

Brain and Mind Control

STS.003

Fall 2010

Unit 6: Mind

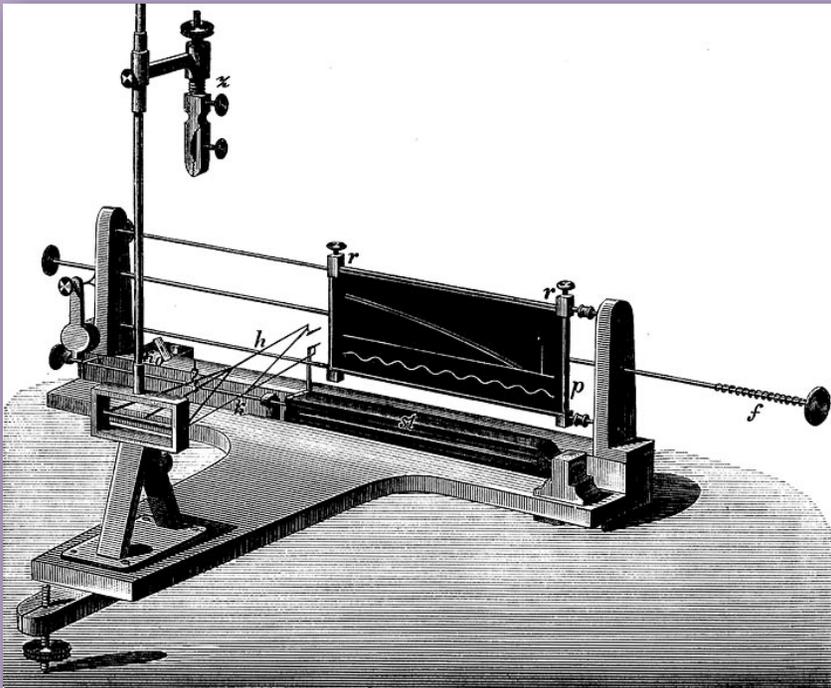
- a. action of thinking, or occurrence of a thought;
- b. the organ of the human brain.

- (1) Is it possible to understand the human mind and brain?
- (2) Science, power, and control.

How To Study the Brain?

Image from an fMRI machine removed due to copyright restrictions.

Image from an EEG removed due to copyright restrictions.



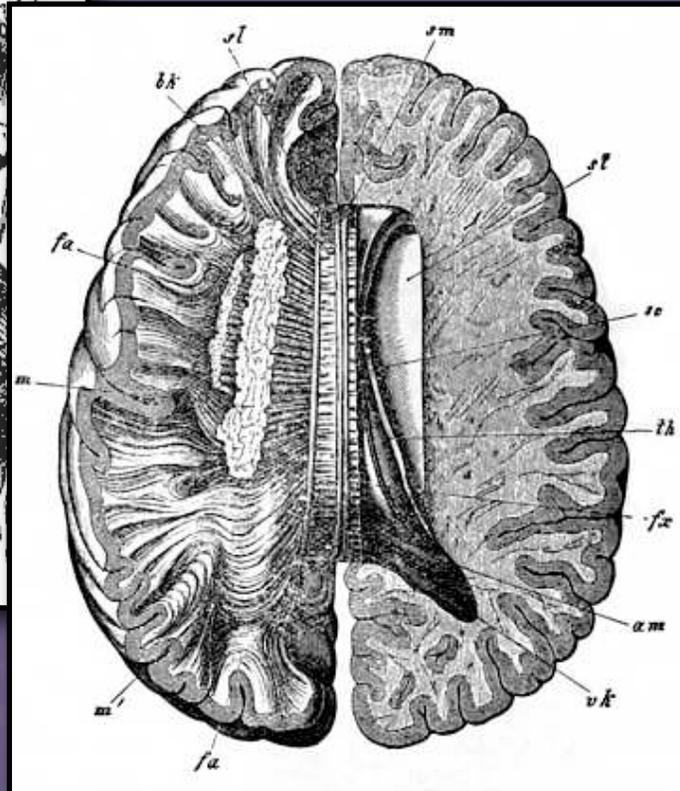
How To Control the Brain?

Traditional Knowledge of Psychoactive Drugs



- Tobacco
- Coca
- Poppy
- Peyote
- Marijuana...

Psychoactive Substances



Brain as a Chemical Organ?



Photograph of an 1899 bottle of Bayer Aspirin removed due to copyright restrictions.

Bayer Aspirin (1899):
From Willow Trees
to Acetylsalicylic Acid

BAYER PHARMACEUTICAL PRODUCTS.

Send for samples
and Literature to



FARBENFABRIKEN OF
ELBERFELD CO.

