Julio Moizeszowicz: Psychodynamic Psychopharmacology

and

Julio Moizeszowicz and Mirta Moizeszowicz:
Psychopharmacology and Freudian Theory

Collated Document

Thomas A. Ban

This updated collated document includes the presentation of his textbook on Psychodynamic Psychopharmacology by Julio Moizeszowicz, reviews of the four editions of the text by Carlos Morra and an outline of updates to the text from 1982 to 2008 by Hector Wanes. It also includes Hector Wanes' review of Julio and Mirta Moizeszowicz's monograph on Psychopharmacology and Freudian Theory.

The collated document includes seven postings: four contributed by Carlos Morra, three contributed by Hector Wanes and one contributed by Julio Moizeszowicz.

This collated document is now open to all INHN members for final comment.

Julio Moizeszowicz: Psychodynamic Psychopharmacology

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Julio Moizeszowicz: Psychodynamic Psychopharmacology

FIRST EDITION

JULIO MOIZESZOWICZ: PSICOFARMACOLOGIA, PSICODINAMICA. ASPECTOS NEUROQUIMICOS, NEUROPSIQUIATRICOS y PSICOLOGICOS

(Psychodynamic Psychopharmacology, Neurochemical, Neuropsychiatric and Psychological Aspects)

Buenos Aires: Paidós; 1982. (288 pages.)

Presented (Reviewed) by Julio Moizeszowicz

CONTENT: This book is divided into 8 chapters, preceded by three forewords, one by Omar J Ipar, one by Ricardo Avenburg and one by the author. All through the book, the author emphasizes that psychoanalytic thinking allows us to understand mental pathology that exceeds the psychological itself and necessitates the use of biological treatments and psychopharmacology. He integrates phenomenological descriptive psychiatry with dynamic or psychoanalytic psychiatry, but warns about the uniqueness of each treated patient.
In the first chapter, “Introduction to psychopharmacological treatment”, he points out that in addition to “specific” pharmacodynamics and pharmacokinetic factors, such as bioavailability, “nonspecific factors” in a broad sense, including expectations of the physician who administers the medication, play a role in treatment response. Chapter two is dedicated to antipsychotics, chapter three to tranquilizers, chapter four to anxiolytics, five to hypnotics, six to antidepressants, seven to lithium and eight to stimulants. Thus, all major groups of psychoactive drugs are reviewed in a separate chapter with emphasis on their specific actions, therapeutic indications and side effects.

AUTHOR’S COMMENT: This review is based on the first edition of the book published in 1982 that is available only in Spanish. By bringing together information from the neurosciences and psychodynamic psychiatry (psychoanalysis), it encourages interdisciplinary thinking. It was written with the hope that it will contribute to ending the fruitless struggle between "biological" and "psychodynamic" schools in psychiatry. In 1938, Freud, in his Compendium of Psychoanalysis, anticipated our time when it will become possible to “directly influence by individual chemicals the amounts of energy and its distribution in the mental apparatus”.

The treatment of “conflicts between psychic structures” requires psychotherapeutic treatment. Yet, treatment with drugs is indicated: (a) to reduce the level of excitement when it prevents thinking and reflection (b) in case of excessive pain and regression that interferes with psychotherapy; and (c) to prevent loss of reality testing (psychosis).

February 26, 2015

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Carlos Morra

Information (review) on the first edition of Julio Moizeszowicz's Psychodynamic Psychopharmacology was presented by Moizeszowicz on February 26, 2015. In this presentation, the full table of contents of the first edition is presented in English translation from the original Spanish with the permission of the author.
Introduction

I. General principles of treatment with psychotropic drugs
   Effect of non-specific factors on treatment
   Effect of specific factors on treatment
   Neurotransmitters
      Neuromodulators
      Neuropeptides
   Mechanism of action
      Secondary, adverse or side effects
   Psycho-neurochemistry of affective disorders
   Psycho-neurochemistry of schizophrenia
   Psycho-neurochemistry of anxiety
   Evaluation of efficacy
   Classification
   Bibliography

II. Antipsychotic drugs
   Psychosis
   Neuroleptics
      Phenothiazines
      Butyrophenones
      Diphenylpiperidines
      Dibenzothiazepines
      Benzamides
      Indoles
      Gabaminergic substances
   Therapeutic effects
   Classification
   Mechanism of action
   Therapeutic indications
   Secondary effects
   Drug-drug interactions
   Drug-induced extrapyramidal syndrome
   Opioid receptors antagonists
   Endorphins
   Beta-adrenergic receptor blockers
   Electroconvulsive therapy
   Evaluation of treatment effects with rating scales
   Bibliography
III. Tranquilizers
   Benzodiazepines
   Diphenylmethane
   Dibenzocyclooctadiene
   Sedative neuroleptics
   Propanediols
   Others
Anxiety and anguish
Classification
Blockers of CNS structures
Addiction to tranquilizers
Blockers of the neuro-vegetative (autonomic) nervous system
Evaluation of the effect treatment with rating scales
Bibliography

IV. Anxiolytic benzodiazepines
Pharmacological action
Classification
Mechanism of action
Adverse effects
Drug-drug interactions
Bibliography

V. Hypnotics
   Barbiturates
   Non-barbiturates
      Chloral hydrate
      Sedative neuroleptics
      Glutethimide
      Methaqualone
      Chlormetiazol
      Sedative benzodiazepines
Characteristics of normal sleep
Sleep disorders
Characteristics of an "ideal" hypnotic
Drug withdrawal: rebound effect
Classification
Non-specific measures of sleep facilitation
Evaluation of the effect of treatment with self-assessment scales
Bibliography

VI. Antidepressants
Depression
Classification
Therapeutic effects
Non-MAOIs
   Classification by chemical structure
   Classification by clinical effects
   Mechanism of action
MAOIs
   Mechanism of action
   Drug-drug interactions
Side effects
Phenylalanine
Lithium
Thyrotropine releasing hormone (TRH)
Dopamine release inhibitors
L-tryptophan
Drug combinations
Sleep deprivation
Endorphins and opioid receptor antagonists
Electroconvulsive therapy
Specifics of treatment
Evaluation of the effects of treatment with rating scales
Bibliography

VII. Lithium
   General characteristics of treatment
   Pharmacology
   Mechanism of action
   Side effects
   Types of treatment
   Bibliography

VIII. Stimulants
   Central nervous system stimulants or analeptics
   Stimulants of wakefulness and psychomotor activity
      Adrenergic drugs
      Methylphenidate
      Phenylpirrolidinpentane or prolintane
      Pemoline
      Methylxanthines. (caffeinism)
      Nicotine and lobeline (nicotinism)
      Stimulants of neuronal metabolism
      Psychic-energizers or nooanaleptics
         Dimethylaminoethanol
         GABA derivates
         Others
      Cerebral vasodilators
HECTOR WARNES’ COMMENT

An outline of updates from 1982-2008

Julio Moizeszowicz’s influential book was first published in 1982 by PAIDOS in Buenos Aires (Argentina) and Barcelona (Spain) with the title of Psychopharmacology Psychodynamics: Neurochemical, Neuropsychiatric and Psychological Aspects. During the
years from 1982 to 2000, the book was updated by the author in 1988 in a second edition, in 1994 in a third, and in 1998 in a fourth edition. In the year 2000, the fourth edition was reprinted to meet demands. By the updates in the different editions the size of the book grew considerably from 288 pages to 1248 pages.

