## Chronic Treatment with Medication

- Assertion: May be unnecessary or even harmful for some
- Refutation:
- Medication
  - Reduces risk of relapse for many but not all
  - Spontaneous remission occurs
  - No current reliable method to determine who does and who does not need chronic medication
- Conclusion: Assertion partially true

"None of the drugs have proven to help people function over the long term, and the chemical imbalance theory of mental disorders was in the process of flaming out." (Anatomy of Epidemic, p 281)

## Critique of Biological Psychiatry

- Consistent with Cartesian dualism (ca 1635)
- Not up to date with Spinoza (ca 1650)
- Catecholamine hypothesis (ca 1965)
- Misunderstanding of scientific method
  - Disproven theories serve a purpose
  - Iterative process
- Omits vast biological psychiatry literature

## Psychiatric disorders associated with multiple dysregulations

- Neurotransmitter interactions
  - 5HT, NE, DA, Glutamate
- Neuroreceptors
- Neurogenesis and apoptosis
- Neuroplasticity
- Dendritogenesis
- Synaptogenesis
- Mitochondrial function
- Gene expression
- fMRI, DTI, Default mode network
- Connectome?

## Clinical Dysregulations

- Attention and memory
- Cognitive and executive functions
- Frustration tolerance
- Response to stress
- Anger
- Impulse control
- Anxiety and fear
- Mood
- Sleep and appetite
- Energy