks *with the purpose* of forgetting. Suppose he goes out *in order to* erase or dull his memories of the meetings, memos, and managerial minutiae that made up his week. Suppose, in short, that Phil approaches his night out in the same manner one might approach memory blunting outside cases of treatment.

In this case, Phil's friends may begin to worry about him. We worry about friends who drink to forget. We worry, moreover, for the same reasons treatmentalists caution us against memory blunting unless it is used for treatment. When friends drink to ease their memories, they risk falling into inauthentic lives and undermining the personal and social goods that come from retaining bad memories. Put simply: we suspect that people who drink to forget have adopted an unhealthy relationship with their past.

When we map Phil's approach to drinking more carefully onto memory blunting, the treatmentalist's verdict therefore looks less problematic. Indeed, when we imagine Phil's drinking to be motivated by reasons similar to those that might motivate memory blunting outside treatment, his drinking no longer seems harmless. It begins to seem genuinely worrisome. Given the ethical parity principle and the similarity between PHIL'S NIGHT OUT and memory blunting outside treatment, the scenario may therefore ultimately count in favor of treatmentalism rather than against it. It may suggest that memory blunting outside treatment is problematic for the same reasons that Phil's deliberate attempt to forget is problematic.

I turn now to a second challenge facing treatmentalism. Recall how I formulated the position above. I proposed treatmentalists can be identified by their adherence to the following criterion for memory blunting:

TC: memory blunting is morally permissible just in case it is used as a treatment.

I suggested, moreover, that in embracing *TC*, treatmentalists can accommodate the considerations that motivate conservatives and liberals even while avoiding the problematic cases these rivals face.

But consider cases in which it seems appropriate for someone to retain a traumatic memory that inhibits a healthy life. Consider the terrorist, who is debilitated by the memory of his murderous actions; the war criminal, who is haunted by the atrocities she has committed; the adulterer, who is psychologically distressed over his infidelity. In these cases, it seems *appropriate* for people to be burdened by their memories. Since Lady Macbeth is perhaps the most notorious example of such a case and is cited often in discussions of memory blunting (Erler 2011: 236; President's Council on Bioethics 2003: 212), I will call any burdensome memory that is appropriate to retain a Macbeth memory. By definition, then, Macbeth memories ought to be retained. However, according to *TC* it is morally permissible to blunt Macbeth memories. Macbeth memories impede psychological functioning, and *TC* tells us that memory blunting is morally permissible *whenever* it can restore psychological functioning. Insofar then as treatmentalists embrace *TC* and insofar as *TC* delivers a counterintuitive result for a category of memories that has been frequently emphasized in discussions of memory blunting, Macbeth memories pose an important challenge to treatmentalists.

Treatmentalists can respond to this challenge in two ways. First, they can deny there are any genuine Macbeth memories. They can claim even the most heinous criminals should be able to blunt their memories if those memories impede psychological functioning. This response has the benefit of dissolving the worry Macbeth memories raise. If there are no psychologically burdensome memories that ought to be retained, treatmentalists can wholeheartedly endorse blunting them.

This approach, however, will do little to assuage the worries of those who countenance Macbeth memories. So perhaps it is better for treatmentalists to adopt a different strategy: rather than deny the existence of Macbeth memories, treatmentalists can refine the criterion for memory blunting to which they subscribe. For example, consider the following version of *TC*:

*TC**: memory blunting is prima facie morally permissible just in case it is used as a treatment.

According to *TC**, it is merely prima facie morally permissible to blunt burdensome memories. The prima facie clause of *TC** allows for the possibility that other normative considerations may affect the extent to which we regard memory blunting as permissible. For example, it allows for the possibility that we ought not blunt Macbeth memories even though these memories are burdensome. If treatmentalists swap *TC* for *TC**, they therefore gain a response to the worry Macbeth memories raise.

Treatmentalism could no doubt benefit from further refinement. But I will end my discussion here. I have not intended to defend treatmentalism from all lines

of objection. Rather, I have aimed to shore up the position against the most obvious lines of attack and to suggest some ways in which treatmentism may be superior to rival theories. Treatmentism as I have left it is not a final theory. But I nevertheless hope it opens new avenues for reflection on the ethics of memory blunting.

6. Conclusion: The Ethics of Memory Blunting and Enduring Questions

By way of conclusion, I would like to return to the topics with which I opened: Brave New World Neuroethics and the No New Questions Thesis. Recall that Brave New World Neuroethics says that neuroscience has fundamentally changed the moral landscape, that the progress we have made in neuroscience has upended common sense and traditional ways of understanding morality. The No New Questions Thesis resists this vision: it says debates in neuroethics do not typically change the moral landscape but rather force us to grapple with timeless questions.

I believe the contemporary debate about memory blunting counts in favor of the No New Questions Thesis. Superficially the debate may be about the extent to which we should avail ourselves of a piece of new neuroscientific know-how—the possibilities raised by memory blunting may appear to erode how we understand ourselves as moral beings. My discussion, however, suggests that the debate ultimately turns on several deep-seated questions about what it means to be human: questions about how our memories are implicated in our identities, questions about how we should reconcile common sense with the possibilities presented to us by technology, questions about how to weigh moral and practical considerations.

That is not to say that the possibilities raised by memory blunting cannot help us make real philosophical progress. While discoveries in neuroscience may not resolve enduring philosophical questions, they can sometimes steer us away from problematic answers. For example, if you adhere to a psychological continuity criterion of personal identity, the possibility of memory blunting may lead you to rethink your position. Memory blunting disrupts psychological continuity without ostensibly undermining personal identity. It thereby poses a challenge to anyone who would look to the former to secure the latter. Generally, neuroscientific discoveries can be relevant to enduring philosophical questions by excluding certain answers we are tempted to give. Call this view Real Progress Neuroethics. I am sympathetic to Real Progress Neuroethics, and what I have argued above should not be taken to speak against it.

Rather, I hope to have suggested that there is something amiss with the more radical variant proposed by Brave New World Neuroethics. Memory blunting may seem to suggest the arrival of a world fraught with frightening choices and hard-to-attain values. But that world has always been our world. What seems to be a purely contemporary challenge is in fact a fresh reminder of the inevitability of difficult moral questions for beings like us. Debates in neuroethics may take place at the forefront of neuroscience, and neuroethicists may often be pressed to recommend

practical solutions, but the questions neuroethicists ask are at bottom the questions philosophers have always asked. The questions neuroethicists ask are enduring.

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