

A structure for psychiatry at the century's turn – the view from Johns Hopkins

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Introduction

I have three specific aims: firstly, to review some of the concepts supporting contemporary American (USA) Psychiatry; secondly, to explain the origins, strengths, and frailties of these particular foundations; and thirdly, to provide examples of activity in the Department of Psychiatry at Johns Hopkins School of Medicine that intends to both revise and restructure these foundations in ways that enhance teaching, practice, and research.

The issues

Currently, much of American psychiatric practice rests upon undertakings launched in the late 1960s. The most celebrated achievement was the fashioning of a reliable approach to naming and classifying psychiatric disorders that culminated in the 1980 edition of the American Psychiatric Association's Diagnostic and Statistical Manual (DSM-III). This feat encouraged psychiatry programmes to commit to research in a more collaborative and progressive spirit. As well, American psychiatrists seem to be abandoning allegiances to narrow explanatory theories about mental disorders. Many acknowledge a breadth of informative sources by enthusiastically supporting the encompassing 'biopsychosocial' approach proposed by George Engel^{1,2}.

DSM-III and the biopsychosocial concept settled some of the uneasiness in psychiatry provoked in the 1960s by growing appreciation of the unexpected and specific power of psychopharmacology, the awkward randomness in diagnostic practices, and the embarrassing 'house divided' character of the discipline where 'biologic' and 'dynamic' factions contended. These new proposals had many features to recommend them. Each took a compromising stance towards contemporary practice and opinion. DSM-III admits to its canon any entity that can be 'operationally' defined by its champions, and the biopsychosocial orientation seems ready to embrace any explanatory concept within its ample hierarchical arms.

The problems of these contemporary positions are not hard to find. In attempting to steer clear of the disputes that had riven psychiatry the authors of DSM-III devised a classificatory system committed to empiricism. And empiricism for all its advantages at one stage in a discipline's growth is admittedly - and with DSM-III almost boastfully - a form of ignorance. By posing the existence of conditions DSM-III calls out for their validation and explanation. That call certainly encourages research, but DSM-III is a catalogue not a guide and thus cannot recommend a path.

The biopsychosocial concept looks like the source of information to answer this call from DSM-III. The

Hierarchy of Natural Systems

SYSTEMS HIERARCHY (LEVELS OF ORGANIZATION)

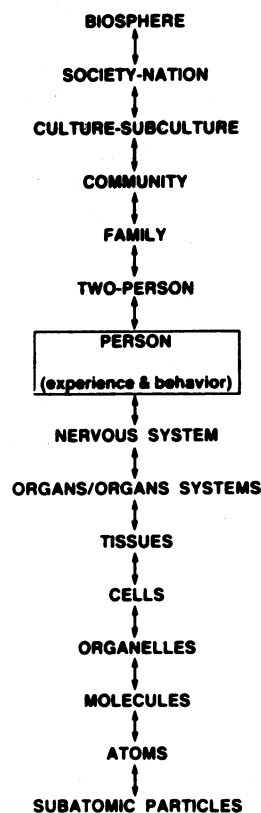


Figure 1. Engel's hierarchy² (reprinted with permission)

systems hierarchy (Figure 1) that Engel laid out² reveals how restrictive any formulation of a clinical disorder would be if it were confined to matters *biologic*, *psychodynamic* or *social*, hence this term *biopsychosocial*. However, this approach is so broad in its scope and so non-specific in its relation to any particular disorder that it can do no more than remind psychiatrists to be prepared to look at everything, and the interactions of everything, when seeking an explanation of any disorder. The biopsychosocial concept offers no rules, no directions, no logical pathways to explain the patient groupings in DSM-III. In this way, it is heuristically sterile. It provides ingredients but no recipes to specify the apt use of these ingredients in validating and explaining the categorically distinct disorders put forward in DSM-III.

