

Collated
December 8, 2016

**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 Warnes. It also includes Hector Warnes' 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 Warnes and one contributed by Julio Moizeszowicz.

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

Julio Moizeszowicz: Psychodynamic Psychopharmacology

Julio Moizeszowicz	February 26, 2015	Presented (reviewed) (1st edition)
Carlos Morra	June 25, 2015	Table of contents 1st edition
Hector Warnes	May 21, 2015	Comment (Outline of updates 1982-2008)

Carlos Morra	July 2, 2015	Review 2nd edition
Carlos Morra	July 30, 2015	Review 3rd edition
Carlos Morra	August 27, 2015	Review 4th edition
Hector Warnes	September 10, 2015	Comment on four editions

Julio Moizeszowicz and Mirta Moizeszowicz: Psychopharmacology and Freudian Theory

Hector Warnes	November 19, 2015	Review of Psychopharmacology and Freudian Theory
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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

TABLE OF CONTENTS

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.

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1st edition
1982

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

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Neuroleptics

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 Diphenylpiperidines

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Therapeutic effects

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Mechanism of action

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- Diphenylmethane
- Dibenzocyclooctadiene
- Sedative neuroleptics
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Blockers of the neuro-vegetative (autonomic) nervous system

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Pharmacological action

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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

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- Classification by clinical effects

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Thyrotropine releasing hormone (TRH)

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Drug combinations

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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

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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

Stimulants of memory
 Cholinergic agents
 Lecithine
 Choline
 CDP-choline
 Anticholinesterases
 Cholinomimetics
 Neuroleptics
 Psychotomimetic or psychotoxic drugs
 Phenylethylamine
 Indolethylamine
 LSD derivatives
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 Bibliography

APENDIX I
 Biochemical assays

APPENDIX II
 Drug Index by Generic Names
 Psychotropic drug regulation
 Drug Index by Trade (Brand) Names in Argentina
 A. Antipsychotics
 B. Antiparkinson drugs
 C. Tranquilizers
 D. Hypnotics
 E. Antidepressants
 F. Antimanic drugs (Antipsychotics, Lithium carbonate)
 G. Psychostimulants

Subject Index

June 25, 2015

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:

Moizeszowicz J: Psychopharmacology-Psychodynamic. Neurochemical, Neuropsychiatric and Psychological Aspects. Buenos Aires: Paidos; 1982, 1988, 1994, 1998. (In Spanish).

Moizeszowicz J, (Editor): Psychopharmacology-Psychodynamic IV. Therapeutic and Psychoneurobiological Strategies. Buenos Aires: Teller Grafico IBS; 2002. (In Spanish).

Moizeszowicz J, (Editor): Psychopharmacology-Psychodynamic IV. Updates. Buenos Aires: Roche; 2003, 2004, 2005, 2006, 2007, 2008. (In Spanish).

May 21, 2015

SECOND EDITION

**JULIO MOIZESZOWICZ: PSICOFARMACOLOGIA
PSICODINAMICA. ASPECTOS NEUROQUIMICOS y
PSICOLOGICOS**

(Psychodynamic Psychopharmacology. Neurochemical and Psychological Aspects)

**Buenos Aires: Editorial Paidos
2nd edition 1988 (670pages)**

Reviewed by Carlos Morra

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 psychotropic 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. Antipsychotic 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

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

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- General Principles
 - Psychogeriatric history
 - History of present illness
- Factors with an effect on treatment outcome
 - Compliance to medication
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 - 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

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Bibliography

XII. Psychopharmacology of epilepsy in adults
by Dr. Fernando Alvarez

The epilepsies

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Anticonvulsants

Mechanisms of action

Pharmacokinetics

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Diphenylhydantoin

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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

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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

THIRD EDITION

**JULIO MOIZESZOWICZ: PSICOFARMACOLOGIA
PSICODINAMICA. ASPECTOS NEUROQUIMICOS y
PSICOLOGICOS**

*(Psychodynamic Psychopharmacology. Neurochemical and Psychological
Aspects)*

**Buenos Aires: Editorial Paidos
3rd edition 1994 (833 pages) (Reprinted 1996)**

Reviewed by Carlos Morra

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

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- Presynaptic
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- 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

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- 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 Channel Blockers

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

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Anxiolytics

Antihistaminics

Anticonvulsants

Other drugs

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- 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

- Combined treatment drugs
- Drug holidays
- Psychiatric Disorders in patients with Parkinson's Disease
 - Primary disorders
 - Secondary disorders
- Bibliography

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

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Bibliography

15. *Pharmacological treatment of addictions*

Introduction

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Etiological and clinical factors

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Opium

Morphine

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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

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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

FOURTH EDITION

**JULIO MOIZESZOWICZ: PSICOFARMACOLOGIA
PSICODINAMICA. ASPECTOS NEUROQUIMICOS y
PSICOLOGICOS**

*(Psychodynamic Psychopharmacology. Neurochemical and Psychological
Aspects)*

4th edition

Buenos Aires: Editorial Paidos; 1998 (1248 pages)

Reviewed by Carlos Morra

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

 Immunopeptides

 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)

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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

borderline personality; a third, reviews the psychopharmacology of women's sexual cycle disorders; and a fourth, is dedicated to epidemiologic and molecular principles of genetic mental disorders.

August 27, 2015

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-enkephalin, 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 Axelrod 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 adenylyclase 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 Lütke), 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 involuntional 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_B. On page 524, a diagram on involuntional 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, ibuprophen and prednisone which counter pro-inflammatory cytokines)
12. Neural Growth Factor (a beta polypeptide, neurotrophins, discovered by Levi-Montalcini).

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

**Julio Moizeszowicz and Mirtta Moizeszowicz\): Psychopharmacology and
Freudian Theory**

PSYCHOPHARMACOLOGIA Y TERRITORIO FREUDIANO

Teoría y clínica de un abordaje interdisciplinario

Psychopharmacology and Freudian Territory

Theoretical and clinical aspects from an interdisciplinary viewpoint

Julio Moizeszowicz-and Mirta Moizeszowicz

Buenos Aires/Barcelona/Mexico: Paidos; 2000. (292 pages)

Reviewed by Hector Warnes

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.

The monograph is divided into seven chapters: 1. Neuronal circuits; 2. Panic attack; 3. Delusional disorders (paranoid types); 4. Depressive disorders; 5 Bipolar Disorders; 6. Schizoaffective disorders and 7. Borderline disorders.

Freud’ 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, mnemonic 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; Conversi3n disorder; Somatoform disorder; Hypochondria; Dysmorphophobia; 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.
4. "Toxic nucleus" as related to psychoneurobiology and early response types.
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.

November 19, 2015

