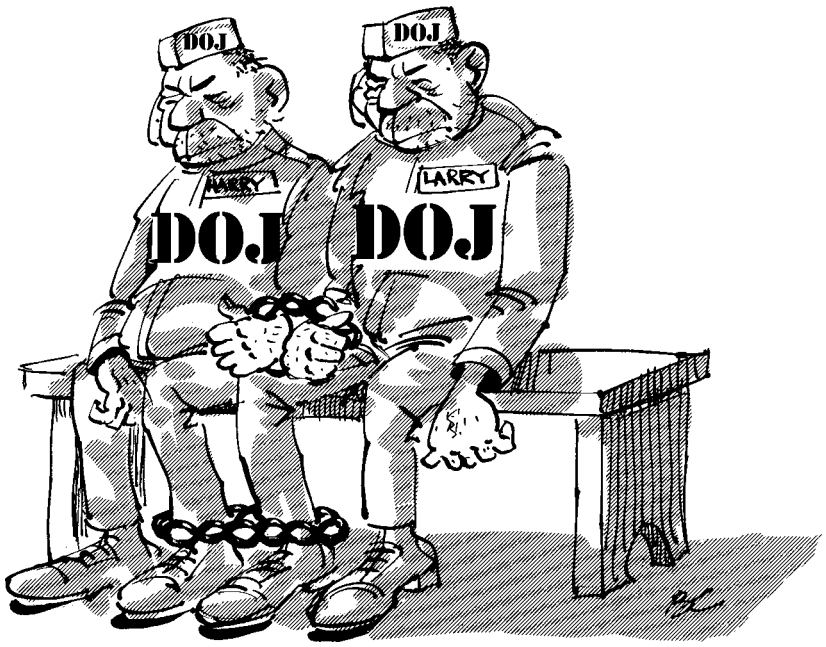
Introduction:

The Biological Dimension



What Does the Term "Psychosomatic" Mean?

Despite the relatively recent use of the term **psychosomatic**, the concept of unity and a reciprocal relationship between the health of the mind and the health of the body has existed since antiquity. Ancient societies appreciated the presence of a cause-and-effect relationship between mind and body. Illnesses were deemed to involve social and emotional factors and often thought to have magical or religious origins. Accordingly, efforts to treat diseases were largely based on such beliefs and on the faith that the afflicted person had in the spiritual healer. The power invested by society in such shamans, as well as their interpersonal qualities, were the curative factors in these relationships.

PSYCHOSOMATIC

Psychosomatic medicine is concerned "holistically" with the whole patient — the effects of the mind on the body and vice versa.

PSYCHE

The study of the psyche became divided — the "mind" by philosophers and the "soul" by theologians. The emotional aspects of illness (both causing and resulting from physical illnesses) are difficult to substantiate objectively, and are seen as unscientific because of the high degree of variability from person to person

SOMA

Virchow, the founder of modern pathology, stated that "disease has its origin in disease of the cell" in that:

- subcellular components are affected by disease, altering cellular function and eventually structure
- tissue and organ changes are observable on a microscopic and macroscopic level

With the disintegration of ancient Greek and Roman civilizations, the concept of illness was viewed as resulting from personal, societal or spiritual causes. Religious causes in particular (i.e. sinning) were considered the dominant factor in the etiology of illness. Until the Renaissance, religious figures were the ones principally involved in treating sickness.

Eventually, the advances made in other scientific fields led to the discovery that certain illnesses had demonstrable organic findings. Autopsies revealed that tissue and organ changes, rather than those in the spiritual realm, caused or were associated with diseases. The use of the microscope detected pathological changes on a cellular level. This started an era where the causes for illnesses were elucidated, the pathological findings correlated and remedies sought — which shifted medicine's focus to treating the illness instead of the patient.

Freud, a neurologist by training, worked with Charcot in Paris. This gave him first-hand experience with hysteria, a condition in which Charcot was especially interested. Freud observed that hypnotic suggestion could cause hysterical (physical) manifestations, which started him thinking about hysteria having a psychological origin. He was instrumental in linking hypnosis and neurology, and ultimately psychology to neurophysiology.

The terms **psychosomatic** and **psychosomatic medicine** still carry considerable ambiguity. Lipowski (1984) traced the historical uses of these terms, and offers the following definitions:

• **psychosomatic** — refers to the inseparability and interdependence of psychosocial and biologic (physiologic) aspects of humankind

• **psychosomatic medicine** — refers to the discipline concerned with: a) the study of the correlations of psychological functions, normal or pathologic, and of the interplay of biologic and psychosocial factors in the development, course, and outcome of diseases; and b) advocacy of a holistic (or biopsychosocial) approach to patient care and application of methods derived from behavioral sciences to the prevention and treatment of human morbidity

Lipowski stresses that there have been two enduring aspects of psychosomatic medicine:

• the holistic conception — refers to the treatment of the whole patient by focusing on emotional/psychological factors in addition to the somatic/physiologic (this is contained in the definition of psychosomatic)

• the psychogenic conception — refers to the mental or psychological etiology of an illness

The Biopsychosocial Model

As an application of psychosomatic principles, Engel (1967, 1977) published an integrated approach to understanding the multifactorial influences on the causation and course of illnesses. A balanced and comprehensive view of the etiology (also called a **formulation**) and treatment of illnesses can be made using this model:

	Biological	Psychological	Social
Predisposing			
Precipitating			
Perpetuating			
Protective			

Some of these factors are intuitively obvious. Physical illnesses, by definition, involve biological aberrations. For example, cirrhosis or Alzheimer's Disease show characteristic pathologic findings in the liver and brain cells, respectively. However, there are psychosocial factors involved in medical illnesses, such as the issue of stress (Type A personalities) in heart disease or emotional upset in psoriasis flare-ups.