40 STONE STREET,
NEW YORK.

Diacetylmorphine (1897): Heroin

- Barbiturates

- Isolated 1864

- Sedative effects 1903

- Amphetamines

- Isolated 1887

- Stimulant effects 1930s

*Thanks to
Dexamyl*
brand of
dextroamphetamine sulfate and amobarbital

she can say "No thank you"
to the praline sundae

'Dexamyl' does more than most anorectics. Because it not only curbs appetite but also lifts mood, 'Dexamyl' can give the discouraged dieter the confidence she needs to stay on her diet.

The mood lift with 'Dexamyl' can make the difference between the success or failure of her diet plan.

Formulas: Each 'Dexamyl' Spansule® Capsule (brand of sustained release capsule) No. 1 contains 30 mg. of Dexedrine® (brand of dextroamphetamine sulfate) and 1 gr. of amobarbital, derivative of barbituric acid [Warning, may be habit forming]. Each 'Dexamyl' Spansule Capsule No. 2 contains 15 mg. of Dexedrine (brand of dextroamphetamine sulfate) and 1½ gr. of amobarbital [Warning, may be habit forming].

Principal precautions and side effects: Use with caution in patients hypersensitive to sympathomimetics or barbiturates and in coronary or cardiovascular disease or severe hypertension. Insomnia, excitability and increased motor activity are infrequent and ordinarily mild.

Before prescribing, see SK&F product Prescribing Information.

Smith Kline & French Laboratories 



Drug Policy:

Photo of law enforcement officers with seized cocaine removed due to copyright restrictions.

Safety?
Crime?
Pleasure?
Asocial?

COCA-COLA
SYRUP * AND * EXTRACT.

For Soda Water and other Carbonated Beverages.

This "INTELLECTUAL BEVERAGE" and TEMPERANCE DRINK contains the valuable TONIC and NERVE STIMULANT properties of the Coca plant and Cola (or Kola) nuts, and makes not only a delicious, exhilarating, refreshing and invigorating Beverage, (dispensed from the soda water fountain or in other carbonated beverages), but a valuable Brain Tonic, and a cure for all nervous affections — SICK HEAD-ACHE, NEURALGIA, HYSTERIA, MELANCHOLY, &c.

The peculiar flavor of COCA-COLA delights every palate; it is dispensed from the soda fountain in same manner as any of the fruit syrups.

J. S. Pemberton;
Chemist,
Sole Proprietor, Atlanta, Ga.



COCAINE
TOOTHACHE DROPS

Instantaneous Cure!
PRICE 15 CENTS.
Prepared by the
LLOYD MANUFACTURING CO.
219 HUDSON AVE., ALBANY, N. Y.
For sale by all Druggists.
(Registered March 1885.) See other side.

Front cover of "The New Yorker," May 23, 2005, removed due to copyright restrictions.

Controlling Mental Illness: Psychotherapy? Psychiatry of Everyday Life

State Lunatic Asylum, Danvers, Massachusetts 1878-1992

Photos of the State Lunatic Asylum in Danvers, Massachusetts and a female patient removed due to copyright restrictions.

DESPERATION AND THERAPEUTIC EXPERIMENTATION

- Hydrotherapy
- Malaria Fever Therapy
- Insulin Coma Therapy
- Electroconvulsive Therapy
- Psychosurgery



Image of a Portuguese stamp honoring Egas Moniz removed due to copyright restrictions.

Illustrations explaining how a prefrontal lobotomy is performed removed due to copyright restrictions.

Egas Moniz

Prefrontal lobotomy
12 November 1935

Transorbital Lobotomy

“Human Salvage”

Therapeutic Niche

Illustration on how to perform a transorbital lobotomy removed due to copyright restrictions.

Photograph of a patient receiving a transorbital lobotomy removed due to copyright restrictions.

Image of “Last Resort Psychosurgery and the Limits of Medicine,” Jack D. Pressman, removed due to copyright restrictions,

1950s: Rapid Advances in Psychopharmacology

Advertisements for Thorazine, Valium, and Tofranil (1950s) removed due to copyright restrictions.

DEINSTITUTIONALIZATION

Graph displaying the number of inpatients housed in asylums and hospitals between 1950 and 1995 removed due to copyright restrictions. In 1955 the first antipsychotic drugs were introduced. There was a gradual decline in patients until 1965 when Medicaid and Medicare were enacted, at which point there was a steep decline. In the mid-80s, the decline of patients slowed down,

- 1955: 558,239 in asylums
 - of 164M: 340/100,000
- 1994: 71,619 in hospitals
 - of 260M: 28/100,000
- 92% reduction: 763,391 people out of hospitals in 1994 who would have been in hospitals in 1955

Routinization of Psychopharmacology

Two covers from "Time" removed due to copyright restrictions. One included the cover story "Are We Giving Kids Too Many Drugs" and the other had "Attention Deficit Disorder Its not just kids who suffer from it."



