

## Is neuroscience making us lose our minds?

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It's happening so slowly that we are almost unaware of it.

Little by little, we are losing our minds.

As a result of the recent progress in neuroscience, the mind is out and the brain is in.

The hard science of the brain is where the grant money is and it's the only thing that truly matters today.

Maybe it's just a paradigm shift in the way we conceive ourselves, or perhaps it's another stage in the evolution of Homo sapiens?

We used to think in dualistic terms of body and mind, apart and together, or as two sides of the same coin. Now, the mind is viewed as an expression of the brain and not the other way round. The mind is relevant only in so far as it has a physical correlate.

You remember when we believed that the mind could influence the body and make us sick? It could even give us gastrointestinal ulcers. We don't believe that anymore. New evidence has shown that gastrointestinal ulcers are caused by a bacterial infection rather than by psychological stress.

The focus has shifted from bottom-up to top down.

Gilbert Ryle's (1949) concept of the mind has triumphed, stating that the mind is no more than a scientific misconception; a Ghost in the machine, or a remnant of Descartes' error (Damasio, 1994).

Whereas classical psychology was separated from the physiology of the nervous system, it now seeks to explain how the brain makes us behave, think and feel. As a result, neuroscience is gradually becoming more dominant within the field of psychology. Research on genetic and environmental interactions has replaced studies in social psychology. Brain imaging has replaced dynamic psychiatry. Cognitive neuroscience has replaced cognitive psychology and social neuroscience is trying to find the neural basis for social interactions. The shift in focus to a biological and/or evolutionary bias is apparent among [the 50 most influential living psychologists in the world today](#).

We are no longer categorized as pessimists or optimists. Instead, we either have 'rainy' or 'sunny' brains (Fox, 2012). After traumatic experiences, the body keeps the score (van der Kolk, 1994). Our emotions have a biomolecular basis (Pert, 1999). Even beliefs are assumed to be based on neural networks or some kind of cell-biology (Lipton, 2016). Consciousness has become a 'user-illusion' (Dennett, 1991) since brain cells are merely responding to electro-chemical signals. As a result of these assumptions, it is recommended that if we only change our brains, we will also change our lives (Amen, 2015).

All these neuro-science fiction ideas have had a profound influence on us and numerous mental health professionals have adopted this view. Having lost faith in natural observation studies and in self-administered tests, they increasingly rely on data from biochemistry laboratories and neuroimaging devices.

But the increasing emphasis on the brain and the body is not only happening within psychosomatic medicine, biological psychiatry and neuropsychology. Clinical psychologists and psychotherapists everywhere are using the findings from neuroscience when explaining why they do what they do. It has even become the center of debate within the third wave of psychiatry (Walter, 2013) regarding the use of a descriptive DSM approach vs. a neuroscience-based diagnostic approach.

Overenthusiastic media reports have convinced us that we are driven by blueprints in our genes and by various other physiological processes. As heard in TED lectures on YouTube, everybody now knows that what's going on in our minds is actually an expression of what's going on in our nervous systems. Everybody now knows that when we are stressed out, something has gone wrong within the neuro-circuitry of our brains. When too excited, we now tend to explain it as over-activity in the amygdala, deficient regulation of the prefrontal cortex and abnormal hippocampus mediation. It's become common knowledge to refer to the 'faulty messages' of neurotransmitters when explaining what makes us fearful or sad. Action potentials and neural circuits have become much more appealing than free associations.

As a result of this newfound understanding, more hands-on avenues of healing are called for. We increasingly rely more on psychopharmacological remedies, transcranial magnetic stimulation (TMS) or neurosurgical interventions, or anything else that will take the mind and the self out of the equation.

If psychotherapy is nevertheless recommended, the goal is no longer to achieve an open mind (Prinz, 2012), but a well-regulated body in balance with environmental stress. Psychotherapy should be firmly based on a medical model of diagnosis, a focused treatment plan and on follow-up outcome research. Only evidence-based approaches are

recommended which are scientifically proven to be effective for specific disorders. Psychotherapy should be brief, focused and goal directed. Even the names of the recommended methods are abbreviated with only a few letters (e.g. ACT, CBT, DBT, EMDR, NLP, PE, PT or SIT). They require following a strict protocol in which the therapist is implementing specific interventions to achieve the desired neurobiological results. Everything should work quickly, efficiently, and ... mindlessly. Therapists have no patience with a prolonged process of analyzing abstract ideas or unconscious fantasies. When the word 'head-shrinking' is at all mentioned today, it refers to a reduction of brain cells and the decrease of synaptic connections in ageing.