Psychiatric disorders are still often referred to as "functional" in that no "organic" impairment has been consistently demonstrated. Nevertheless, there are biological bases for some mental illnesses, ranging from conditions which are clearly genetically based (e.g. psychosis in Wilson's Disease, an inherited defect in copper metabolism) to those that are more speculative, such depression following a head injury. Many Axis I conditions are now being found to have genetic associations (e.g. genes associated with **bipolar mood disorder** are thought to be on chromosomes 5, 11 and X). There are also physical findings associated with many major psychiatric disorders, for example:

- eye pursuit movement abnormalities in **schizophrenia**
- endocrine and sleep abnormalities in **depression**
- metabolic irregularities in certain brain regions in patients with **obsessive-compulsive disorder**
- the majority of patients presenting with a **conversion disorder** go on to develop bona fide neurologic disorders within several years of the onset of their psychiatric symptoms

The Biopsychosocial Management Plan

A management plan for psychiatric conditions is included below and on the following pages. While this is a comprehensive plan designed to address the salient parameters for Axis I conditions, many of these factors apply to patients with severe personality disorders (who are frequently hospitalized) and to patients who have personality changes induced by physical illnesses, substance use or the side effects of medications or other treatments.

Investigations

Biological

- Admission physical exam
- Diagnostic tests:
  - *Routine*: hematologic and clinical chemistry admission/screening bloodwork
  - *Toxicology*: serum medication levels; urine screen for substances of abuse
  - *Special assays*
- Diagnostic investigations: CXR, EKG
- Neuro-imaging: CT, MRI scans
- EEG
- Consultations to other medical/surgical specialties
- Special tests:
  - *hypothalamic/pituitary/adrenal axis testing (DST, TRH stimulation test, GH response)*
  - *sleep studies*

Social

- Collateral history:
  - *friends and family members*
  - *primary care physician*
  - *community psychiatrist*
  - *other clinics, programs or hospitals*
- Activities of Daily Living (ADL) assessment
- Referral to members of multidisciplinary team
  - *social worker*
  - *occupational therapist*
  - *physiotherapist*
  - *dietician*
  - *clergy*
  - *nurse clinician*

Psychological

- Personality and Intelligence tests
- Cognitive screening tests (e.g. Mini-Mental State Exam, Clock Drawing, etc.)
- Neuropsychological test batteries
- Structured interviews/diagnostic testing

Treatment — Short Term

Biological

- Psychopharmacology
  - *antidepressants*
  - *antiparkinsonian agents*
  - *antipsychotics*
  - *anxiolytics*
  - *mood stabilizers*
  - *psychostimulants*
  - *sedative/hypnotics*
  - *others*
- ECT
- Other psychiatric treatments
- Somatic illnesses
  - *medications*
  - *physical treatments*
- Detoxification from medications or substances
- Environmental
  - *level of observation*
  - *passes*
  - *attire (pajamas or street clothes)*
  - *seclusion rooms*
  - *mechanical restraints*
  - *objects to assist with orientation*

Social

- Social services
  - *assistance with housing, finances, etc.*
- Education and focus/support groups
- Occupational therapy
- Family meetings
- Administrative
  - *voluntary/involuntary status*
  - *rights/legal advice*
  - *duty to warn/duty to protect others*
  - *treatment contracts*
  - *informing work/school of absence*
  - *obtaining consent if patient incapable*

Psychological

- Advice/Reality Therapy
- Behavior Therapy/Modification
- Cognitive Therapy
- Group Therapy
- Milieu Therapy
- Recreation Therapy
- Stress Management/Coping Skills
- Other therapies with a shorter-term focus

Treatment — Longer Term

Biological

- Reduction/optimization of dosage
- Depot antipsychotic medications
- Monitoring vulnerable organ systems
- Serum level monitoring
- Adjunct/augmentation/combination treatments
- Reducing factors affecting efficacy of medication
  - *nicotine*
  - *caffeine*
  - *liver enzyme inducers*
  - *others*
- Health teaching and lifestyle changes

Social

- Vocational rehabilitation
- Religious guidance
- Community supports and organizations
- Discharge planning
  - *transfer to another facility*
  - *housing considerations*
  - *case manager*
- Liaison with general practitioner

Psychological

- Psychotherapy
  - *continuation of inpatient therapy*
  - *outpatient treatment*
- Match various types of therapies to needs and attainable goals for the patient
- Skills Training

Comprehensive Management Parameters

	Biological	Psychological	Social
Investigations			
Short-Term Treatment			
Longer-Term Treatment			