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Still trying to get ahead of your depression?

If you've been on an antidepressant for at least six weeks and still have unresolved symptoms of depression, ask your doctor about adding SEROQUEL XR.

Important Safety Information About SEROQUEL XR
 Elderly patients with dementia-related psychosis (having lost touch with reality due to confusion and memory loss) treated with this type of medicine are at an increased risk of death, compared to placebo (sugar pill). SEROQUEL XR is not approved for treating these patients.

Antidepressants have increased the risk of suicidal thoughts and actions in some children, teenagers, and young adults. Patients of all ages starting treatment should be watched closely for worsening of depression, suicidal thoughts or actions, unusual changes in behavior, agitation, and irritability. Patients, families, and caregivers should pay close attention to any changes, especially sudden changes, in mood, behaviors, thoughts, or feelings. This is very important when an antidepressant medicine is started or when the dose is changed. These symptoms should be reported immediately to the doctor. SEROQUEL XR is not approved for patients under the age of 18 years.

- Stop SEROQUEL XR and call your doctor right away if you have very high fever; stiff muscles; shaking; confusion; sweating; changes in pulse, heart rate, or blood pressure; or muscle pain and weakness, as these may be signs of a rare, but potentially fatal, side effect called neuroleptic malignant syndrome (NMS)
- If you have diabetes or risk factors such as obesity or a family history of diabetes, your doctor should check your blood sugar before you start taking SEROQUEL XR and also during therapy. If you develop symptoms of high blood sugar or diabetes, such as excessive thirst or hunger, increased urination, or weakness, contact your doctor. Complications from diabetes can be serious and even life threatening
- Increases in triglycerides and in LDL (bad) cholesterol and decreases in HDL (good) cholesterol have been reported with SEROQUEL XR. Your doctor should check your cholesterol levels before you start SEROQUEL XR and during therapy
- Weight gain has been reported with SEROQUEL XR. Your doctor should check your weight regularly
- Tell your doctor about any movements you cannot control in your face, tongue, or other body parts, as they may be signs of a serious condition called tardive dyskinesia (TD). TD may not go away, even if you stop taking SEROQUEL XR. TD may also start after you stop taking SEROQUEL XR

● Tell your doctor if you have a history of low white blood cell count or seizures. Your doctor should check for cataracts. Other risks include feeling dizzy or lightheaded upon standing, decreases in white blood cells (which can be fatal), drowsiness, impaired judgment, and trouble swallowing

● Use caution before driving or operating machinery until you know that you can do so safely. Avoid alcohol while taking SEROQUEL XR

● The most common side effects are drowsiness, dry mouth, constipation, dizziness, increased appetite, upset stomach, weight gain, fatigue, disturbance in speech and language, and stuffy nose

This is not a complete summary of safety information about prescription SEROQUEL XR.

Indication
 SEROQUEL XR is a once-daily tablet approved in adults for add-on treatment to an antidepressant for patients with major depressive disorder (MDD) who did not have an adequate response to antidepressant therapy.

Please read the Brief Summary of Important Information about SEROQUEL XR on the next two pages.
 You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1-800-FDA-1088.

For questions to ask your doctor, visit SeroquelXR.com or call 1-866-331-3010.

If you're without prescription coverage and can't afford your medication, AstraZeneca may be able to help. For more information, please visit AstraZeneca-us.com.

Learn more at SeroquelXR.com

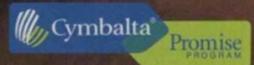
Once-daily
SEROQUEL XR[®]
 quetiapine fumarate
 extended-release tablets

SEROQUEL XR is a registered trademark of the AstraZeneca group of companies.
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AstraZeneca

If you're struggling with depression, a helping hand.

Introducing the Cymbalta Promise program.



Try Cymbalta for up to 60 days.
If you and your doctor are not satisfied, you'll get your money back.

Talk to your doctor and visit www.cymbaltapromise.com.

Restrictions apply; see terms and conditions below.

Ask your doctor about Cymbalta and the Cymbalta Promise program.

When you're depressed, every day can feel like a struggle. It can be hard to feel like things are going to get better. And even harder to think about finding the right treatment option.

The Cymbalta Promise program is designed to help you get started on Cymbalta and to encourage an ongoing dialogue with your doctor throughout your treatment. If you and your doctor aren't satisfied with Cymbalta, you may be reimbursed 100% of your out-of-pocket prescription costs for up to the first 60 days of treatment. Our goal is to help you get on the right treatment, whether it's Cymbalta or not. This program is not a guarantee of efficacy. It provides a trial period that may help you and your doctor assess the efficacy, safety, and tolerability of Cymbalta.