In the early years of the 21st century, Psychopharmacology Psychodynamics was converted into a multi-authored text, edited by Julio Moizeszowicz that was published in 2002 by Taller Gráfico IBS (print Oscar Sanchez), in Buenos Aires with 14 chapters from which one, on Geriatric Psychopharmacology was written by Moizeszowicz himself. Subsequently, in 2003, 2004, 2005, 2006, 2007 and 2008, updates to the book, edited by Moizeszowicz, were published, with the title Psychopharmacology Psychodynamics IV. Each update volume is about 200 pages and includes 10 to 14 chapter written by different authors including Moizeszowicz. These updated volumes were published under the auspices of Hoffman-LaRoche Pharmaceuticals in Buenos Aires.

References:


May 21, 2015

SECOND EDITION

JULIO MOIZESZOWICZ: PSICOFARMACOLOGIA PSICODINAMICA. ASPECTOS NEUROQUIMICOS y PSICOLOGICOS
Information on Content: The second edition of Psychodynamic Psychopharmacology is a text of 14 chapters-of which the first ten were written by Julio Moizeszowicz. In this review the full table of contents of the book is presented in English translation with the permission of the author.

Introduction

I. General principles of treatment with psychotropics drugs
   Effect of non-specific factors on treatment
   Neurotransmitters
   Effect of specific factors on treatment
      Neuromodulators
      Neuropeptides
   Mechanism of action
      Secondary, adverse or side effects
   Psycho-neurochemistry of affective disorders
   Psycho-neurochemistry of schizophrenia
   Psycho-neurochemistry of anxiety
   Evaluation of efficacy
   Classification
   Bibliography

II. Antipsychotics drugs
   Psychodynamic and neurochemical basis of pharmacological treatment of schizophrenia
   Classification of antipsychotic drugs
      Neuroleptics
      Benzodiazepines
      Clonidine
      Beta-blockers
      Opioid neuropeptides
Opioid receptor antagonists
Cholecystokinin,
(Electroconvulsive therapy)
Treatment with antipsychotics
Family dynamics and drug treatment
Selection of drug
  Daily dose
  Duration of treatment
Acute treatment
Maintenance treatment
Prophylactic treatment
Treatment of relapse
Treatment of residual symptoms
Drug-drug interactions
Bibliography

III. Tranquilizers
Psychodynamic foundation of drug treatment of
  anxiety disorder
Bibliography

IV. Anxiolytic benzodiazepines
Psychodynamic and neurochemical foundation of
  pharmacological treatment of anguish and anxiety
Pharmacology
Classification
Mechanism of action
Adverse effects
Treatment with anxiolytics
  Selection of drug
  Daily dose
  Duration of treatment
Drug-drug interactions
Bibliography

V. Hypnotics
Neurophysiology of sleep and sleep disorders
Sleep disorders
Primary sleep disorders
Secondary sleep disorders
Characteristics of an "ideal" hypnotic Drug withdrawal: rebound effect
Classification of hypnotics
  Barbiturates
  Non-barbiturates
Psychotropic drug combinations
Non-specific measures for sleep induction
Bibliography

VI. Antidepressants.
Psychodynamic and psychoneurochemical foundation of treatment of depression

Classification of antidepressants
- Non-monoamineoxidase inhibitors
- Monoamineoxidase inhibitors
- Precursors of neurotransmitters
- Lithium
- Dopamine releasing agents
- Thyrotropin-releasing hormone (TRH)
- Endorphins and opioid receptors antagonists
- Chronobiological treatment of depression
- Combination therapy
  (Electroconvulsive therapy)

Drug-drug interactions

Considerations for antidepressant treatment
- Predominant symptom, syndrome and diagnosis
- Duration of depressive episode, manic episode and symptom free intervals
- Prior response to antidepressants
- Adequate psychotherapeutic treatment
- Monitoring plasma level of the drug and urinary catecholamine metabolites
- Age

Types of treatment

Bibliography

VII. Drugs for the treatment of mania
Psychodynamic and psychoneurochemical foundation of pharmacological treatment of mania
- Lithium carbonate
- Anticonvulsants
- Calcium Channel Blockers
- MAOI-A Inhibitors
- Aldosterone antagonists

Bibliography

VIII. Stimulants
Therapeutic indication

Central stimulants or analeptics

Stimulants of wakefulness and psychomotor activity
- Adrenergics
- Pemoline
- Methylxanthines (caffeine, theophylline, theobromine)
Caffeinism
Nicotine and lobeline (addiction)
Stimulants of neuronal metabolism
Psychic-energizers or psycho-analeptics
Cerebral vasodilators
Stimulants of memory
Cholinergic agents
Neuroleptics
Psychotomimetics (psychotoxic drugs)
Bibliography

IX. Pediatric psychopharmacology
General principles of pharmacotherapy in
Childhood
Adolescence
Biochemical assays
Treatment of intellect (mental retardation)
Treatment of behavioral disorders
by Dr. Héctor Wainsburg
Attention Deficit disorder
hyperactivity
hyperkinetic syndrome
Bibliography
Treatment of emotional disorders
Separation anxiety
Phobias
Treatment of somatic manifestations
Eating disorder
anorexia
bulimia
Stereotype movements
Other somatic manifestations
Treatment of profound developmental disorders
Infantile autism
Treatment of affective disorders
Bibliography

X. Geriatric psychopharmacology
General Principles
Psychogeriatric history
History of present illness
Factors with an effect on treatment outcome
Compliance to medication
Iatrogenic factors
Dose
Drug-drug interactions
Involutional changes in drug metabolism
Treatment of psychosis
  Prevailing symptoms and associated illnesses
  Physiological and pharmacokinetic changes
  Drug-drug interactions
  Adverse effects
Treatment of anxiety and insomnia
  Prevailing symptoms and associated illnesses
  Physiological and pharmacokinetic changes
  Drug interactions
  Dosing and administration
  Adverse effects of benzodiazepines
Treatment of depression
  Suicidal risk
  Masked depression
Dementia Syndrome
  Prevailing symptoms and associated illnesses
  Physiological changes (changes in drug metabolism)
  Drug-drug interactions
  Dose and routes of administration
  Adverse effects
Treatment of memory and cognition
  Psycho-stimulants
  Vasodilators
  Stimulants of memory
  Brain peptides
  Corticoids
Bibliography

XI. Psychopharmacology of alcoholism
  by Dr. Herbert J Chappa
Pharmacology of alcohol
  Metabolism of alcohol
  Pharmacological actions of alcohol
  Alcohol and alcoholism
Ethiopathological and psychopathological factors
  Genetic
  Sociopathic personality
  Depression
  Neurotic disorders
  Socio-cultural
  Multifactorial Model
  Risk
Pharmacologic treatment of alcoholism
  Acute alcoholic intoxication
  Treatment of alcohol withdrawal
  Treatment of chronic alcoholism
XII. Psychopharmacology of epilepsy in adults
by Dr. Fernando Alvarez

The epilepsies
Classification
Anticonvulsants
  Mechanisms of action
  Pharmacokinetics
  Phenobarbital
    Diphenylhidantoine
    Phenitoine (DFH)
    Primidone or desoxiphenobarbital (PRM)
    Ethosuximide (ESM)
    Benzodiazepines (BZD)
    Valproic acid
    Progabide

