Barry Blackwell: Pioneers and Controversies in Psychopharmacology

Chapter 18: The Biological Basis of Psychiatric Diagnosis and Treatment

Preamble

In the 19th century, pioneers like Thudichum believed, without clinical evidence, that disorders of the brain were linked to the chemical composition of the brain (Chapter 1). Early in the 20th century, response of specific symptoms to particular drugs (chloral hydrate, paraldehyde, bromides, barbiturates and amphetamine) reinforced that belief. In mid-century, Joel Elkes (Chapter 3) provided the missing link between physiology and chemical changes in the central nervous system shortly before the first drugs were shown to be effective for specific psychiatric disorders (Chapters 4, 5 and 6).

This opened the door to attempts to link specific drugs to particular diagnostic systems described in the essay below, *Diagnostic Illusions.* In the first three decades (1949-1980) hopes of such specificity faded fast until DSM III ushered in a new multiaxial system designed to incorporate the biological, social and psychological components of each disorder. Introduced in 1980 by the American Psychiatric Association in America, it replaced the pre-existing clinical formulations with symptoms derived from a consensus of clinical experts (often after contentious debate) and largely uninfluenced by earlier knowledge from the pre-drug era concerning etiology, nosology, natural history, prognosis and outcome. Faults in the system appeared quickly and were not corrected. That the system was used primarily to justify insurance payments for drugs emphasized Axis One (Biological features) and the fact each diagnostic category included a Not Otherwise Specified (NOS) category encouraged slipshod diagnosis, a tendency that might have been checked by appropriate quality assurance criteria in clinical settings. These flaws also exposed the DSM system to corruption by industry and its hired KOL's encouraging spurious specific drug-diagnostic correlations and over prescribing (Chapters 19, 20 and 21).

The chapter on "Biological Formulations" from the book *Psychiatric Case Formulations* (Sperry et al. 1992) is part of an effort by the authors to address the problems of the DSM system by a proper use of the multi-axial format, incorporating information from earlier classification systems. The authors collaborated in sharing their areas of expertise: Sperry (Cognitive-

Behavioral), Gudeman (Psychoanalytic), Blackwell (Biological) and Faulkner (Community psychiatry). Published a quarter century ago, the text remains remarkably relevant, testimony to the slow pace of innovation in the last four decades (1980-2019).

A biological formulation incorporates four elements: evidence for a structural or biochemical etiology; the relationship between psychiatric and physical features; the availability of biological markers, laboratory tests and imaging techniques; and treatment choice, efficacy and side effects.

Also described are features of history taken from the patient and significant others; examination of the mental and physical state; results of appropriate laboratory or test procedures; and, finally, treatment choices and prognosis. All this information is presented as both a Case Formulation and a DSM 5 axis diagnosis.

Reference:

Sperry L., Gudeman JE, Blackwell B. and Faulkner LR. *Psychiatric Case Formulations*. American Psychiatric Press, Washington, DC, 1992.

DIAGNOSTIC ILLUSIONS

OED: *illusion;* a deceptive appearance or impression; a false belief or idea.

Via: OFr from L, *"illudere,"* to mock.

Until the mid-20th century psychiatric disorders were seldom, if ever, based on the response to a treatment; there were none - beyond those stifling selected symptoms (barbiturates, bromides, chloral, amphetamine, paraldehyde, etc.).

Instead, classification of disorders was based almost entirely on clinical features of presumed etiology (familial, environmental or "endogenous"), nosology, natural history, prognosis (the mark of a good clinician) and outcome. Notable systems were defined by Kraepelin, Schneider, Wernicke- Kleist and Leonard (WKL) among others less well accepted.

The discovery of effective remedies in mid-20th century and after (1949-1974) sparked interest in a putative connection between particular drugs and specific disorders. A flock of diagnostic systems evolved in rapid succession: The ICD (UK), the DSM (USA), prototypes (French), neuro-pathologies (German), CODE (Ban), selective neurotransmitters (NIH), genetic diathesis (universal) and RDoC (NIMH). The hard-earned clinical knowledge accumulated before this "golden era" was soon abandoned and, to all intents, disappeared from educational programs and clinical practice.

In 1980 DSM III and clinical consensus based primarily on symptoms became America's ideal, a perpetual source of revenue for the American Psychiatric Association (APA) but also popular worldwide. The multiaxial system allowed for attention to social and psychological features of illness, but these were rapidly subordinated to Axis 1 presumptive biological disorders often for insurance purposes but also manipulated by industry to define syndromes that inflated drug use and revenue - part of which was employed to suborn prominent members of the psychiatric profession as their shills (OED: *shill;* an accomplice, a hawker, gambler or swindler, an enthusiastic customer to entice others).

With limited exceptions, sloppy diagnosis, Big Pharma's hegemony and NIMH ambivalence have defiled the latest of many diagnostic systems with nothing ready to replace it. Our ignorance of how the brain translates treatment into outcomes remains a profound mystery. The brain guards its secrets well.

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