To learn more about the Cymbalta Promise program and to enroll, visit our website at www.cymbaltapromise.com or call 1-877-CYMBALTA.

Cymbalta is a prescription medication approved for the treatment of depression.



If you need assistance with prescription costs, help may be available. Visit www.pparx.org or call 1-888-4PPA-NOW.

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

Important Safety Information About Cymbalta

Antidepressants can increase suicidal thoughts and behaviors in children, teens, and young adults. Suicide is a known risk of depression and some other psychiatric disorders. Call your doctor right away if you have new or worsening depression symptoms, unusual changes in behavior, or thoughts of suicide. Be especially observant within the first few months of treatment or after a change in dose. Approved only for adults 18 and over.

Cymbalta® (duloxetine HCl) is not for everyone. Do not take Cymbalta if you:

- Have recently taken a type of antidepressant called a Monoamine Oxidase Inhibitor (MAOI) or Mellari® (thioridazine)
- Have uncontrolled narrow-angle glaucoma (increased eye pressure)

Talk with your healthcare provider:

- About all your medical conditions, including kidney or liver problems, glaucoma, diabetes, seizures, or if you have bipolar disorder. Cymbalta may worsen a type of glaucoma or diabetes
- If you have itching, right upper belly pain, dark urine, yellow skin/eyes or unexplained flu-like symptoms while taking Cymbalta, which may be signs of liver problems. Severe liver problems, sometimes fatal, have been reported

Important Safety Information (continued)

- About your alcohol use
- About all your medicines, including those for migraine, to address a potentially life-threatening condition. Symptoms may include high fever, confusion, and stiff muscles
- If you are taking NSAID pain relievers, aspirin, or blood thinners. Use with Cymbalta may increase bleeding risk
- Before stopping Cymbalta or changing your dose
- If you experience dizziness or fainting upon standing while taking Cymbalta. This is likely to occur in the first week or when increasing the dose, but may occur at any time during treatment
- About your blood pressure. Cymbalta can increase your blood pressure. Your healthcare provider should check your blood pressure prior to and while taking Cymbalta
- If you experience headache, weakness, confusion, problems concentrating, memory problems, or feel unsteady while taking Cymbalta, which may be signs of low sodium levels
- If you develop problems with urine flow while taking Cymbalta
- If you are pregnant or plan to become pregnant during therapy, or are breast-feeding

Most common side effects of Cymbalta (this is not a complete list):

- Nausea, dry mouth, constipation, sleepiness, increased sweating, decreased appetite, dizziness, and weakness

Other safety information about Cymbalta:

Cymbalta may cause sleepiness and dizziness. Until you know how Cymbalta affects you, you should not drive a car or operate hazardous machinery.

See back page for additional information for patients about Cymbalta, including Boxed Warning.

Terms and Conditions: Reimbursement offered for up to 60 days of Cymbalta therapy to a maximum of \$700. Prescriptions for more than two capsules per day are not eligible for reimbursement. Limit one reimbursement per person. Offer void where prohibited by law. Valid only in the United States for US residents. Offer not valid if your prescription claims for Cymbalta are reimbursed, in whole or in part, by (1) any governmental program, including, without limitation, Medicaid, Medicare, or any other federal or state program, such as Champus, the VA, TRICARE, or a state pharmaceutical assistance program, or (2) any third-party payer in the state of Massachusetts. By accepting this offer, you agree to notify your insurance carrier of reimbursement if required to do so by law or under the terms of coverage. Additional exclusions may apply and this offer may be terminated, rescinded, revoked or amended by Lilly USA, LLC at any time without notice. Cymbalta® and the Cymbalta Logo are trademarks of Eli Lilly and Company.



Lilly

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1

month* since I took my
schizophrenia medicine,
INVEGA® SUSTENNA®

*Once monthly after starting doses.

IMPORTANT SAFETY INFORMATION

INVEGA® SUSTENNA® (paliperidone palmitate) is used for the treatment of schizophrenia.

INVEGA® SUSTENNA® is not approved for the treatment of dementia-related psychosis in elderly patients. Elderly patients who were given oral antipsychotics like INVEGA® SUSTENNA® in clinical studies for psychosis caused by dementia (memory problems) had a higher risk of death.