Selection criteria
Drug-drug interactions
Monitoring plasma levels
Bibliography

XIII. Psychopharmacology of childhood epilepsy
by Dr. Héctor Waisburg

Epidemiology, prevalence and incidence
Clinical focus on childhood convulsive episode(s)
General therapeutic principles of childhood epilepsies
Convulsive or epileptic syndromes
  Convulsions in the recently born (neonatal period)
  Febrile convulsions
  Infantile spasms: West’s Syndrome
  Lennox-Gastaut’s Syndrome
  Absence or petit mal
  Generalized convulsions
  Partial seizures
Pharmacologic treatment
  Phenytoin
  Primidone
  Carbamazepine
  Ethosuximide
  Valproic acid
  Benzodiazepines
Bibliography
XIV. Pharmacology of Parkinson’s Disease
by Dr. Oscar S. Gershanik
Introduction
Physiopathology
Etiology
Neurochemical basis of therapeutics. Dopamine receptors
Pharmacological treatment
  Initiation of treatment
  Antiparkinson drugs
Psychiatric disorders in patients with Parkinson’s disease
  Primary disorders
  Secondary disorders
Bibliography

Index: Generic names

Index: Trade (brand) names

Subject Index

Reviewer’s Comment: From the first (1982) to the second (1988) edition, the size of the book increased from 288 to 670 pages and the number of chapters from eight to 14. The book was also converted from a single authored to a multi-authored text. The original eight chapters, were supplemented by six chapters, of which two, Pediatric Psychopharmacology and Geriatric Psychopharmacology, were written by Moizeszowicz himself, with a section on the Treatment of Behavioral Disorders in Children, contributed by Hector Wainsberg. Of the four chapters contributed by others, one, written by Herbert Chappa, deals with the Psychopharmacology of Alcoholism; another, written by Fernando Alvarez, discusses the Psychopharmacology of Epilepsy in Adults; a third, written by Hector Waisburg, reviews Psychopharmacology of Childhood Epilepsy; and the fourth, written by Oscar Gershanik, is dedicated to the Pharmacology of Parkinson’s Disease. From the eight original chapters, chapter 7, on Lithium, in the first edition, is replaced by a chapter on Drugs for the Treatment of Mania, which, in addition to lithium, includes anticonvulsants, calcium channel blockers, MAO-A inhibitors and aldosterone antagonists.

July 9, 2015
Information on Content: The third edition of Psychodynamic Psychopharmacology is a text of 15 chapters, of which with all but one written by the author. In this review the full table of contents of which, the book is presented in English translation with the permission of the author.

1. General principles of treatment with psychotropic drugs
   Effect of non-specific factors on treatment
   Effect of specific factors on treatment
   Intercellular transduction
   Neurotransmitters
      Catecholamines
      Acetylcholine,
      Serotonin
      Histamine
      GABA
      Glutamate
      Aspartate
      Taurine
      Purines.
   Neuromodulators
      Neuropeptides
         Limbic hypothalamic peptides (ACTH, MSH, beta and gamma-LPH, beta-endorphins, methionine-enkephaline, methionine-leucine, opioid peptides)
         Endocrine hypothalamic peptides
         TRH
LHRH
Somatostatine
MIF
PRF-PIF

Neuroplasticity
Oncogenic Theory (Post-synaptic cascade)
Secondary, adverse or side effects
Legal aspects of the Informed consent
Evaluation of the efficacy of psychotropic drugs
Bibliography

2. Antipsychotic drugs
Schizophrenia (clinical features; structural bass; neurophysiology; neurochemistry)
Therapeutic effect and action on:
  CNS
  Endocrine system
  Kidney
  Vegetative nervous system
Pharmacokinetics (plasma concentration)
Mechanism of action
Classification
  Clinical
    Typical neuroleptics
    Atypical neuroleptics
    Drugs in clinical investigation
    Adjuvants
  Chemical structure
Side effects
  Neurological
  Psychopathological
  Neuro-vegetative
  Metabolic and endocrine
  Cardiovascular
  Allergic
  Withdrawal
Drug-drug interactions
Treatment characteristics
  Relationship with the Schizophrenic patient´s family
  Determination of dose and duration of treatment
  Acute phase
  Sub-acute phase
  Chronic phase
Treatment resistant schizophrenia
Bibliography
3. *Anxiolytic drugs*
   Neurobiology and etiology of anxiety
   Benzodiazepines
      Pharmacology
      Mechanism of action
      Pharmacokinetics
      Adverse effects
      Drug-drug interactions
   High potency benzodiazepines
      Triazolobenzodiazepines
      Alprazolam
      Clonazepam
   Non-benzodiazepines
      Imidazopyridines
      Azapirones
      Serenics or anti-aggressive agents (eltoprazine)
   Treatment with benzodiazepines
   Bibliography

4. *Hypnotic drugs*
   Psychopharmacology of sleep disorders
   Neurophysiology of sleep
   Neurotransmission and sleep
   Classification of hypnotics
      Benzodiazepines
      Non-benzodiazepine
      Cyclopyrrolones
      Imidazopyridines
   Classification of sleep disorders
   Treatment of sleep disorders
   Specific measures for sleep facilitation
   Bibliography

5. *Antidepressant drugs*
   Introduction
   Depression
   Etiology
   Classification
   Biological theories
      Amines
      Noradrenalin and depression
      Noradrenergic deregulation
      Serotonin and depression
      Dopamine and depression
      Acetylcholine and depression
      Neurobiological deregulation by stress
Mechanism of action
- Presynaptic
- Receptors
- Sensitization
- Other

Classification of antidepressants
- Based on chemical structure
- Based on mechanisms of action
- Based on clinical effects

Non-MAOI’s Antidepressants
- Tricyclic antidepressants
- Non-cholinergic sedatives
- Non-cholinergic activators

Clinical and pharmacological actions
Advantages and disadvantages of
- Tricyclic antidepressants
- Non-cholinergic sedatives
- Non-cholinergic activators
- SSRIs
- Dopaminergic drugs

MAOI antidepressants
- History
- Chemical structure
- Classification
- Pharmacokinetics
- Side effects

Overdose (lethality)
Indications
- Atypical depression
- Sub-affective dysthymia
Advantages and disadvantages
Side effects
Alternative pharmacological treatments
Treatment with antidepressants
Drug-drug interactions
The Patients that don’t respond to treatment. Treatment resistant depression.

Bibliography

6. Anti-manic drugs
I-Lithium
- History
- Li salts
- Pharmacokinetics
- Mechanisms of action
- Side effects
Modes of treatment
Treatment of the acute episode
Maintenance treatment
Preventive (prophylactic) treatment
Indications
Drug-drug interactions
Bibliography

II-Anticonvulsants
Carbamazepine
- Chemical structure and pharmacokinetics
- Mechanisms of action
- Indications
- Dosing
- Side effects
- Drug-drug interactions
- Combined with lithium

Clonazepam
Valproic acid, valpromide
Oxcarbazepine
Diphenylhydantoin

III Calcium Chanel Bloquers

IV MAO-A inhibitors

V Aldosterone Antagonists
Bibliography

7. Psychopharmacology in Children and Adolescent
Introduction
Pharmacological treatment
- General principles
- Pharmacodynamics and pharmacokinetics
Stimulants
Antidepressants
Antipsychotics
- Haloperidol
Lithium carbonate
Anxiolytics
Antihistaminics
Anticonvulsants
Other drugs
- Clonidine
- Beta blockers
- Fenfluramine
Opioid antagonists
Psychopathology and psychiatry in children and adolescents
- Diagnoses
- Developmental disorders
Mental retardations
Autism
Asperger’s syndrome
Disruptive behavior disorder
Attention deficit hyperactivity disorder
Anxiety
Obsessive-compulsive disorder
Mood disorders
Schizophrenia
Tics
Sleep disorders
Enuresis
Lead intoxication