In fact, the biopsychosocial idea is not new. It is quite simply Adolf Meyer's concept of psychobiology

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renamed and reanimated for the contemporary era. It retains all the strengths and limitations of that previous version. Meyer also embedded the person in a hierarchy of stratified systems ('interactive levels of integration' was his term) from the atom to the society (Figure 2)³. In proposing an explanation for any disorder, he encouraged a complete study of each patient's body, brain and biography. Every mental disorder, he believed, stemmed from the responses of the person encountering the issues of a lifetime. He persuaded psychiatrists to seek within their 'critical common sense', amply enhanced through this concept of integrative levels, the explanations and treatments of mental disorders.

Meyer's energies derived from his opposition to simplicities and fatalistic implications that he discerned within the diagnostic and conceptual framework that came from Emil Kraepelin. He debunked the method of fixed entity *diagnosis* emphasizing instead individualized *formulations* for patients with mental illnesses.

It certainly was no coincidence that Engel's biopsychosocial concept, a restatement of Meyer's position, emerged into prominence in the same decade as DSM-III. It met and satisfied the same felt need as had its predecessor. American Psychiatry is replaying a set of themes from earlier in this century. It is *both* neo-Kraepelinian and neo-Meyerian. But, how these reappropriations of the past can steer our present activities into a more satisfactory future is not obvious.

A more thoroughgoing reappraisal of psychiatric explanations is required in the 1990s to answer the call from the neo-Kraepelinian DSM-III and yet sustain the ecumenical tenor of the neo-Meyerian

biopsychosocial approach. Specifically we need a conceptual structure on which to rest an illuminating sequence of propositions about mental disorders and from which to derive a corresponding set of examples embodying and investigating these propositions.

A structure for explanations

We at Johns Hopkins hold that four standard methods for elucidating mental disorder are implicit (and should be made explicit) in contemporary psychiatric thought. They are: the disease concept, the dimensional concept, the behaviour concept and the life story concept. We have called these concepts four 'perspectives'⁴. We chose a visual metaphor because we wished to emphasize how each of these methods is a distinct viewpoint from which certain aspects of psychiatric disorders are clearly seen and others are obscured. In combination, they provide a basic structure for psychiatric explanations and illuminate what is pathologic in psychopathology (Table 1).

Each perspective is rule governed. Each is unique in its initiating premises, operational guidelines, logical sequences and validating implications. Each, therefore, must be separately taught even though it may be employed with the others, in varying salience, in the elucidation of a particular clinical problem. Each perspective, because it reveals how we are thinking about certain disorders, enlarges what we know about all the patients in our care and enhances our grasp of what we are doing for them.

The *disease perspective* rests on a categorical logic. It attempts to cluster patients into separate groups, each group defined by the distinct features that are the defining characteristics of the disease. Embedded in the term disease is the implication that the ultimate and confirming characteristic endowing a patient with membership in a given category and distinguishing that patient from those in other categories will be an identifiable abnormality in structure or function of a bodily part.

The *dimensional perspective* applies the logic of quantitative gradation and individual variation to psychiatric disorder. It grapples with patients who cannot be placed in clear and distinct categories but can sometimes be comprehended in their vulnerability to mental distress from their individual position on psychological dimensions that are analogous to physical dimensions such as height or weight.

The *behaviour perspective* emphasizes the goal-directed, often goal-driven, teleologic aspect of human activities. It notes that disorders can emerge either because of the abnormal goals some people can come to crave (as in drug addiction) or because of an excess in their attempts to satisfy drives common to all (as in eating to obesity).

Finally, the *life-story perspective* rests on the logic of narrative. It draws on the occurrence of events in the patient's past to understand his current distress, and more specifically, it posits the existence of a piloting self whose choices somehow bring about