- Neuroleptic Malignant Syndrome (NMS) is a rare, but serious side effect that could be fatal and has been reported with INVEGA® SUSTENNA® and similar medicines. Call your doctor right away if you develop symptoms such as a high fever, rigid muscles, shaking, confusion, sweating more than usual, increased heart rate or blood pressure, or muscle pain or weakness. Treatment should be stopped if you are being treated for NMS.
- Tardive Dyskinesia (TD) is a rare, but serious and sometimes permanent side effect reported with INVEGA® SUSTENNA® and similar medicines. Call your doctor right away if you start to develop twitching or jerking movements that you cannot control in your face, tongue, or other parts of your body. The risk of developing TD and the chance that it will become permanent is thought to increase with the length of therapy and the total dose received. This condition can also develop after a short period of treatment at low doses, but this is less common. There is no known treatment for TD, but it may go away partially or completely if the medicine is stopped.
- One risk of INVEGA® SUSTENNA® is that it may change your heart rhythm. This effect is potentially serious. You should talk to your doctor about any current or past heart problems. Because these problems could mean you're having a heart rhythm abnormality, contact your doctor **IMMEDIATELY** if you feel faint or feel a change in the way that your heart beats (palpitations).
- High blood sugar and diabetes have been reported with INVEGA® SUSTENNA® and similar medicines. If you already have diabetes or have risk factors such as being overweight or a family history of diabetes, blood sugar testing should be done at the beginning and during the treatment. The complications of diabetes can be serious and even life-threatening. Call your doctor if you develop signs of high blood sugar or diabetes, such as being thirsty all the time, having to urinate or "pass urine" more often than usual, or feeling weak or hungry.
- Weight gain has been observed with INVEGA® SUSTENNA® and other atypical antipsychotic medications. If you notice that you are gaining weight, please notify your doctor.
- Some people may feel faint, dizzy, or may pass out when they stand up or sit up suddenly. Be careful not to get up too quickly. It may help if you get up slowly and sit on the edge of the bed or chair for a few minutes before you stand up. These symptoms may decrease or go away after your body becomes used to the medicine.
- INVEGA® SUSTENNA® and similar medicines have been associated with decreases in the counts of white cells in circulating blood. If you have a history of low white blood cell counts or have unexplained fever or infection, then please contact your doctor right away.
- INVEGA® SUSTENNA® and similar medicines can raise the blood levels of a hormone called prolactin, and blood levels of prolactin remain high with continued use. This may result in some side effects including missed menstrual periods, leakage of milk from the breasts, development of breasts in men, or problems with erection.
- If you have a prolonged or painful erection lasting more than 4 hours, seek immediate medical help to avoid long-term injury.
- Call your doctor right away if you start thinking about suicide or wanting to hurt yourself.

 Janssen

Division of Ortho-McNeil-Janssen
Pharmaceuticals, Inc.

© Ortho-McNeil-Janssen Pharmaceuticals, Inc. 2010 November 2010 01PM10064C

0

missed doses
for the month



- INVEGA® SUSTENNA® can make some people feel dizzy, sleepy, or less alert. Until you know how you are going to respond to INVEGA® SUSTENNA®, be careful driving a car, operating machines, or doing things that require you to be alert.
- This medicine may make you more sensitive to heat. You may have trouble cooling off or be more likely to become dehydrated. Be careful when you exercise or spend time doing things that make you warm.
- Some medications interact with INVEGA® SUSTENNA®. Please inform your healthcare professional of any medications or supplements that you are taking.
- INVEGA® SUSTENNA® should be used cautiously in people with a seizure disorder, who have had seizures in the past, or who have conditions that increase their risk for seizures.
- Inform your healthcare professional if you become pregnant or intend to become pregnant during therapy with INVEGA® SUSTENNA®.
- Do not drink alcohol while you are taking INVEGA® SUSTENNA®.
- In a study of people taking INVEGA® SUSTENNA®, common side effects in the treatment of schizophrenia were reactions at the injection site, sleepiness, dizziness, feeling of inner restlessness, and abnormal muscle movements, including tremor (shaking), shuffling, uncontrolled involuntary movements, and abnormal movements of the eyes.
- This is not a complete list of all possible side effects. Ask your doctor or treatment team if you have any questions or want more information.
- You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

INVEGA® SUSTENNA®, a once-monthly injection, given by your doctor or other healthcare professional, can help you manage your symptoms of schizophrenia and lessen the chance of the symptoms coming back, longer term.

Talk to your doctor to see if INVEGA® SUSTENNA® is right for you.

ONCE-MONTHLY

INVEGA® SUSTENNA®
paliperidone palmitate extended-release
injectable suspension

Visit www.invegasustenna2.com
for more information.

Please see the Medication Guide for INVEGA® SUSTENNA® on the next page.
Model used for illustrative purposes.

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ONE SIZE SHOULD NEVER FIT all

SNUS

WARNING: Smokeless tobacco is addictive.

The advertisement features a dark blue background with a faint silhouette of a person's head and shoulders. In the top right corner, there is a logo for Camel cigarettes, showing a camel and the words 'BREAK FREE'. The central text is in large, bold, white and blue letters, reading 'ONE SIZE SHOULD NEVER FIT all'. Below this, the word 'SNUS' is written in small white letters. At the bottom, a black rectangular box contains the warning 'WARNING: Smokeless tobacco is addictive.' in white, bold, sans-serif font.