Bibliography

8. Geriatric psychopharmacology
   General principles
   History
   Factors with an effect on treatment outcome
   Drug-drug interactions
   Pharmacokinetic changes in involution
   Treatment of anxiety and insomnia
   Treatment of depression
   Pseudo-dementia
   Treatment of psychosis
   Use of new antipsychotics
   Dementia
   Histopathology
   Biomarkers of Alzheimer’s disease
   Psychopharmacology
   Symptomatic treatment
   Prevention of neuronal death
   Bibliography

9. Pharmacology of Parkinson’s Disease by Dr. Oscar S. Gershanik
   Introduction
   Physiopathology
   Etiology
   Neurochemical basis of treatment. Dopamine receptors
   Pharmacological treatment
   Initiation of treatment
   Antiparkinson’s drugs
   Dopamine agonists
   MAO-B inhibitors
   Cholinergic blockers
   Amantadine
10. Treatment of panic disorder
Introduction
  Cognitive
  Behavioral
  Neurochemical
Treatment
Bibliography

11. Treatment of obsessive-compulsive disorder
Introduction
  Neurobiological aspects of OCD
  Serotonergic Hypothesis
  Neuroanatomical model
  Other hypothesis
Treatment
Treatment resistant
Bibliography

12. Treatment of bulimia nervosa
General principles
  Neurochemistry
  Endocrinology
  Structural changes (brain)
Pharmacological treatment
Bibliography

13. Treatment of psychiatric emergencies
Acute psychotic episodes (Psychomotor agitation)
Anxiety attacks or crises
Somatization disorders (conversion disorders)
Suicidal behavior, risk and attempts
Bibliography

14. Pharmacological treatment in "day hospital"
Introduction
Treatment
  Cognitive/psychodynamic
  Social
  Recreational
15. *Pharmacological treatment of addictions*

Introduction

Criteria for dependence

Etiological and clinical factors

Opioids

- Opium
- Morphine
- Heroine
- Codeine
- Dextropropoxyphene
- Dextromethorphan

CNS depressants. Benzodiazepines

CNS stimulants

- Xanthines
- Ecstasy
- Cocaine
- Crack

Amphetamines

Hallucinogens

- LSD 25

Cannabinoids. Marijuana

Inhalants (Volatile substances)

Psychodynamic profile of addicts

Psychiatric, psychodynamic and laboratory correlates of addiction

Bibliography

**Appendix**

- Clinical assessment
- Psychophysical examination
- Drug consumption
- Aggressiveness
- Vigilance
- Opioids
- CNS depressants
- CNS stimulants
- Hallucinogens
- Cannabinoids

**Indexes**

- Drug index
  - Generic names
  - Trade names
Subject index

Reviewer's Comment: From the second (1988) to the third (1994) edition the size of the book increased from 670 to 830 pages and the number of chapters from 14 to 15. The book was also reverted from a multi-authored to a single authored text with all but one chapter, the chapter on the Pharmacology of Parkinson's Disease, written by Moizeszowicz. From the 15 chapters, eight (General principles of treatment with psychotropic drugs, Antipsychotic drugs, Hypnotic drugs, Antidepressant drugs, Drugs for the treatment of mania, Pediatric psychopharmacology, Geriatric psychopharmacology and Pharmacology of Parkinson's Disease) are updated versions of the corresponding chapters in the 2nd edition. Two chapters, the chapter on Tranquilizers and the chapter on Anxiolytic benzodiazepines in the 2nd edition were replaced by one chapter, a chapter with the title, Anxiolytic drugs in the 3rd; and the chapter on the Psychopharmacology of alcoholism in the 2nd edition was replaced by a chapter on Pharmacological treatments of addictions in the 3rd. There are no separate chapters in the 3rd edition on Stimulants, on the Psychopharmacology of epilepsy in adults, and on the Psychopharmacology of childhood epilepsy, but there are five new chapters in the 3rd edition: one on the Treatment of panic disorder, another, on the Treatment of obsessive-compulsive disorder, a third on the Treatment of bulimia nervosa, a fourth on Treatment of psychiatric emergencies, and the fifth on Pharmacological treatments in "day hospital".

July 30, 2015
Information on Contents: The fourth edition of Psychodynamic Psychopharmacology is a text of 19 chapters presented in three sections. Section 1 is preceded by a Preface of the fourth and the Prefaces of the prior editions; and Section 3 is followed by an Appendix on Neuroimaging and Indexes (drug and subject). In this review, the full table of contents of the 4th edition is presented with the permission of the author.

Preface to fourth edition
Preface to previous editions

SECTION 1: GENERAL PSYCHOPHARMACOLOGY

Chapter 1: Introduction to Psychopharmacology and Neurobiology
Basic concepts of Psychopharmacologic Treatment
  Effect of non-specific factors on treatment
  Effect of specific factors on treatment
Basic concepts of Psychopharmacology and of Molecular Biology
  Mechanism of action of psychotropic drugs
    Cytoskeleton
    Membranes
    Receptors
      Hetero-oligomeric or ion channel linked
      Monomeric or metabotropic (protein-coupled)
      Cytoplasmic receptor
      Enzymatic receptors
    Signal Pathway
      Mechanism of action according to site of action in the synapse
        Neurotransmitters
        Neuromodulators
        Immunepeptides
        Apoptosis
Psychoneurobiology of therapeutic action and side effects
  Efficacy of psychotropic drugs (genetic expression)
    Oncogenic theory (Post-synaptic cascade)
  Types of psychopharmacological response (genetic point of view)
Secondary, adverse or side effects
Assessment of efficacy (assessment scales for antidepressant effect)
Clinical psychoneurobiology of anxiety disorders
Clinical psychoneurobiology of impulsive-violent behavior (cholesterol levels)
Psychoneurobiology: Glossary of terms and abbreviations
References

Chapter 2: Psychoimmunoendocrinology, psychoneuroimmuno-oncology
Immunoneuropeptides
Limbic- hypothalamic–pituitary–adrenal axis
  Corticotropin-releasing hormone (CRH)
  Hypothalamic–pituitary-thyroid axis
  Hypothalamic–pituitary-somatotropic axis
  Hypothalamic–pituitary-gonadal axis
Neuroendocrine effects of psychotropic drugs
Psychoneuroimmuno-oncology
  The oncologic patient
References

Chapter 3: Antipsychotics
Schizophrenia
  Therapeutic actions of antipsychotics
  Pharmacokinetics and plasma concentration
  Mechanism of action
  Classification of antipsychotic drugs
    Clinical classification
      Typical neuroleptics
      Atypical neuroleptics
    Drugs in clinical research
    Adjuvants
  Classification based on the chemical structure
    Phenothiazines
    Butyrophenones
    Others
Treatment characteristics
  Depression in schizophrenia
  Treatment resistant schizophrenia

References

Chapter 4: Anxiolytics
Anguish and anxiety
  Neuroanatomical model of fear and anxiety
  Neuronal model of anxiety and fear
  The role of previous experiences
    Conditioning fear
    Extinction
    Sensitization
  Neurotransmitters related to anxiety and fear
  Genetic predisposition in anxiety disorder
Classification of anxiolytics
  Benzodiazepines
    Pharmacokinetics
    Side effects
    High potency drugs
      Alprazolam
      Clonazepam
  Non-benzodiazepines
    Imidazopyridines
    Azapirones
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Reviewer’s Comment: From the 3rd edition, published in 1994 (and reprinted in 1996) to the 4th edition, published in 1998 (and reprinted in 2000), the size of the book further increased from 830 to 1248 pages and the number of chapters from 15 to 19. It also fully reverted to a single author text. The enlarged material covered in the fourth edition is divided into three Sections, from which the 1st, General Psychopharmacology and the 2nd, each include seven chapters, and the 3rd, Special Psychopharmacology, includes five. From the four added chapters, one addresses psychoimmunoendocrinology and psychoneuroimmunology; another, covers the treatment of
HECTOR WARNES’ COMMENTS ON THE FOUR EDITIONS

