OH WOW! PARADIGM SHIFT!
Philippe Pinel, 1745-1826
Philippe Pinel, 1745-1826

*Philosophique*
Dementia, Mania, Idiocy, Melancholia,

Vincenzio Charugi, 1759-1820

*On Fantasy*
Dementia, Mania, Melancholia,
DEMENTIA PRAECOX
Young male becomes demented dysfunctional

HEBEPHRENIA
Young male, disorganized restless loose associations Fragmented experiences

CATATONIA
Signs of motor abnormalities freezing, waxy-flexibility
Emil Kraepelin

- Dementia praecox
- Manic depressive psychosis
- Paranoia (today delusional)

Based on prognosis medical model

Based on prognosis

Eugen Bleuler

Schizophrenia
Schizo - Prenus

4 A’s
Affect
Associations
Ambivalence
Autism
Emil Kraepelin

- Dementia praecox
- Manic depressive psychosis
- Paranoia (today delusional)

Based on prognosis
medical model
Based on prognosis

Eugen Bleuler

Schizophrenia
Schizo - Prenus

4 A’s
Affect
Associations
Ambivalence
Autism

Sigmund Freud

Id
Ego
Super-ego
Sigmund Freud, the Noted Viennese Psychologist, Has Interest in Theories About the Unconscious Motives in Our Everyday Activities.
1900

Emil Kraepelin
- Dementia praecox
- Manic depressive psychosis
- Paranoia (today delusional)

Eugen Bleuler
- Schizophrenia
  Schizo - Prenus
- 4 A’s
  Affect
  Associations
  Ambivalence
  Autism

Sigmund Freud
- Id
- Ego
- Super-ego

Based on prognosis medical model
Based on prognosis

United Kingdom

United States
ON BEING SANE IN INSANE PLACES†

D. L. Rosenhan*

INTRODUCTION

If sanity and insanity exist, how shall we know them?

The question is neither capricious nor itself insane. However much we may be personally convinced that we can tell the normal from the abnormal, the evidence is simply not compelling. It is commonplace, for example, to read about murder trials wherein eminent psychiatrists for the defense are contradicted by equally eminent psychiatrists for the prosecution on the matter of the defendant’s sanity. More generally, there are a great deal of conflicting data on the reliability, utility, and meaning of such terms as “sanity,” “insanity,” “mental illness,” and “schizophrenia.” Finally, as early as 1934, Benedict suggested that normality and abnormality are not universal. What is viewed as normal in one culture may be seen as quite aberrant in another. This, notions of

† This article was originally published in SCIENCE, Jan. 9, 1973, vol. 179 at 250, copyright 1973 by the American Association for the Advancement of Science. The article is reprinted here with the permission of the American Association for the Advancement of Science and the author, Dr. D.L. Rosenhan.

* B.A., Yeshiva College, 1951; M.A., Columbia University, 1953; Ph.D., Columbia University, 1956. The author is professor of psychology and law at Stanford University, Stanford, California. Portions of these data were presented to colleagues of the psychology departments at the University of California at Berkeley and at Santa Barbara; University of Arizona, Tucson; and Harvard University, Cambridge, Massachusetts.


2. R. Benedict, Anthroponymy & The Abnormal, 10 J. GENERAL PSYCHOL. 59 (1934).
1970

The Rozenhan experiment
*Being Sane in Insane places*

David Rosenhan

Robert Spitzer MD  Allen Frances MD

RDC
Research Diagnostic Criteria

Inter-rater Reliability

US UK study
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<th>Year</th>
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2010

No Etiology (not brain related)

No Category & Not Personalized

No Pharmacology (no med’ efficacy)

Hampered Research (no advance)
The goal of this new manual, as with all previous editions, is to provide a common language for describing psychopathology.

While DSM has been described as a “Bible” for the field, it is, at best, a dictionary, creating a set of labels and defining each.

The strength of each of the editions of DSM has been “reliability” – each edition has ensured that clinicians use the same terms in the same ways.

The weakness is its lack of validity ... Patients with mental disorders deserve better.