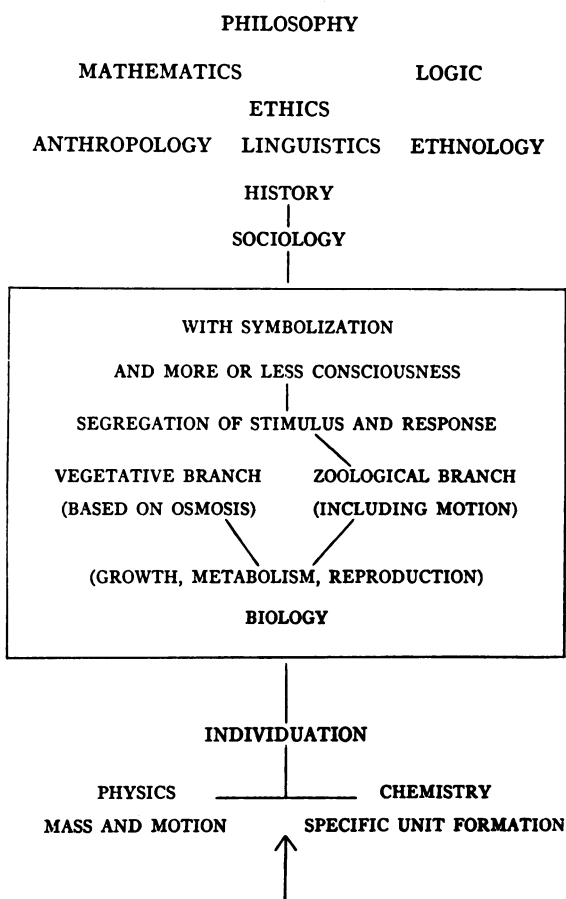


Figure 2. Meyer's hierarchy³ (reprinted with permission)

Table 1. The four perspectives

1. Disease perspective (the logic of categories)
2. Dimensional perspective (the logic of quantitation and individual variation)
3. Behaviour perspective (the logic of teleology)
4. Life Story perspective (the logic of narrative)

unintended consequences, all illuminated by the persuasive power of narrative.

Notice that we do not describe a 'biologic' or a 'dynamic' perspective. Biologic and dynamic issues figure in each of our perspectives but vary in salience from the disease to the life story perspective in an almost reciprocal fashion. Also, just as we do not find it helpful in teaching this structure for psychiatric explanations to specify a separate neurophysiologic perspective, or a sociologic perspective, or a psychopharmacologic perspective, so we do not put forward a separate developmental perspective. Development like physiology and like culture is everywhere. Thus in our proposal it forms an ingredient (an important ingredient, admittedly) for each of these perspectives rather than a perspective itself.

Disease perspective

The logic of this perspective is a categorical one. It rests upon the fact that signs and symptoms of some disorders tend to cohere in recognizable clusters or syndromes that progress in characteristic ways. The elucidating chore is driven by the need to explain this cohesion. Once physicians recognize a group of patients with a distinctive cluster of symptoms, they begin to wonder whether a bodily pathology (either in structure or function) and a biologic aetiology might be provoking the condition. Successful discoveries of these latter elements confirm both the opinion that the clinical category is appropriately considered a disease and the embedded implication that its nature rests on a disruption of bodily mechanisms. Psychiatrists treat many confirmed diseases (dementia, delirium etc.) without quarrelling about whether the concept is appropriately applied to them.

Both computerized axial tomography (CAT) and magnetic resonance imaging (MRI) have shown that brains of schizophrenic patients often have atrophy implying damage. Among the best examples of such work are the studies of identical twins discordant for schizophrenia of Suddath *et al.*⁵ where these clear distinctions between the normal and the abnormal subjects are evident in their brain images.

At Johns Hopkins, Barta *et al.*⁶ demonstrated not only evidence of atrophy in the left superior temporal gyrus but also a clear correlation of this atrophy with the severity of the hallucinatory experiences in their patients with schizophrenia (Figure 3). This is some evidence confirming that schizophrenia will, like epilepsy, emerge as a product of brain pathology and

