

# The Evolution of the Science of the Brain vs. The Evolution of the Science of Mental Health

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# I am:

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- Trained Psychiatry : Maudsley Hospital, London
- Research: Schizophrenia ( mostly biological)
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Consultant  
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# Vincent Van Gogh

- Little by little I can look upon madness as a disease like any other

# Where are we?

- Why Brain Vs. Mind ?

(Neurology vs. Psychiatry/Clinical Psychology)

Neuropsychiatry

- Computer:

Brain (hardware)

Mind (software)

# Where are we?

- Brain/ Mind: Are we speaking on the same thing?
- To “see” the brain: technology (MRI, EEG, etc)
- To “see” the mind: communication (mostly words)

# Where are we?

- If we are saying brain/mind overlap: can we see the mind by means of the technology we use to see the brain?

# Schizophrenia

- Functional MRI: visualize hallucinations  
(McGuire)
- Genetically loaded relatives: ? Enlarged ventricles in the Brain  
(Maudsley Family Study)

# Depression

- Functional MRI can:
  1. Measures Outcome of Depression and effect of different antidepressants
  2. Predicts response to antidepressants(Frodl et al 2011)

(can use for same measures pupillary reaction?  
Lewis et al 2011)

# Where did we start ?

- Psychoanalytic theories explaining purely biological processes

e.g. ulcerative colitis

# Where is the truth ?

- Focusing on the brain only we are not going to have complete answers, but we cannot focus on mind only while excluding the brain
- Also : we must not forget the Environment

# Environment

- the mind/brain is not in isolation and is influenced by:
  1. Physical environment (schizophrenia: city)
  2. Substances (schizophrenia: cannabis)
  3. Physical Events (schizophrenia: hypoxia at birth)Etc. etc,

# Present/Future

- To understand more mental suffering we need to have a system integrating brain/mind/environment
- Synergy between different sciences and specialties

# Present/Future

- MIND: e.g. psychologists (clinical, neuropsychologists), psychiatrists
- BRAIN: e.g. neurologists, radiologists, technicians, geneticists
- ENVIRONMENT: e.g. sociologists

# SYSTEM

1. synergy between sciences and scientists
2. importance of particular science varies according to particular illness and its aetiological factors and consequences
3. other sciences involved as necessary

But : WHO WILL TAKE THE LEAD ?

? Psychiatry

# RESEARCH

- large projects
- thousands of subjects
- subjects with and without condition
- using markers of 'brain'
- assessing environmental influences (known and looking for potential ones)
- interaction between genes and environment (e.g. AESOP study in UK)

# CLINICAL WORK

- multidisciplinary teams
- transdisciplinary teams
- location, not medical environment only
- more community based, less hospital based
- offering individualized multidisciplinary packages of care to clients
  
- need to explore novel interactions between different treatment modalities

# POLICY

- governments need to recognize the new face of mental care
- must not consider community psychiatry as a cost cutting exercise
- departments need to be more horizontal and less pyramid shaped
- policies that attract more scientists and carerers to the area

# EUROPEAN DIMENSION

- clear guidelines from EU to member states
- more harmonization between members in their approach to mental health
- support of research (moving towards new frontiers)
- collaborative network across Europe of therapeutic work that is also continuously assessed by research to be innovated further

# CULTURE

- Cannot ignore the large influence of CULTURE on our existence
- Thus, despite advocating synergy and harmony across Europe, the different cultural backgrounds cannot be ignored and have to be allowed to

# CULTURE

- Persons with non European background and culture, particularly challenging:
  - a. research shows increase in rate of mental illness
  - b. more difficult to understand the non-brain aspect of their condition

# CONCLUSION

- No more brain/mind dichotomy
- Need to include environment and culture to have a better understanding
- Research/ clinical work/ policies must reflect this
- Poses new challenges for Europe