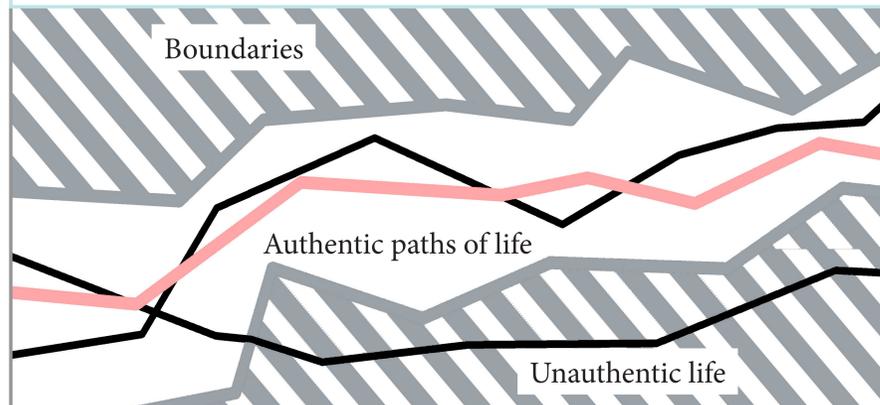


## Summary

The idea of authenticity includes some core assumptions about what a self is and to what degree we can change it. Neural interventions have an effect on authenticity within this framework. Crucially, they can also shake those foundations of authenticity. On the one hand, because of how neural interventions initiate changes they can undermine the basis of selfhood: the narrative perspective. On the other hand, they move the goalposts by resetting the constraints of what we can change about ourselves.

## Authenticity

**Authenticity combines the two ideas of self-discovery and self-creation<sup>1</sup>:** on the one hand, there are boundaries of who I can be and that there are things I can discover about myself. Those boundaries constrain the authentic paths of life open for me. On the other hand, I can to some degree create myself and I am responsible for who I am. More than one authentic life is possible.



## Hyponarrativity undermines selfhood

**Neural Interventions undermine the self-narrative by favoring an objective attitude over a narrative one<sup>2</sup>.** Humans integrate their experiences into a linear, internalized and evolving story, which gives them meaning. A self-narrative can contain instances of an objective attitude and it is generally possible to take either perspective on actions. But if the objective perspective dominates, authenticity is undermined. **For a self which is merely a causal object, there is no question of authenticity.** Depending on the method of initiating changes, some experiences are easier to construe in the objective than the narrative perspective.

## Objective perspective

Explanation of actions via neurons, enzymes, muscles, ...

*“The depression fell away from me just like that [...]. The press of a button, confirmed by a barely audible digital beep [...] and my overcast skies instantly cleared.”<sup>3</sup>*

**Deep Brain Stimulation (DBS)** strongly favors the causal perspective because 1) in some cases the DBS induced changes are severe and instant and 2) the causal chain seems clear and simple—after all, DBS is just a wire in your brain emitting a low current. The only route to take a narrative perspective seems to be to focus on one’s choice to deal with your illness by undergoing DBS<sup>4</sup>.

*“The reason I came to believe that the world is worth living in after all is because more of my serotonin transporters were blocked.”*

The effect of **psychoactive drugs** is often slower, which allows for perspectives including personal insights. The causal chain seems more complicated compared to DBS. Also, taking them is a repeated (often daily) act putting more focus on the choice for the treatment.

*“The reason I came to believe that the world is worth living in after all is because LSD increased the resting state connectivity between my brain areas.”*

**Psychedelic substances** like LSD or Psilocybin are a mixture of indirect and direct interventions: on the one hand the directly interact with the brain, on the other hand, the phenomenological experience contributes to the treatment. The process is thus easy to construe in a narrative perspective.

*“The reason I came to believe that the world is worth living in after all is because talking about my trauma helped to increase serotonin uptake in the medial prefrontal area.”*

Because **psychotherapy** works directly with insights, motives, goals, and traits the narrative perspective suggests itself.

## Narrative perspective

Explanation of action via intentions, reasons, traits, ...

*“After fighting all my life against depression without success I decided to undergo DBS, through which I was freed from my depressive thoughts.”*

*“After more of my serotonin transporters were blocked, a previous deficiency in my perception of the world was corrected. This helped me to see that the world is worth living in after all.”*

*“After I experienced a deep sense of connectedness to others, the world and myself, I felt far less absorbed by my own issues and concerns, which helped me to see that the world is worth living in after all.”*

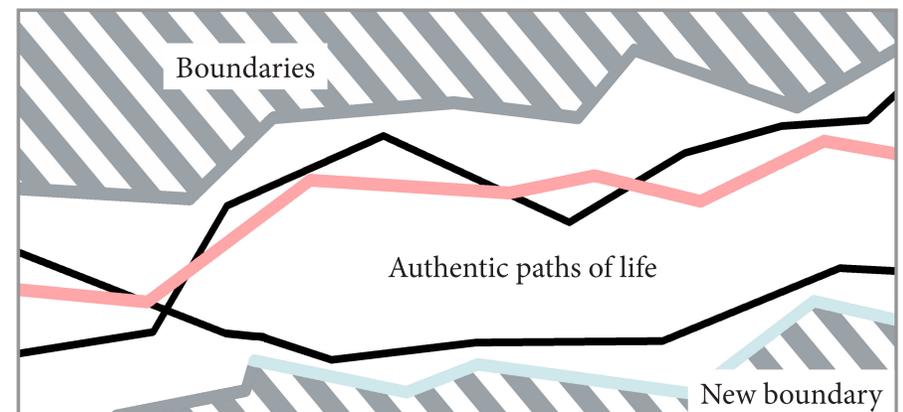
*“After I talked about my trauma I realized that anger is the more appropriate response than being depressed which helped me to believe that the world is worth living in after all.”*

## Moving the goalposts of authenticity

**Through neural interventions the boundaries of who we can be become more flexible** because they provide new possibilities for changing ourselves. They can alter traits like shyness or introversion and even change our memory, thereby moving the goalposts of authenticity.

*“I believe Tess’s story contains an unchronicled reason for Prozac’s enormous popularity: its ability to alter personality. Here was a patient whose usual method of functioning changed dramatically. [...] Where once she had focused on obligations to others, now she was vivacious and fun-loving.”<sup>5</sup>*

Memory Modification Techniques (MMTs) can reduce the emotional strength of memories, for instance to treat PTSD, and at some point, they may be able to selectively erase memories.



**The spectrum of authentic ways of living our lives can be increased.** We have new tools at hand that can change us such that ways of acting which used to be unauthentic fit within the boundaries of what is fitting for us and become authentic. The requirements for authenticity remained the same but the goalposts moved. For some people, the only authentic paths through life available are very difficult. The traits and goals they include are e.g. not rewarded in their cultural setting and do not lead to private or professional success. By changing the constraints of who I can be, neural interventions open up the possibility for life-paths which are easier while remaining authentic. At the same time, this raises issues of conformity.

## References

1. Leuenberger M. In Defence of Narrative Authenticity. *Cambridge Quarterly of Healthcare Ethics* Forthcoming.
2. Hofmann G. How Hyponarrativity May Hinder Antidepressants’ “Happy Ending”. *Philosophy, Psychiatry, & Psychology* 2015;22(4):317–21.
3. Dubiel H. *Deep Within the Brain*. NY: Europa Editions; 2006.
4. Schechtman M. Philosophical Reflections on Narrative and Deep Brain Stimulation. *J Clin Ethics* 2010;21(2):133–9.
5. Kramer P. *Listening to Prozac*. NY: Penguin Books; 1993.