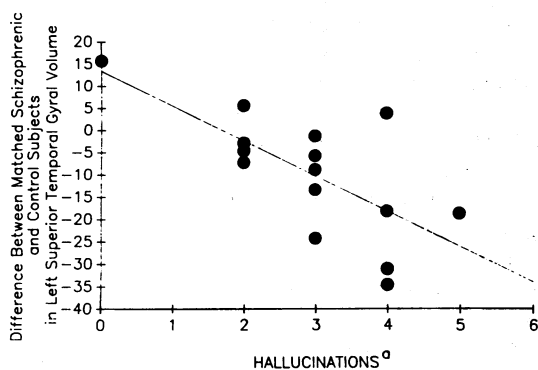


Figure 3. Increasing auditory hallucinations as left superior temporal gyrus shrinks in schizophrenic subjects with respect to matched controls (reprinted with permission from Barta *et al.*⁶)

that its particular symptoms, of which hallucinatory experiences are but one, may be linked to distinct sites of damage in the brain.

This work is but beginning. I admire it because it neatly exemplifies what is expected when employing the disease perspective to elucidate a mental disorder. Symptoms are linked to pathology and a search for aetiologies - which, for schizophrenia, may be of several kinds (birth injury, anoxia, genetic vulnerability etc.) - can be launched. If this research programme is successful in its search for causes, then rational treatment and prevention become possible.

Yet everyone knows that disease is not an appropriate term for all distress or difficulty. To teach that all disorders are kinds of disease will misconstrue matters of importance in practice and research, implying as it does that neuroscience will provide an anomalous neuron for every anomalous thought.

Dimensional perspective

Psychological dimensions with their logic of gradation and quantitation provide a contrast to disease. There are several psychological features across which humans vary in a graded fashion much as they vary in such physical characteristics as height and weight. An individual who deviates to an extreme along such a dimension can, under certain circumstances, suffer because of it.

Individual variation is as apparent in affective characteristics as it is in cognitive characteristics such as intelligence. Axis II of DSM-III attempts to capture this variation within categories or typologies (histrionic, narcissistic, compulsive, etc.) and thus follows a pattern of reasoning similar to that used with disease. At Johns Hopkins, we agreed that the features defining these types in DSM-III are unlike the symptoms of disease in their all being graded phenomena. We proposed an approach that assessed such features in a dimensional fashion as with intelligence assessment. We believed that the results would display the nature of certain clinical conditions more clearly than does the categorical approach.

If, as with intelligence, the distressed individuals seen as patients in hospitals and clinics represent those people towards one extreme on a dimension of variation, then a population-based survey would be needed as the source of basic data for dimensional reasoning. We tackled this task in the local Baltimore population, amongst our contributions to the National Epidemiologic Catchment Area (ECA) study. Here I shall discuss the findings for the compulsive personality disorder⁷. Five features, says DSM-III, comprise the characteristics of that disorder: indecision, stubbornness, work devotion, perfectionism, and emotional constriction. The striking aspect of the results of this research is how many people in Baltimore have some compulsive features and how the individuals who satisfy the DSM-III criteria for the compulsive personality disorder are the minority at the extreme on the dimension (Figure 4).

This observation could be an outcome of the methods employed in the study, but a validating set of assessments were available to test whether the actual score on this scale of compulsivity could identify either a risk for certain conditions or a protection from others. This is exactly what emerged when the DSM-III conditions, generalized anxiety disorder (GAD) and alcohol disorders, were correlated with the compulsivity score. There was a clear enhancement of

