

Checking in with Neuroethics

by Martha J. Farah

My, Neuroethics, how you have grown since the days of your infancy! I remember those journal articles and conferences back in the early 2000s, when you first captured the attention of a small cadre of bioethicists and neuroscientists. Beyond these early followers, most people did not know your name. I once Googled you and got back the prompt, “Do you mean Euroethics?”

This changed as we approached the 2010s and the ethical, legal, and social impacts of neuroscience began to register more broadly. And not just for the clinical implications in neurology and psychiatry. Smart pills at college, brain defenses in court, and the concern that brain imaging might threaten our mental privacy all invited serious exploration of the many ways that neuroscience was poised to change our lives and our self-understanding. Your name gained currency in academia and the media.

There were skeptics, of course, who wondered if we needed another boutique field of study when, arguably, you were no more than good old-fashioned bioethics doing work on neuroscience. To be sure, by being declared a new field, you probably benefited from factors beyond your actual merits: the novelty and branding opportunities attached to your name undoubtedly helped attract attention and funding. But darn it, Neuroethics, you also had plenty of merit! Even though some neuroethical issues had analogs in bioethics more generally, others were distinctive. Information from the brain is revealing of personal mental traits and states in a

way that far exceeds findings from other biological measurements, and altering the brain through neurotechnology offers unprecedented means to control the human mind.

In the end, the need for a separate field was resolved de facto, with the coalescing of a new community. Its members came from bioethics as well as neuroscience, law, philosophy, and the history and sociology of science. You have benefited from this diversity of perspectives and methods.

So now you are a field with your own journals, societies, and grant programs. And your influence extends beyond these specialized corners of academia, with broader fields such as neuroscience, law, and bioethics giving you a place in their institutions and activities.

What’s next for you? You’ve got a good thing going, and I sometimes worry that you will get too comfortable and stop moving forward. Ethical issues do not get resolved the way empirical issues do, and it’s possible to nurse an issue along way past the point where any new understanding emerges, always with the unassailable justification that *ethics are at stake!* I know that sounds cynical—sorry. I just want to see you develop and thrive, and I don’t think you will if you keep returning to issues like cognitive enhancement or neural causation of behavior and responsibility, with minor adjustments of your analyses.

You are at your best when you are scanning the horizon for new scientific and technical developments that intersect in new ways with ethics and law. Consider the development of open- and

closed-loop deep brain stimulation for behavioral disorders—one of the most exciting recent developments in clinical neuroscience. Under what conditions are patients responsible for their behavior when it is influenced by an implanted system? You have developed philosophical criteria for agency and personal identity in ways that advance understanding of patients’ responsibility and, reciprocally, provide a new testbed for theories in the philosophy of action.

Here’s another: Cases involving pain are common among lawsuits and disability claims, yet pain is invisible, and people have obvious motivations for malingering. Neuroethicists recognized the relevance of brain imaging research on pain, which shows promise as a source of biomarkers, and have been active in evaluating the needed steps toward validation.

These examples are forward-looking but not silly science fiction. They reassure me that you are still moving forward with intellectually interesting subject matter grounded in reality.

You also have a role in solving immediate problems. Your collaboration with neuroscience researchers is helping to ensure the ethical quality of large neuroscience research programs. You have also identified empirical issues we need to know more about. How often and in what ways is neuroscience used in criminal law? Do so-called cognitive enhancers actually enhance cognition? These are not juicy intellectual questions, but they are essential for establishing policy priorities. You have also worked to better understand people’s beliefs and attitudes toward neuroscience and its applications, because effective policy must take these empirical facts into account too.

The world is looking to neuroscience to solve problems and improve life. We need you with us as we meet the challenges and opportunities to come.

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