FIRST EDITION 1982

Professor Moizeszowicz attempts to integrate the multiple factors implicated in pharmacotherapeutics ranging from the specific ones (pharmacodynamics, pharmacokinetics, biotransformation, neurotransmitters, neuromodulators, neuropeptides, optimal dosing and others) and the non-specific factors which likewise are of paramount importance (the doctor-patient relationship, the placebo effect, the setting, the ongoing psychotherapeutic approach, the expectations of the doctor, of the patient and of the family, socio-cultural factors and last but not least, the impact of marketing). The book includes an appendix of the principal biochemical essays in psychiatry and a Vademecum, or handbook. It has 288 pages and is divided in eight chapters as follows:

The first chapter is on the General Principles of Treatment with Psychotropic Drugs. It has 65 pages and covers clinical issues, such as the clinical history oriented towards the prescription of a psychotropic drug, which includes 12 items to be asked during the interview before the prescription is given: previous use of psychotropic drugs, side effects, medical illnesses, current treatments and so on. Moizeszowicz deals with pharmacology in the proper sense of the word as a hard science in its complexity of absorption, metabolism and excretion of the drug. He covers true neurotransmitters, putative and autoreceptors or presynaptic receptors and sorts out their specific functions and site of major concentration in the brain. Among the neurotransmitters, Moizeszowicz includes catecholamines, acetylcholine, serotonin, histamine, gamma aminobutyric acid, glutamic acid and glycine, the latter has inhibitory action on muscular spasticity and is antagonized by strychnine. The most important neuro-modulators are the prostaglandins, each acting on different organs. Prostaglandin E inhibits the liberation of noradrenaline and facilitates the transmission of pain. Its action is antagonized by acetylsalicylic acid and
others. Moizeszowicz showed us an impressive bibliography and many figures on the biochemistry of each precursor, which are of great clarity. Further Moizeszowicz writes on neuropeptides and neurohormones, making the point that ACTH (adrenocorticotrophic hormone), which was thought to be present in the anterior-pituitary gland but later it was discovered to be present in the hypothalamus as well, shall stimulate the production of the following seven neuropeptides and neurohormones: melanocyte stimulating hormone, CLIP (corticotrophin lobular intermediate peptide), lipotrophin, beta-endorphins, methionine-encephalin, methionine-leucine and opiate peptides (endorphins and lipotrophins). What follows is a dense section on the mechanism of action of psychotropic drugs, its adverse effects and the psycho-neurochemistry of affective disorder. In 1960, it was observed that hypertensive patients treated with reserpine showed symptoms of depression because reserpine depletes the intracellular deposits of catecholamines and would induce psychomotor retardation in experimental animals. These findings were corroborated by clinical observations and led Schildkraut to formulate his hypothesis which later on he himself called ‘reductionist’ when he understood that there were ‘alterations of the metabolism of indolamines and other neurotransmitters as well as physiological and psychological factors’ (cited by Moizeszowicz from Schildkraut on page 44). In the section on the psycho-neurochemistry of schizophrenic disorders, a didactic elaboration of the trans-methylation hypothesis first postulated by Axelroad in the 1950s is elaborated.

The section on the evaluation of the effectiveness of psychotropic drugs is very interesting, not only because of the use of rating scales and clinical parameters, which are applied to behavior, neurological, autonomic-vegetative nervous system profiles and the various psycho-physiological, sensorial, psychomotor, visual and intellectual performance, vigilance and attention tests. Moizeszowicz introduces us to two instruments he used in Germany during his early training in research: the rotor pursuit and the visual psychomotor coordination tests. He classifies the psychotropic drugs into antipsychotics, anti-parkinsonian, tranquilizers, hypnotics, antidepressants, anti-manic, stimulants (analeptics, awakening drugs, stimulants of neuronal metabolism, vasodilators and stimulants of memory) and finally the group of psychotomimetics or psychodysleptics.

It is noteworthy that in the chapter on Stimulants, Moizeszowicz starts off by quoting Freud’s 1930 paper on Civilization and its Discontents, vol. XXI of the Standard
Edition: “We are threatened by suffering from three directions: from our own body, which is doomed to decay and dissolution and which cannot even do without pain and anxiety as warning signals; from the external world, which may rage against us with overwhelming and merciless forces of destruction; and finally from our relations to other men…An unrestricted satisfaction of every need presents itself as the most enticing method of conducting one’s life, but it means putting enjoyment before caution, and soon brings its own punishment” (p.77). Freud then turns to chemical intoxication to overcome displeasure or psychic pain and adds “there must be substances in the chemistry of our own bodies which have similar effects, for we know at least one pathological state, mania, in which a condition similar to intoxication arises without the administration of an intoxicating drug” (p. 78). (In German the word Rausch means intoxication, exhilaration and ecstasy).

We are forever trying to keep misery at bay: “for one knows that, with the help of these downer of cares one can at any time withdraw from the pressure of reality and find refuge in a world of one’s own with better conditions of sensibility” (p.78). Starting with alcoholic beverages up to the use of cocaine that Freud knew very well because, in the late 1800s, he wrote an important paper on the subject and he himself had a period of dependence on this drug.

The stimulants are classified into stimulants of alertness and wakefulness, of psychomotor activity, of neuronal metabolism and of memory. In the latter, the author listed three hormones related to memory: ACTH, MSH and vasopressin adding clarifying figures on the metabolism of choline and the mechanism of action of the cholinesterase inhibitors.

SECOND EDITION, 1988

The second edition of Psychopharmacology Psychodynamics contained a preface by Dr. Ricardo Avenburg, a prominent psychoanalyst and the introduction was written by the author himself. It was increased considerably in size to 670 pages with fourteen chapters. New chapters include psychopharmacology in Pediatrics, in Geriatrics, in Alcoholism, in childhood Epilepsy, in Attention Deficit Disorders, in adult Epilepsy, in
Parkinson’s Disease, each new chapter with the collaboration of Herbert Chappa, Hector Wainsburg, Fernando A. Alvarez and Oscar Gershanik. This second edition was expanded in its bibliography and the latest advances in the discovery of new psychotropic compounds. On the cover there is an intriguing painting by Laszlo Moholy-Nagy (1925).

In the introduction, the author recognized the changes in the field in the last 6 years since the publication of the first edition, namely, drug-interactions, introduction of the DSM-III-R, multi-axial classification, significant advances of the neurosciences, molecular biology and the new era of molecules designed to target only certain receptors. In ‘General Principles’ I shall cite page 19, which reads: “these trophic pituitary hormones are under the control of a releasing hormone and an inhibitory one the actions of which are added up algebraically along with psychological factors (mediated by neurotransmitters, neuromodulators, etc) and its hormonal activation with its positive or negative feedback leading finally to an organismic response”. Further, in the same chapter, page 31, I shall cite the crucial concept of excitation or inhibition of firing of certain neuronal groups, which allow movement of Na or Cl in or out of the cell: “The transmission would be mediated in the first place by neurotransmitters (first messenger) and by AMPc called second messenger. This second messenger would activate the enzyme adenylcyclase which would transform the energy stored in ATP to AMP to be finally stored in the form of information in a third messenger, the protein kinases”. On page 32, of the third edition of his book, the author present an excellent diagram elaborating on these three messengers, which would facilitate ionic and enzymatic intracellular transduction, based on the studies of Nyman and Nestler.