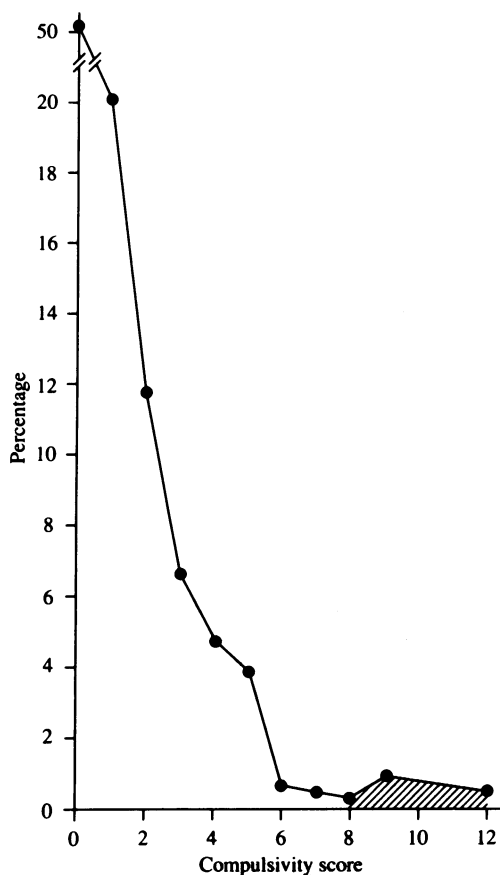


Figure 4. Prevalence (%) of compulsive features in the Baltimore population and (shaded) the prevalence and position on this compulsivity scale of subjects who satisfied DSM-III criteria for compulsive personality disorder (reprinted with permission from Nestadt et al.⁹)

risk for GAD as the score increased and a clear protection against alcoholism as the score decreased, in an almost 'dose-response' fashion.

My major point here is simple. A dimensional perspective illuminates some psychiatric disorders better than does the more strictly categorical logic tied to disease reasoning. It is compatible with the sense of individual variation in disposition that is familiar to every psychiatrist making a personality diagnosis. Finally, it brings into focus a substrate of risk and protection that is comprehensible for elucidating other psychiatric disorders.

Behaviour perspective

The idea I wish to communicate with the term *behaviour* is the significance of the goal-directed aspect of many human actions. Disorders of human behaviour may rest either on disrupted bodily mechanisms - as in hypothalamic obesity - or upon culturally induced goals such as the 'sick' role sought in hysteria. Many clinically significant behaviours probably derive from both life experience and embodied mechanisms. Drug addictions or various sexual abnormalities are examples where both the inducements and enticements of a persuasive public may provoke the first act of what then becomes a behavioural pattern self-sustained by a craving derived from both pharmacophysiology and conditioning. Once the concept of the behaviour perspective is appreciated, an approach radically different from the disease perspective recommends itself for the treatment of these disorders. The initial focus of treatment is to use every measure to *stop* the

behaviour - a kind of 'symptomatic' approach that would be scorned as superficial in the management of disease.

Behaviours tend to be self sustaining for many reasons: the bodily toxicities associated with drug abuse prompt repetition of drug-taking behaviour; changes in the social network provoked by illness-imitating hysterical behaviour may encourage it; starvation's disruption to bodily and psychological integrity in anorexia nervosa renders the patient inaccessible to counsel. These issues are magnified by the habit aspect that derives from simple recurrence of behaviour and encourages it.

All the programmes for behaviour disorders (anorexia nervosa, alcoholism, sexual disorder) at Johns Hopkins share the opinion derived from this perspective that treatments for such conditions must be staged. The starting point is always a major effort to stop the behaviour and if pharmacologic measures can help they are employed. Throughout the course of treatment efforts are made to ensure that the behaviour does not recur. Only as the behaviour is stopped can therapy successfully move on to the later steps such as treating comorbid disorders (depression, anxiety, etc.), elucidating vulnerabilities of temperament, deconditioning and addressing habit sustaining social attitudes.

Finally, it is as behaviours that linkages to basic science will emerge for these conditions. For example, at Johns Hopkins we have been active in attempting to curtail the craving for drugs that sustains the behaviour of addiction. The investigators in our Behavioural Pharmacology Research Unit (BPRU) have combined approaches that attempt to combat the operant conditioning features sustaining drug abuse⁸ with research on the clinical application of new medications to suppress the rewards of drug seeking and drug taking activities. Recent work at the BPRU has focused on buprenorphine^{9,10}, a compound with both opiate agonist and antagonist features, thus combining aspects found in methadone and naloxone. It may prove to be an ideal compound to help patients stop opiate abuse, particularly if it is integrated into a programme of behavioural management as advocated by the BPRU⁸.