As our lives become less meaningful and less mindful, many have turned to mindfulness training. But as long as it is practiced as a quick fix within a biological and 'evidence-based' framework, its effectiveness will be more doubtful than mindful.

Humanistic psychology and experimental group therapies have been out of fashion for a long time. Interpersonal feedback has been replaced by bio-feedback. Brainwaves, skin conductance, and heart rate will provide more useful information than a gathering of strangers.

Sophisticated machines, such as large computers, optogenetics, electron microscopy, and fMRI can uncover parts of our minds that were previously hidden. Neuroscientists all over the world are searching vigorously for the neural correlates of all mental phenomena and publish their findings in journals such as *Psychoneuroendocrinology*, where they later become popularized through the online access *Neuroscience News*.

All of this is done with the stated purpose of improving the diagnosis, therapy and prevention of various mental disorders. However, at least until now, the data gathered from neuroscience have not made much substantial contribution to psychiatry (Schmidt & Vermetten, 2017). At every stage of the new findings, it seems rather as if we are gradually losing another piece of our minds. Perhaps large-scale genomic analysis will deliver the final nail in its coffin?

Earlier psychological theories are now disposed of as primitive and unfounded folk psychology. These have been replaced by scientific evidence from neuroscientific discoveries. We have come to trust these findings more than the previous unproven belief systems. The recent popularization of epigenetics has only reinforced this conviction and fundamentally changed our view of the body and the mind.

Personal memories, which used to be regarded as the most important parts of our minds, remains relevant only in so far as it can be located within a specific neuroanatomical part of the brain. Such memories have been reduced to engrams: the electrochemical nerve-

endings that store and deliver messages between one another. They are now studied as either explicit or implicit and in terms of their affiliation to the old reptilian brain, the limbic system, or the neo-cortex. Rather than talking about past traumatic experiences, *episodic memories of fear* are assumed to be located in the dentate gyrus in the hippocampus (Besnard & Sahay, 2016) and *consciousness* within the posterior cortical hot zone (Koch, Massimini, Boly, & Tononi, 2016), rather than within the pineal gland as suggested by Descartes.

Such neuroscientific language is highly appealing to us because we always had a problem with words such as the soul, spirit, consciousness, self and personality. *Neuronal circuits*, on the other hand, or specific parts of the brain, can be observed and investigated and it's therefore easier for us to accept that they may in fact regulate what we do, think and feel.

We have also downgraded our minds because we have realized how tenuous our perceptions are and how easy it is to manipulate our common-sense understanding of the world. We can no longer fully trust our own minds to the point that we have started to doubt that it exists at all.

At this time and age, we are almost urged to get rid of our minds altogether. Some argue that it will be a relief, since the mind has created so much trouble for us in our lives. Without it, we will be able to cease thinking about the past (an end to depression) and to stop worrying about the future (an end to anxiety), and start to appreciate the power of now (Tolle, 1997). If we succeed to completely lose our minds, we will be able to celebrate the creation of a true bionic man-machine: A mindless zombie without any complex human spirit.

We've heard this before. In *The Hidden Persuaders* (1957), Vance Packard predicted that "Eventually – say by A.D. 2000 – perhaps all this depth manipulation of the psychological variety will seem amusingly old-fashioned. By then perhaps the biophysicists will take over with 'biocontrol,' which is depth persuasion carried to its ultimate."

But so far, the predictions of the end of the mind have not materialized. The reports of humankind losing their minds have been greatly exaggerated, to rephrase Mark Twain's famous quotation on the reports of his death. The mind is alive and kicking (even if it is not always doing well).

We have not lost our minds to neuroscience because it cannot resolve what David Chalmers (1995) called the 'hard problem' of consciousness and personal experience. In its splendid glory, this part of our minds will always remain beyond the reach of neuroscience and belong only to ourselves.

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