I must underline the many excellent figures, which are highly didactic including comparing predictive factors of outcome of treatment. A letter from a patient was also transcribed regarding the side effects of the medication he had personally experienced. In this long letter, the patient raises key questions which we must always have in mind.

It must be pointed out that in more than 90% of the book, the author does not deal with psychodynamics per se as the second title of the book would suggest, at least in the sense of a conjoint treatment of psychotherapy and pharmacotherapy and its interaction in the form of facilitation or hindrance. We know for sure that an excess of tranquilizing drugs put the unconscious (in Freud’s conception) to rest. Other times, the depressive episode
leads to stagnation of the psychoanalytic or psychotherapeutic process and the antidepressant drug would instill new life in the therapeutic relationship. Further, casualties are seen with the use of abreaction or catharsis in latent or former psychotic patients. It means that some defenses against primitive anxieties are not to be tampered with. There are criteria for selection in psychoanalysis, in psychoanalytic psychotherapy, in cognitive behavioural therapy, in Gestalt therapy and so on. In fact each school of psychotherapy put more emphasis on either the interpersonal, the intrapsychic and within the latter the cognitive, the vicissitudes of transference upheavals, the past, the present or the future, the emotional, the somatic (such as the method of autogenic training of Schultz and Lütthe), biofeedback, relaxation training, Yoga, etc. Unless the patient is carefully evaluated for each potential psychotherapeutic approach, the fall out rate increases significantly. We have not reached that level of sophistication as yet. However, we are more accurate should we be good psychopathologists to select patients for particular psychoneuropharmacological interventions, at least in the short term.

THIRD EDITION 1994

The third edition III (1994 and 1996) is vastly expanded in scope and much updated. The sub-title has been changed to ‘New clinical-therapeutic approaches’ and was written with the collaboration of prominent psychiatrists and one neurologist, who wrote the chapter on Pharmacology of Parkinson’s Disease.

On page 3 and 4, the authors listed the collaborators to this Third Edition of 833 pages, comprising 15 chapters, including chapters on psychopharmacology in children and adolescents, geriatrics, panic disorder, obsessive compulsive disorder, bulimia, emergencies, Day-Hospital and addictions.

In the first chapter, the author has clarified the difference between the medical model and the current model of illness (e.g., as shown in tuberculosis). We would be naive to subscribe to the strict medical model in view of epigenetic and environmental factors, which have become more and more the center of attention.

The medical model in the classical view states:

1. There is a known etiology
2. There is a clear discontinuity or break with normality
3. There are defined symptoms of illness
4. Once the noxa or pathogen which is causing the illness is identified the external environment has little influence on the course of the disease.

The author discusses each of the above points, demonstrating its anachronism. Once more it is worth citing Freud, the visionary, as the author does on page 19: “…But here we are concerned with therapy only in so far as it works by psychological means; and for the time being we have no other. The future may teach us to exercise a direct influence, by means of particular chemical substances, on the amounts of energy and their distribution in the mental apparatus. It may be that there are other still undreamt-of possibilities of therapy. But for the moment we have nothing better at our disposal than the technique of psychoanalysis, and for that reason, in spite of its limitations, it should not be despised” (p. 182 of an Outline of Psychoanalysis. The Standard Edition vol. XXIII. 1937-1939).

On page 45, of the Introduction to the Psychopharmacological treatment, the author writes: “The amphetamines or their derivatives can be trans-methylated by the enzyme N-methyl-transferase. In addition, the amphetamines cause the release of catecholamines and the inhibition of MAO, creating the conditions for the formation of psychotomimetic molecules which would explain the amphetamine psychosis”. Further, the author graphically shows how metabolic errors would result in increases of the following psychotomimetics:
3-4-dimetoxifenyletilamine,
N,N-dimetyltryptamine,
bufotenine (O-phosphoryl-4-hydroxy-N,N-dimetyl tryptamine) and
3,5 methoxy-N, N-dimetyltryptamine.

It would be beyond the scope of this review to cite the finest details on the function and locus of serotonin receptors and on the deviation of the various metabolic pathways (its synthesis and degradation) of L-tryptophan. On page 52, the author presents a revision of neuro-peptides and hormones, including those produced by the gut. On page 55, we have a pictures of the characteristics and function of 9 major receptors. Moizeszowicz advances on the theory of the oncogene, which are found in chromosomes and are activated by c-fos and c-jun: “An oncogene fos combines with the action of RNA messenger is translocated
and transformed in the cytoplasm in a protein fos which modifies genetic expression” (p. 56).

In chapter two, Moizeszowicz going beyond the DSM III, points out that a complete diagnosis should include (p. 69):

1. A phenomenological or symptomatic description
2. Major intra-psychic conflicts
3. A structural analysis
4. Bioelectrical studies
5. Neurochemical studies
6. Psychopharmacotherapeutic indications.

In the chapter on antidepressants, the author cites Akiskal (1985) on the etiopathogenic factors in depressive disorders, such as biological stress, psychosocial stress, life history, genetic vulnerabilities and personality profile, including character and temperament (p.255). Based on the work of Gold, Goodwin and Chrousos, the author presents a clarifying diagram on the differences between stress and depression (p.268). Apart from the clinical difference, the two share the same physiological response of hypercortisolemia, hyperactivity of the locus coeruleus, immuno-suppression with the difference that the stress response has a counter-regulatory mechanism which limits its chronicity unlike the depressive response. The frequency of sub-affective dysthymia and the overlapping of dysthymia, major depression and recurrent depression are dealt with very clearly (p. 334 - 335). We have to be alert to the presence of double or triple depression. The diagnostic validation of sub-affective dysthymia is confirmed with the presence of a family history of depression, unipolar or bipolar affective disorders, the hypomanic response to antidepressant therapy, a short REM latency period and a non-suppressing dexamethasone test. Atypical depressions are presented in a diagram following the criteria of Nies and Robinson, cited by the author (p. 332). It comprises, in short, the following items: interpersonal reactions, course of the illness, psychopathological symptoms and autonomic or vegetative symptoms, which usually are atypical (Liebowitz, cited on page 33, enumerates these as hypersomnia, hyperorexia, weight gain, evening worsening, fatigue and interpersonal hypersensitivity).
New rating scales and biochemical measures of plasma concentration of psychotropic drugs are added to this expanding field. Once more, I must express my admiration for the excellent figures which make the book easy to read and understand. I particularly recommend the chapter where the topic of atypical depression and the chapter on Geriatrics are elaborated in depth. Regarding the latter topic Moizeszowicz in a masterful way reminds us of the key issues in a psychogeriatric history, which also includes rating scales, neurological, cardiological, and endocrine examinations, as well as biochemical measures, MRI, CT, EEG, and so on. Of course, one cannot ignore that drug metabolism, or pharmacokinetics, are altered in the geriatric patient. The involutional neurochemical changes cited by the author are the following: a) a reduction of dopamine receptors, b) a reduction of muscarine receptors, c) an increase of the benzodiazepine receptors and d) an increase of the enzyme MAO\textsubscript{B}. On page 524, a diagram on involutional pharmacokinetic changes are presented in terms of absorption, distribution, elimination and neurochemical alterations, including a decrease of acetylcholine, tyrosine hydroxylase and DOPA decarboxylase. The figures used by the author, based on original studies, are of great value, particularly in regard with his update on the dementias. The diagrams on the histopathology of degenerative dementias and of the deposit of the protein beta-amyloid are indeed outstanding. The author cites the work of Tanaka et al. regarding the differential expression of three types of Amyloid Precursor Protein (in chromosome 21) found in the brain and non-neural tissues. The protein B amyloid A4 is the product of degradation by an enzyme of the Amyloid Precursor Protein. The normal versus the abnormal degradation of beta amyloid involves the activation of proteases and are of paramount importance in the development of dementia of the Alzheimer type. The bibliography in this latest volume has grown exponentially with the advances in the field.