Limits on Cigarettes, Seeking Other Outlets

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Most Profitable Medications

Graph of 2009 sales removed due to copyright restrictions.

See: http://www.pharmacytimes.com/media/pdf/PHTM_35.pdf

Photos of Diet Coke, Red Bull, Coffee, NoDoz, Provigil, and Ritalin removed due to copyright restrictions.

Caffeine -- Stimulants?

Article removed due to copyright restrictions. Farah, Martha J. "Emerging Ethical Issues in Neuroscience."
Nature Neuroscience 5 (2002): 1123-1129. <http://dx.doi.org/doi:10.1038/nn1102-1123>

Neuro Enhancement?

Image of "The Case Against Perfection," Michael J. Sandel, removed due to copyright restrictions,

Do the Drugs Work Well? Not in all (most?) cases...

PSYCHIATRIC EMERGENCY SERVICE

Photo of a Cambridge Health Alliance building removed due to copyright restrictions.

- Chronic psychoses
- Unable or unwilling to get treatment
- Homeless or marginal housing options
- Isolation, exposure, victims of crime
- Untreated medical disease, reduced life expectancy

Dystopian Visions: Soma

Image of "Brave New World,"
Aldous Huxley, removed due to
copyright restrictions.



Drugs and Imperialism: The British Opium Trade



Psychiatry and Civil Rights

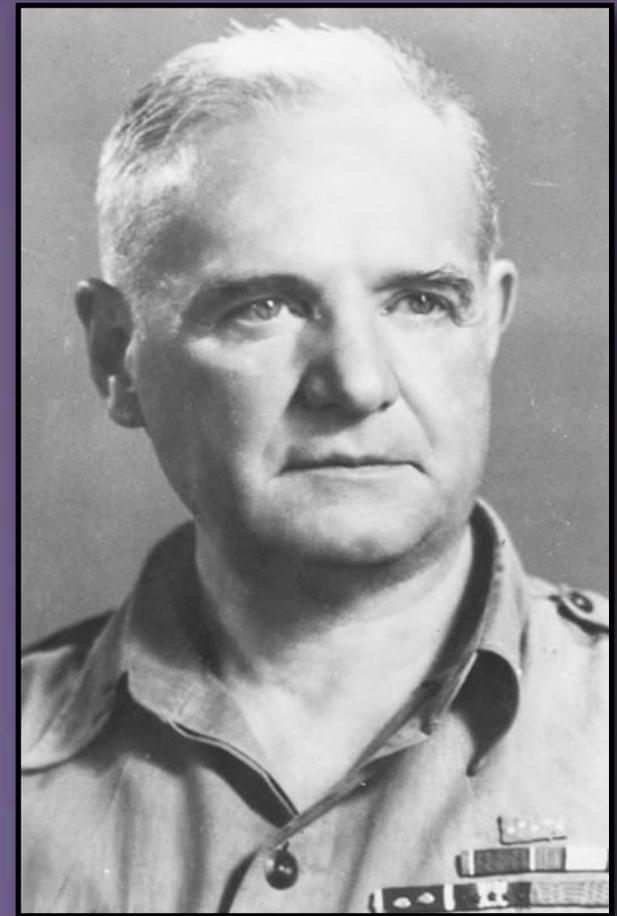
Photo of a "The Protest Psychosis
How Schizophrenia Became a
Black Disease," Jonathan Metzl,
removed due to copyright
restrictions.

Article removed due to copyright restrictions. Bromberg, W., and Simon.
The "Protest" Psychosis: A Special Type of Reactive Psychosis. *Arch
Gen Psychiatry* (1968): 155-160.

"growing up as a Negro in America may produce distortions or impairments in the capacity to participate in the surrounding culture which will facilitate the development of schizophrenic types of behavior..."

Raskin, Crook, and Herman (1970): "blacks" with schizophrenia rated higher than "whites" on a set of hostility variables due to delusional beliefs that "their civil rights were being compromised or violated."

Image of "The Complete Social History of LSD: The CIA, the Sixties, and Beyond," Martin A. Lee and Bruce Shlain, removed due to copyright restrictions.