Tom Insel
Previous head of NIMH
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<td>Arousal</td>
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</table>
My stomach hurts, what do I have doctor? 

You have Appendicitis

Place in the body

What happened to it
- It is infected

How to treat it
- Antibiotics

Gee – isn’t that what I just told you Can’t you give me any added value

I am depressed, what do I have doctor? Please tell me

You have depression
BUT THERE ARE TREATMENTS / MED’s
Manfred Sakel  Ugo Cerletti  Ugo Walter Freeman  Henry Laborit

Jean Delay  Pierre Deniker
1900

Wernicke

Theodor Meynert

Sigmund Freud

Wilhelm Fliess

The Project

EGO
1900

Theodor Meynert

Sigmund Freud

Wilhelm Fliess

Theodor Meynert and Sigmund Freud; Dialog on the future of Psychiatry

Avi Peled
NEUROANALYSIS
Translate
Biological Psychiatry
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RDoC
Salience network detecting and filtering salient stimuli, variety of complex functions, social behavior, self-awareness through the integration of sensory, emotional, and cognitive information.

Integration of emotional and sensory stimuli, as well as in modulating the switch between the internally directed cognition of the default mode network and the externally directed cognition of the central executive network.

High level cognitive functions such as maintaining and using information in working memory, problem solving, and decision making executive control tasks IQ.

Wakeful rest internal focus daydreaming and mind-wandering. But it is also active when the individual is thinking about others, thinking about themselves, remembering the past, and planning for the future theory of mind. Retrieval of social semantic and conceptual knowledge. Autobiographical memory and future simulations.
Salience

Executive

wakeful rest internal focus daydreaming and mind-wandering. Theory of mind
Retrieval of social semantic and conceptual knowledge. Autobiographical memory and future simulations

Environment

Fast Millisecond-range Plasticity (FP)

High level cognitive functions working memory, problem solving, and decision making executive control tasks IQ

Executive

Stable Developmental Lifelong Plasticity (DP)

Slow Intermediate Weeks-range Plasticity (SP)

integration of sensory, emotional, and cognitive information modulating the switch between the internally directed cognition of the default mode network

Salience

Default

Network Plasticity & Functions
Salience

Karl Friston

$S = f_z(\psi, a) + \omega$

$\dot{\psi} = f_\psi(\psi, a) + \omega$

$\dot{a} = -\partial_a F(s, \mu)$

$\mu = -\partial_\mu F(s, \mu)$

Hidden states

Sensations

Brain

Internal states

Action

Synaptogenesis

Atrophy
Donald Hebb

Trajectory

Attractor

State

5

20

-5

0

-10

-20

-30
Psychiatric phenomenology

Disconnection - disorganization
Over-connection – restriction
Perseveration

Environment

Executive

Salience

HTD – Delusions
HBU – Avolition

Default

Internal representations and personality organization

Optimization

Mood

HTD – Hierarchical Top-Down
HBU – Hierarchical Bottom-up
Psychiatric phenomenology

Environment → Executive

Executive → Default

Default → Salience

Salience → Executive

Environment

HTD – Hierarchal Top-Down
HBU – Hierarchal Bottom-up
Psychosis
Disconnection dynamics

Anxiety
Dist’ Constraint frustration

Mania
Synaptogenesis and Optimization

Higher PD Dist’ to developmental plasticity

Negative Signs
Over-connection

Phobia
Reactive Dist’ Constraint frustration

Depression
Atrophy and De-optimization

Lower PD Sever Dist’ to developmental plasticity
Clinical Brain Profiler
Clinical Brain Profiler
Synchronized EEG collection validates the testable prediction of disconnection dynamics.

The clinician finds positive signs of functional psychosis.

The patient complains of disorientation and fragmented experience.

Sensors track irregular disorganized behavior.

They all point to reliable testable prediction for disconnection dynamics in the brain.

Once disconnection is validated, entrenching Gamma stimulation can be delivered to increase connectivity and treat the disconnection disturbance.
OH WOW! PARADIGM SHIFT!