FOURTH EDITION 2000

The fourth edition of Psychopharmacology-Psychodynamics published by Paidos in 1998 and reprinted in the year 2000 has increased significantly in size and academic content. Prof. Moizeszowics has enlisted 12 collaborators, each highly qualified in the respective field of their contribution to this volume of 1248 pages, divided in 19 chapters.
The subtitle of the book has changed to “Therapeutical and Psychoneurobiological Strategies”.

The first chapter has changed its name from the one used in previous editions (General Principles of Treatment with Psychotropic drugs) to Introduction to Psychopharmacology and Psycho-neurobiology. The author, in his introduction to the book, reminds us that the old concept of psychotropic drugs (labeled as chemical ‘straight jackets’), with advancing research beyond neurotransmitters, has been transformed to involve the domains of molecular and genetic psycho-neurobiology and the human genome. Moizeszowicz also elaborates in his introduction on the role of the family of CYP450 enzymes, which could, as genetically determined inhibit or stimulate the effect of pharmacological agents. Many side effects are due to drug interactions are set off by polypharmacy. The wealth of information and the bibliography has increased substantially with new chapters on Premenstrual disorders, Pregnancy and Puerperium written by Liliana Fernandez, Julio Moizeszowicz and Yriam Monczor and an excellent new chapter written by Pablo V. Gejman on Epidemiological and Molecular Principles of Genetics in Mental Illnesses. The author of these chapters as is the general trend in the many editions, subscribes to the principle of multi-factorial convergence of nature-nurture. The volume has been enriched by very good images of CT and MRI of bipolar disorders during 20 and 15 years of follow-up. Further images of trichotillomania, self-aggression and the SPECT of a patient of 18 with schizoaffective disorder who showed left temporal hypo-perfusion are revealing. Another patient, who was a cocaine addict for 15 years showed in a SPECT with frontal orbital hypo-perfusion and thinning of the posterior parietal cerebral cortex. The SPECT of another patient of 45 years who consumed cocaine for 10 years, showed frontal and left temporal hypo-perfusion.

Another new chapter of high academic value is the one on Psycho-immuno-endocrinology and psycho-neuro-immuno-oncology written by Moizeszowicz and Sergio Guala. The authors cite Harvey Cushing, who in 1913, wrote on the difficulty of establishing which is the primary factor, the psychic or the endogenous dysequilibrium. It would appear that with modern technology we are coming to grips with this dichotomy. I shall cite Professor Moizeszowicz once more in an elucidating résumé: “The transduction which is the process of union of the neurotransmitter to a receptor (first messenger) has the
objective of transmitting cyclic AMP, cyclic GMP, Ca, DAG, IP3 information (second messengers) which must phosphorylate a more complex protein kinase (third messengers) in order to transmit the message for storage in the neuron (factors of transcription or fourth messengers) which would result in signaling as a cellular response” (p.26). There is on page 28 an outstanding diagram on the mechanism of action of psychotropic drugs in the synapse, which points out to the importance of nitrous oxide and the activation of NMDA in the hippocampus, along with the role of Na, K, Ca and protein G in the postsynaptic neurons. Neurotransmitters, second messengers, protein kinases, ion channels and transcription factors (CREB, or cAMP response element binding protein) are responsible for memory, learning, and response to pharmacological and psychotherapeutic treatments. The interaction between genetic vulnerabilities, life events, stressors and current situation are pathogenic. The action potential are monitored with microelectrodes, which record the sequences of electro-chemical events.

An outstanding diagram on page 56 shows us the difference between normal and pathological apoptosis. Pathological apoptosis involves a more severe dysfunction of immunity and of the blueprint of cellular response along with greater changes in the genotype.

On page 57 of his introduction, the author elaborates on the issue of the efficacy of psychopharmacological treatment based on the regulation of genetic expression, i.e., the duration of the beneficial effects in the long run depend on long-term potentiation (LTP) in three key areas: “neuro-learning associated with memory, genetic transcription and Neuroplasticity.” Further the author points out that the oxidative phosphorylation is the vehicle of action of psychotropic drugs in long term use (LTP), of course, mediated by a particular genetic transcription. Antidepressant resistant or refractory patients are given another drug that would potentiate the effect of the antidepressant. On page 568, the author cites studies that have show that lithium and T3, in combination with an known antidepressant, are useful in the treatment of refractory depressions. Finally, on page 1052, the authors elaborates on the factors of neural growth and neural plasticity namely:

1. Phosphatidylserine
2. Acetyl-L-carnitine
3. Ganglioside (glial tissue secrete neurosteroids, N- acetylesphingosine or LIGA 4)

4. Antagonist of NMDA (Memantine)
5. Calcium antagonist (Nimodipine)
6. Nootropic agents (related to GABA, such as Piracetam and Aniracetam)
7. Idebenona (acts on the mitochondria with anti-oxidant properties and inhibits the synthesis of prostaglandins)
8. Biphemelane (increase cholinergic transmission)
9. Estrogens (increase the activity of the acetyltransferase and of the muscarine receptors)
10. Vitamine E (antioxidant that has been shown in animals to delay neuronal degeneration)
11. Anti-inflammatory drugs (aspirin, ibuprofen and prednisone which counter pro-inflammatory cytokines)

I have also read updates of Psychopharmacology and Psychodynamics IV, published in 2002, 2003, 2004, 2005, 2006, 2007, 2008 and 2009, each volume of about 200 pages contains a wealth of information in this blossoming field and, most interesting, each volume has a final chapter with multiple-choice questions of great didactic value. Hopefully, I should be able to review these books at a later date. I understand that the different editions and the excellent figures shall be available free of charge in the Web in Power Point format.

I would like to underline the relative lack of real psychodynamic formulations of patients evaluated for or under psychopharmacological-psychotherapeutic approaches. Reading the updates from 2002 to 2009, this integration has been surmounted in this book, Psychopharmacology and Freudian Territory, written in collaboration with Mirta Moizeszowicz and published by Paidos in the year 2000. I shall be reviewing this outstanding book in the near future.
The role of psychotherapy to promote more beneficial outcomes than only with the use of psychotropic drugs has been established. I would add that the open ended interviews of patients provide a wealth of information (phenomenological and psychodynamic) that the structured interviews or the use of rating scales, do not.

In this regard, the outcome of patients treated only with drugs and those treated only with psychotherapy reach an unhappy conclusion because the statistical findings are not very encouraging (between 50 and 70 or at best 75% improvement rate in general with either mode of therapy). Strupp and Hadley singled out the specific versus non-specific factors in psychotherapy in a controlled study of outcome (Archives of General Psychiatry, 36(1): 125-136, 1979), not unlike the findings that in pharmacotherapy there are specific and non-specific factors at work. Luborsky L, Singer B and Luborsky L wrote of a comparative study of the various schools of psychotherapy and concluded that they all have approximately the same success rate (Archives of General Psychiatry 32: 995-1008, 1975).