General William Donovan (1942)
Office of Strategic Services
Interrogation Drugs

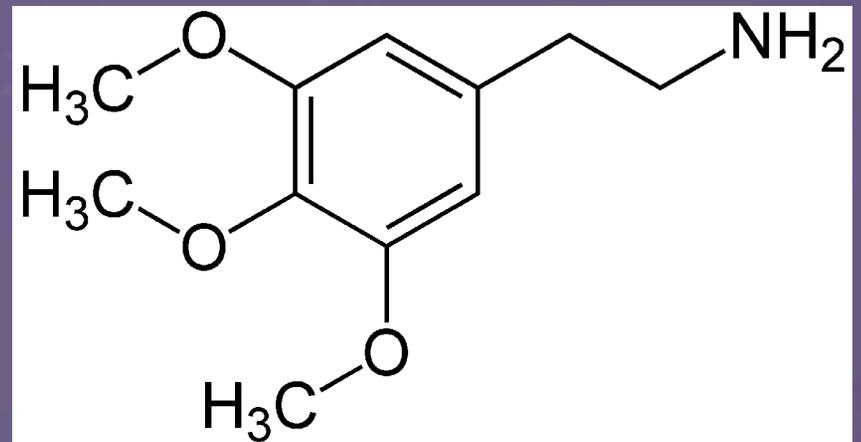
Photo of a United States of America War Department patch removed due to copyright restrictions.



Photo courtesy of [Manuel M. Ramos](#) on Flickr.

U.S. Navy
Project Chatter (1947)

Mescaline for Interrogations



This image is public domain.

Image of "Project Paperclip German Scientists and the Cold War,"
Clarence G. Lasby, removed due to
copyright restrictions.



War Department
Bureau of Public Relations
Press Branch
Tel. RE 6500
Brs. 3425 and 4860

October 1, 1945

IMMEDIATE

RELEASE

OUTSTANDING GERMAN SCIENTISTS
BEING BROUGHT TO U.S.

The Secretary of War has approved a project whereby certain understanding German scientists and technicians are being brought to this country to ensure that we take full advantage of those significant developments which are deemed vital to our national security.

Interrogation and examination of documents, equipments and facilities in the aggregate are but one means of exploiting German progress in science and technology. In order that this country may benefit fully from this resource a number of carefully selected scientists and technologists are being brought to the United States on a voluntary basis. These individuals have been chosen from those fields where German progress is of significant importance to us and in which these specialists have played a dominant role.

Throughout their temporary stay in the United States these German scientists and technical experts will be under the supervision of the War Department but will be utilized for appropriate military projects of the Army and Navy.

END

DISTRIBUTION: As, Af, B, Da, Dd, Dg, H,

4:30 P.M.

CIA's Search for Interrogation Drugs,
Microwave amnesia beams

5-11
F.L. - Ultra Sub-5
DRAFT-SC/111
11 May 1953

MEMORANDUM FOR THE RECORD

SUBJECT: Visit to Project [REDACTED] (A)

(C) 1. On this day the writer spent the day observing experiments with Mr. [REDACTED] on project [REDACTED], and in planning next year's work on the project (Mr. [REDACTED] has already submitted his proposal to the [REDACTED]).

2. The general picture of the present status of the project is one of a carefully planned series of five major experiments. Most of the year has been spent in screening and standardizing a large group of subjects (approximately 100) and the months between now and September 1 should yield much data, so that these five experiments should be completed by September 1. The five experiments are: (N stands for the total number of subjects involved in the experiment.)

Experiment 1 - N-18 Hypnotically induced amnesia to be completed by September 1.

Experiment 2 - N-24 Hypnotically increasing ability to learn and recall complex written matter, to be completed by September 1.

Experiment 3 - N-30 Polygraph response under hypnosis, to be completed by June 15.

Experiment 4 - N-24 Hypnotically increasing ability to observe and recall a complex arrangement of physical objects.

Experiment 5 - N-100 Relationship of personality to susceptibility to hypnosis.

3. The work for next year (September 1, 1953 to June 1, 1954) will concentrate on:

Experiment 6 - The normal nude problem, with the emphasis on relatively lower I.Q. subjects than found on University volunteers.

[REDACTED]

Operation Bluebird Operation Artichoke

- ESP, Seances
- Search for psychoactive drugs
- Cocaine, LSD

Albert Hofmann,
Sandoz Laboratories

Photo of Albert Hoffman removed due
to copyright restrictions.

