

Brain imaging and psychiatric diagnosis: Scientific and societal issues



- “Psychiatrists continue to make diagnoses the same way they did 100 years ago, based on clinical exams and symptom clusters. There is a better way. SPECT imaging is a clinically useful way to look at brain function.”
 - Website of Amen Clinics (accessed 5.18.13)
- “...there are currently no brain imaging biomarkers that are currently clinically useful for any diagnostic category in psychiatry.”
 - Consensus Report of the APA Work Group on Neuroimaging Markers of Psychiatric Disorders (approved 7.12)



Questions

1. What is at stake?
2. Why expect brain imaging to be diagnostic?
3. Why isn't it diagnostic?
4. Is there reason for optimism?

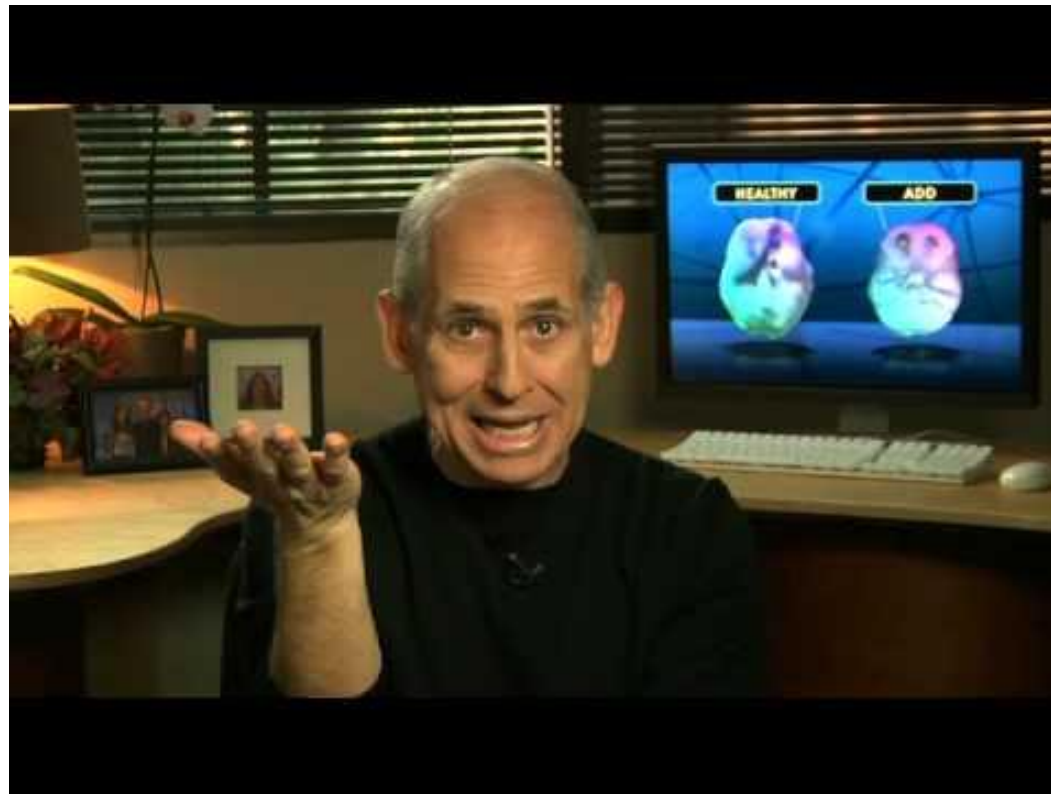


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Daniel Amen on TV



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What is at stake?

- Patient care
- Research progress
- Ultimately nosology
- Self-understanding, stigma
- Legal issues
- Parity



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Why expect brain imaging to be diagnostic?

- Psychiatric disorders are taken to be brain disorders
- with brain imaging correlates
- Many treatments are biological
- Biological and behavioral treatments alter brain imaging correlates



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Why is brain imaging not currently diagnostic?

Brain imaging

- Groups v. individuals
- Contrast only with healthy subjects
- Noncomparability of different task activations
- No guarantee imaging will capture pathology

Diagnosis

- DSM is designed for validity and reliability
- Valid categories would align with imaging
- So far, better on reliability than validity
- (RDoC may help change)



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Reason for optimism?

- Rapid progress in development of brain imaging: physics and statistics
- Increased flexibility concerning alternatives to DSM categories for research

...but it will take the accumulated results of many well designed studies

