

Failure to Integrate Brain and Mind (or Blaming Descartes to Understand a Very Modern Dilemma about Explanatory Models, Psychiatric Treatment, and Underfunding of Clinical Care and Research)

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"I thence concluded that I was a substance whose whole essence or nature consists only in thinking, and which, that it may exist, has need of no place, nor is dependent on any material thing; so that "I," that is to say, the mind by which I am what I am, is wholly distinct from the body..." —Descartes, 1637

The history of Rene Descartes' ideas and how his bones were revered, reburied, unearthed, moved, lost, and found again (at least some, including his skull), makes for a great story about the conflict between faith and reason.¹ This story made me think of the relevance of 17th century Cartesian thought to 21st century psychiatry.

Descartes postulated a rational scientific method that is widely considered to have started the modern world. Descartes' radical departure from the past was to focus on his own thoughts and to use Reason to figure out what was going on. His "Discourse on the Method of Rightly Conducting Reason and Seeking Truth in the Sciences" and his realization "I think, therefore I am" started a movement that, in turn, started multiple revolutions.² But Descartes had difficulties with reason because of conflicts between it and his religion. How could transubstantiation

exist, not as a metaphor, but as a real change in bread and wine during the Eucharist if the scientific method were also true? As an idea, the possibility that transubstantiation was only a metaphor threatened a foundation of the Catholic faith. To solve his problem, Descartes protected faith by separating the physical (brain) and the mind and soul into different, but related realms, which, in some mysterious way, communicated through the pineal gland in the center of the brain (familiar to him from his dissection of brains and which he considered the principal seat of the soul).¹ This separation (Cartesian Dualism) helped him maintain his belief in transubstantiation (which occurred in the nonmaterial realm) and his pursuit of Reason.

As many psychotherapists know, coping strategies at an earlier stage of life, if continued long after the original problem fades, can cause problems later in life. So, too, with Cartesian Dualism. Descartes' 17th century strategy to allow nonmaterial transubstantiation to exist along side Reason is causing problems for 21st century psychiatry.

Cartesian Dualism is alive and well. Our brains are the most complex dynamic structures that exist in the universe. It is no surprise that brain

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functioning can go wrong; it is more of a surprise that human brains work at all. Psychiatric disorders are highly prevalent (worldwide inter-quartile range from 18.1% to 36.1%)³ and may account for up to 11% of the global burden of disease.⁴ Loss of productivity from psychiatric disorders in the United States costs ~\$193.2 billion⁵ and a 2002 estimate put total costs at over \$317.6 billion.⁶ In contrast, funding for research of psychiatric disorders, accounts for only \$1.4 billion (4.7%) out of a total National Institute of Health (NIH) 2008 actual budget of \$29.5 billion⁷ and 0.4% of the total costs of psychiatric disorders. To be clear, funding for research of psychiatric disorders is low relative to their high prevalence, burden, and cost. This state of clinical and research funding is not just because of stigma. I wonder if ignorance and Cartesian Dualism are, at least partially, at fault.

Allow me to use Reason to make my argument. If much of the population (including insurance companies and legislators) ascribe to Cartesian Dualism (without even being aware of it), then psychiatric disorders are not brain based, but instead, are mind or mentally based, hence "mental illness". If they are mentally based, then the best explanation for those disorders is that people are responsible for their mental problems. If they are responsible for their problems, then why should we spend a lot of money treating and researching those problems? Medications will not heal sick souls.

Cartesian Dualism leads to unhelpful explanations of the causes of psychiatric disorders.⁸ Blame poor parenting (attention-deficit/hyperactivity disorder results from bad parenting); blame drug companies (children cannot have psychiatric disorders such as bipolar disorder because their minds are not yet developed, thus, if they are being treated with medications, it must be a conspiracy between doctors and drug companies); blame weakness (depression results if you cannot pull yourself up by your bootstraps); blame poor self-control (drug addicts could stop if they wanted to, how can this be brain based?);⁹ blame lack of machismo (soldiers and veterans with post-traumatic stress disorder should just get over it); blame people for self-indulgence (psychotherapy is for complainers who will break the bank if insurance companies cover it); blame society (we are now over-medicated because we are stressed and cannot handle it; we are medicalizing sadness)¹⁰; blame patients (limit lifetime psychiatric coverage,

limit number of visits, increase copayments relative to other disorders); blame psychiatrists (have the fewest descriptive codes for clinical care of any specialty, eg, one clinical procedure terminology code [90862] for a psychopharmacology visit the US). As an aside, would surgeons accept one code for "surgery"? And so on.

Consider this hypothesis: Cartesian Dualism as the philosophical basis for explaining psychiatric diseases leads to inadequate funding for clinical care and research. Psychiatric departments frequently lose money for every patient that they treat. The National Institute of Mental Health funding is among the lowest of the institutes (relative to the disorders' costs) in the NIH. Why such problems?

One possible answer is that it is just too frightening for people to realize that all of our senses, knowledge, memories, emotions, thoughts, desires, actions, ability to reason and think and function, all depend on our physical brains, not on our souls or disembodied minds.⁷ We exist here and psychiatric disorders impact (and threaten) our very essence. Cartesian Dualism is false. Instead, our minds impact our brains and our brains impact our minds. The more knowledge about integrated mind/brains and brain/minds is disseminated, the less ignorance there is, and with less ignorance, more resources should follow so that we have sufficient funds to treat and research widespread psychiatric disorders that touch so many and their loved ones so deeply.

For the sake of our patients, may Descartes' bones (and Cartesian Dualism) rest in peace. **CNS**

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