In 2008, Pollak DD and Kandel ER discovered that conditioning mice to associate specific noise with protection from harm (learned safety) produced a behavioural antidepressant effect comparable to that of medications (Neuron 60 (1): 149-161, 2008). Eric Kandel suggested that the structure of the cells may change as a result of learning and genetic changes. Those that were inactive or dormant interact with the environment in such a way that they become active. It was shown, in 1972, that the second messenger molecule, cAMP, was also produced in Aplysia ganglia. It was found that serotonin is involved in the molecular basis of sensitization of the cAMP dependent protein kinase A. In turn, the potassium channel is regulated by the protein kinase A (PKA) whose nuclear target is the transcriptional control protein CREB (involved in long-term memory storage). The activation of CREB results in an increase number of synaptic connections. We are at the heart of the action of psychoneurotropic drugs, so well elaborated by Professor Moizeszowicz, which also leaves open the door for the deconditioning, counterconditioning and learning mechanisms of psychotherapy and insight-therapy.

Finally I would like to congratulate the author for the outstanding and most complete evaluation in the area of psycho-neuro-pharmacology

September 10, 2015
Information on Content: This 292 pages book attempts to integrate psychoanalysis and psychoneuropharmacology. In approximately, 106 pages the authors elaborate on the neurobiological basis of Freudian psychoanalysis in the light of contemporary neurosciences. In the second part of the book starting on page 115 the authors present six clinical vignettes (panic attacks, delusional disorders, depressive disorder, bipolar disorder, schizoaffective disorder and borderline personality disorder). On page 9 and 10 there are forty pictures, figures, illustrations and diagrams including Sigmund Freud’s, Santiago Ramon y Cajal’s and Charles Scott Sherrington’s pictures. They cover neuroanatomy, neurochemistry, genetic transcription, the limbic system, sleep stages, apoptosis and the Freudian diagnoses comparing it with the DSMV, the mechanism of action of
psychotropic drugs, the latest advances in the neurosciences regarding PET scanning and so on. Between pages 275 and 292 a glossary of technical terms is presented.

There are two prefaces to the book: one written by David Maldavsky which draws attention to epistemological and methodological issues, and the other by Gregorio Klimovsky that deals with “mind-body theories”. They are followed by the authors’ Introduction.


Freud’s basic assumption is that the organism attempts to keep stimulus at a manageable level (via a stimulus barrier or protective shield) otherwise it would be overwhelmed by overstimulation which would lead to a breakdown of its defenses and adaptive capabilities.

Within Freud’s frame of reference between the structures responsible for receiving (afferent structures) and emitting (efferent structures) impulses there is the “black box (chapter VII) involved in the transformation of quantity into quality, i.e., impulses into perceptions, mnemic traces, etc..

According to Freud stimuli proceed through phi (permeable) neurones to psi (impermeable) neurones to omega (perceptual) neurones. The mind is ruled by several principles: the pleasure (Lust-Unlust) principle, the reality principle, the constancy (not unlike homeostasis) principle and the nirvana principle (death instinct).

The authors present Freud’s concept of “instinct” and cite from Freud the following: “an instinct appears to us as a concept on the frontier between the mental and the somatic. The word Instinct has been a matter of debate and replaced by the word drive mostly because every innate psychophysical tendency or impulse to action is based on learned patterns of behavior. Instincts have a pressure or quantity (energy or excitation), an aim (which could be displaced), an object which could be changed and a source which is somatic”. They suggest that Freud was wondering whether as a ‘general rule the somatic source of the instinct was chemical’ (p.62). They also suggest that death and life instincts contribute to the construction of the ‘”ego” that provides for self-preservation by defending the organism from unconscious forces. In support of their interpretation on page 45 the
authors quote from Freud that ”the transmission of energy has an aim…it is to unload the excitation that has entered via the stimuli” and suggest that in accordance with the ‘inertia principle’ “the organism seeks to unburden itself from an excess of quantity of stimulus”.

The authors present an update on advances in the neurosciences and suggest that the origin of some current contributions to the neurosciences are in Freud’s work and hypotheses. They also present an extensive review of the relevant literature by E. R. Kandel; K.H. Pribram and M M Gill; M. Bear, B. Connors and M. Paradiso; P. Marty; S M. Stahl; Sami-Ali; O. Kernberg and many others.

The authors maintain that the beginning of life is crucial in the structuring of the Self. According to them ”If the mother has not fulfilled its humanizing function the child takes the place of the absent mother or of her overwhelming presence that would perpetuate the toxic circuit between the two of them” (p. 98). Based on this notion the authors put forward a contemporary formulation of Freud’s conceptual framework relevant to neuropsychopharmacology in which genetic factors combined with childhood experiences activate the so called ‘toxic nucleus’ and neurotransmitter imbalance (the original actual neurosis). According to them certain personality types could filter better stressing life-events and these personality types mitigate the genetic code, whereas some other personality types speed up or increase the potential for life events triggering certain genes and the chances of becoming ill (p.101).

On page 107 the authors present Freud’s psychodynamically-based diagnoses and DSM IV diagnoses. Freud’s diagnoses include: Actual neurosis or neurasthenia; Acute anxiety neurosis (Angst); Chronic anxiety neurosis; psychoneurosis or transference neurosis: Conversion hysteria; Anxiety-hysteria; Narcissistic psychoneurosis; Psychosis, schizophrenia and severe depression or Manic depressive disorder. The DSM IV diagnoses include: Anxiety disorders: Panic attacks, agoraphobia; Specific phobias; social phobias; Posttraumatic stress disorders; Generalized anxiety disorder; Anxiety induced by drugs or medical illnesses, etc.; Somatization disorders or Briquet syndrome; Conversión disorder; Somatoform disorder; Hypochondria; Dyssomorphophobia; Chronic pain syndromes, etc.; Affective illnesses, dysthymia, bipolar disorders, unipolar disorders; Schizophrenic and psychotic disorders.
The authors suggest the use of a multiaxial diagnostic scheme to underline the multifactorial aspect of patient’s psychopathology. On page 108 they spell out the variables on which diagnostic formulations should be based. They are:

1. Clinical manifestations
2. Libidinal fixations: somatic discharge, oral, anal and phallic orientations.
3. Ego fixations—Object-relations: inside-outside, autoerotism and narcissism, capacity for mourning loss love.
5. Defences: Areas of conflict between ego and drives, between ego and external reality and between ego and superego. Defence mechanisms: repression, denial, negation, projection, introjection, isolation, reaction formation, undoing, rationalization, regression, identification, acting-out, sublimation.
6. Co-morbidity

On page 120 the authors present a diagram with a list of symptoms that was presented as syndrome by Freud that today would be diagnosed as Panic disorder.

**Reviewer’s Comments:** This is an exceptionally well written book that brings together nosology, clinical psychopathology, neurosciences and psychodynamic formulations. The latter are too condensed to allow an evaluation of the patient’s strength and weaknesses, typology, defence mechanisms, object-relationships, and current focal conflicts in the light of precipitating factors. The authors put forward Freud’s original hypothesis that there is a “toxic nucleus” lurking in the background of our psyche (the chemical factor) and whether it becomes manifest in one or another form of mental illness depends on individual vulnerabilities and on brain and environment interaction. They suggest that we are all at risk of becoming ill as a result of “affective flooding” and at times we go too far to avoid “affective flooding” which is equally harmful.

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