Life story perspective

The final perspective - and for some the one most identified with psychiatrists - is that of the life story. It presumes that distressing mental states can be the outcome of a series of self-involved life events and these events are best depicted when presented in a narrative form. The fundamental component of the clinical story, like any personal narrative depicting a result, is how setting, sequence and a self's intentional interactions can make a seemingly chaotic mental state the understandable outcome of the wishes and wants of the individual.

The life story perspective can be a part of any formulation including those that rest on the disease, dimensional, or behavioural perspectives. In fact, it could be said that in all distress or disorder, some aspect of the individual's life story provides understanding to elements of the clinical presentation. But a story can be the primary way of comprehending a state of distress.

This method of elucidating a mental disorder by describing a coherent role for the patient in its generation (adding ingredients from the dynamic

unconscious if needed) can promote therapeutic optimism and confidence in both the patient and the psychiatrist. If the condition is in part derived from the self's intentions and motives - especially ones that need unearthing - then reconstructed, conscious intentions can set in motion new life plans, sequences and more satisfactory outcomes. The story is the major basis of psychotherapy and transmits an excitement encouraging patient care.

A missionary fervor, however, may develop around the story method and is often at the heart of the conflict between various schools of dynamic psychiatry. Thus Freudians propose that hidden libidinal conflicts should be sought to illuminate manifest disorder, while Adlerians claim that power drives are at the root of things and need to be brought to light and rescripted. Each school of psychotherapy tends to produce version after version of the same story despite the different ingredients of person, place and time in their patients.

The insistence upon retelling the same story suggests a dogmatic commitment or gnostic zeal ('we know the secret') that transforms teaching into initiation. A subliminal awareness of this feature is an issue for most young psychiatrists. It repels some and draws others into segregated training institutes. In all, it produces an uneasiness over their educational pathway that can only be dispelled by recognizing its source within the life story perspective.

At Johns Hopkins, the research of Jerome Frank has done much to relieve this problem by turning the customary therapeutic and elucidatory aspects of the life story perspective around. He demonstrated, from looking at the patients treated by psychotherapists, that what they share is not their stories but their states. This state he described well as 'demoralization'. It can derive from many different circumstances and life sequences.

This view of Frank's directed his research into the commonalities of psychotherapies rather than their differences. In the most recent edition of his impressive book, *Persuasion and Healing*¹¹, he and his co-author, Julia Frank, repeatedly display how the illumination from quite distinct 'story lines' can bring recovery to demoralized individuals. The key to psychotherapy is not the elucidation of the 'correct' story. Help emerges from the patient's sense that he is understood by some authority who is prepared to provide assistance in restructuring his thoughts and intentions into a story with more promising meanings. This can restore a sense of mastery of life critically absent from the initial demoralized state.

Thus, the life stories which have been so illuminating and yet so divisive in psychiatry have been re-emphasized in a radically different way. We see commonalities in outcome more than commonalities to the story lines. We appreciate that the great theorists have provided a collection of themes for our consideration. We can select the most appropriate themes for the narrations we draw with our patients, ones that fit the particular situation and do not depend upon some esoteric, sectarian knowledge of something hidden in human nature.

Resolution

I have attempted three things. First, I discussed some contemporary foundations of American psychiatry to show their merits but also how they are recurrent notions that now, as in their previous appearances,

leave much unresolved. Second, I wished to propose a set of elucidating and encompassing perspectives that can, when made explicit, restructure our thought. Each perspective has its own logic, grapples with certain psychiatric issues most naturally, and yet can be coordinated with the other perspectives in practice. Finally, I tried to review briefly a current application of each perspective at Johns Hopkins so as to show how every one of them can be embodied in teaching, practice or research.

We are all challenged to find ways to assimilate the amorphous body of psychiatric fact and opinion. This is the response from Hopkins. The effort is to entrench our professional claims and competences on what we know and how we know it, dispelling both the caprice that emboldens pop psychology and the mystery that kindles faction. We should demonstrate not only that we are a part of Medicine, but how we are a vital and distinctive part with a *structured* body of knowledge unique to us as specialists.

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