Lysergic Acid Diethylamide
(1938)

Psychoactive effects: 1943

8-15
Boston

DRAFT ~~_____~~ A
9 June 1953

MEMORANDUM FOR THE RECORD

SUBJECT: Project MKULTRA, Subproject 8

1. Subproject 8 is being set up as a means to continue the present work in the general field of L.S.D. at ~~_____~~ until 11 September 1954. B

2. This project will include a continuation of a study of the biochemical, neurophysiological, sociological, and clinical psychiatric aspects of L.S.D., and also a study of L.S.D. antagonists and drugs related to L.S.D., such as L.A.E. A detailed proposal is attached. The principle investigators will continue to be ~~_____~~ C

3. The estimated budget of the project at ~~_____~~ is \$39,500.00. The ~~_____~~ will serve as a cut-out and cover for this project and will furnish the above funds to the ~~_____~~ as a philanthropic grant for medical research. A service charge of \$790.00 (2% of the estimated budget) is to be paid to the ~~_____~~ for this service. B

4. Thus the total charges for this project will not exceed \$40,290.00 for a period ending September 11, 1954.

5. ~~_____~~ (Director of the hospital) are cleared through TOP SECRET and are aware of the true purpose of the project. C

[Handwritten signature]
for ~~_____~~ A
Chemical Division/TSS

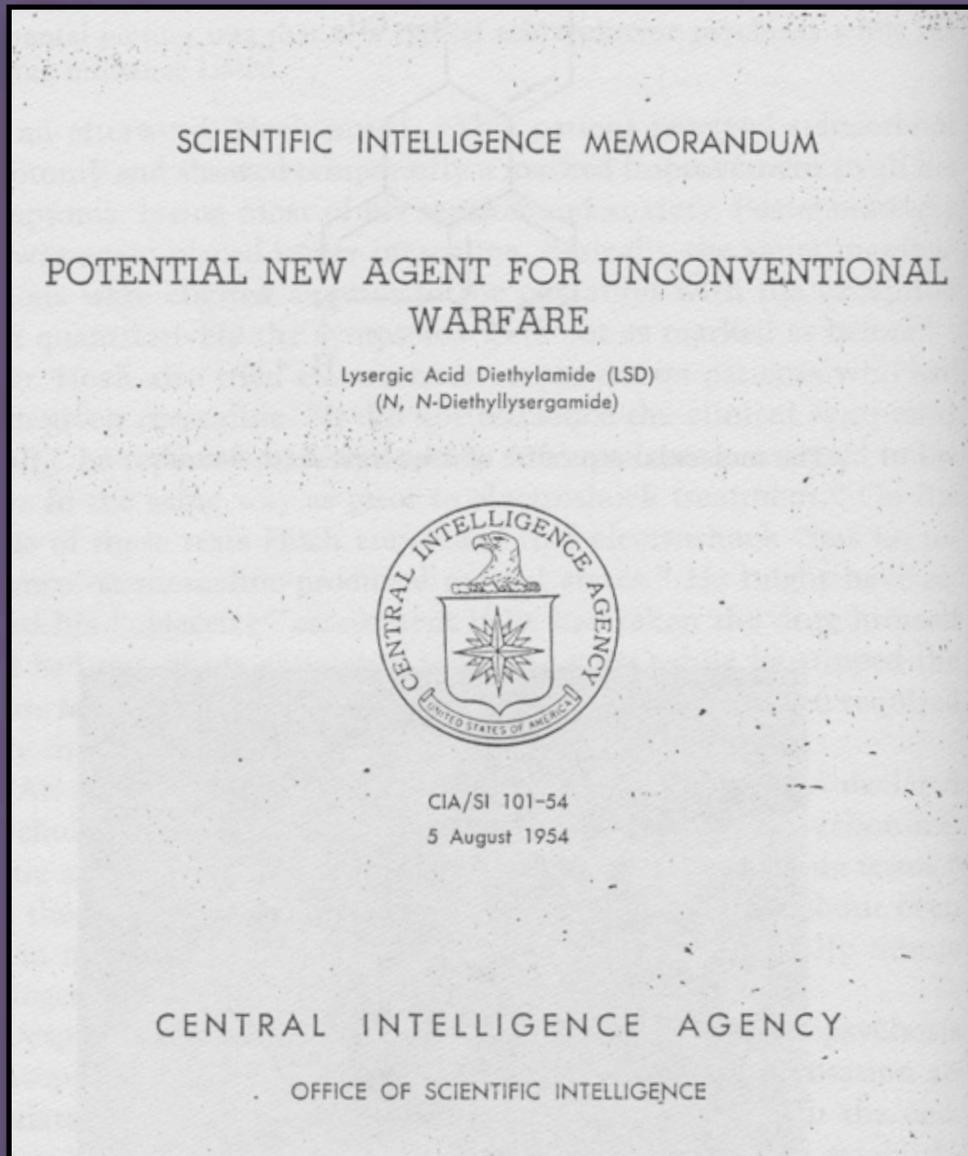
APPROVED:

[Handwritten signature]
Chief, Chemical Division/TSS

~~_____~~ PROGRAM

“There is no question that drugs are already on hand (and new ones are being produced) that can destroy integrity and make indiscreet the most dependable individual.”

-- CIA, c. 1951



- Interrogation
- Render agents useless to enemy interrogation
- Train agents to recognize effects
- “Psychochemical Warfare”



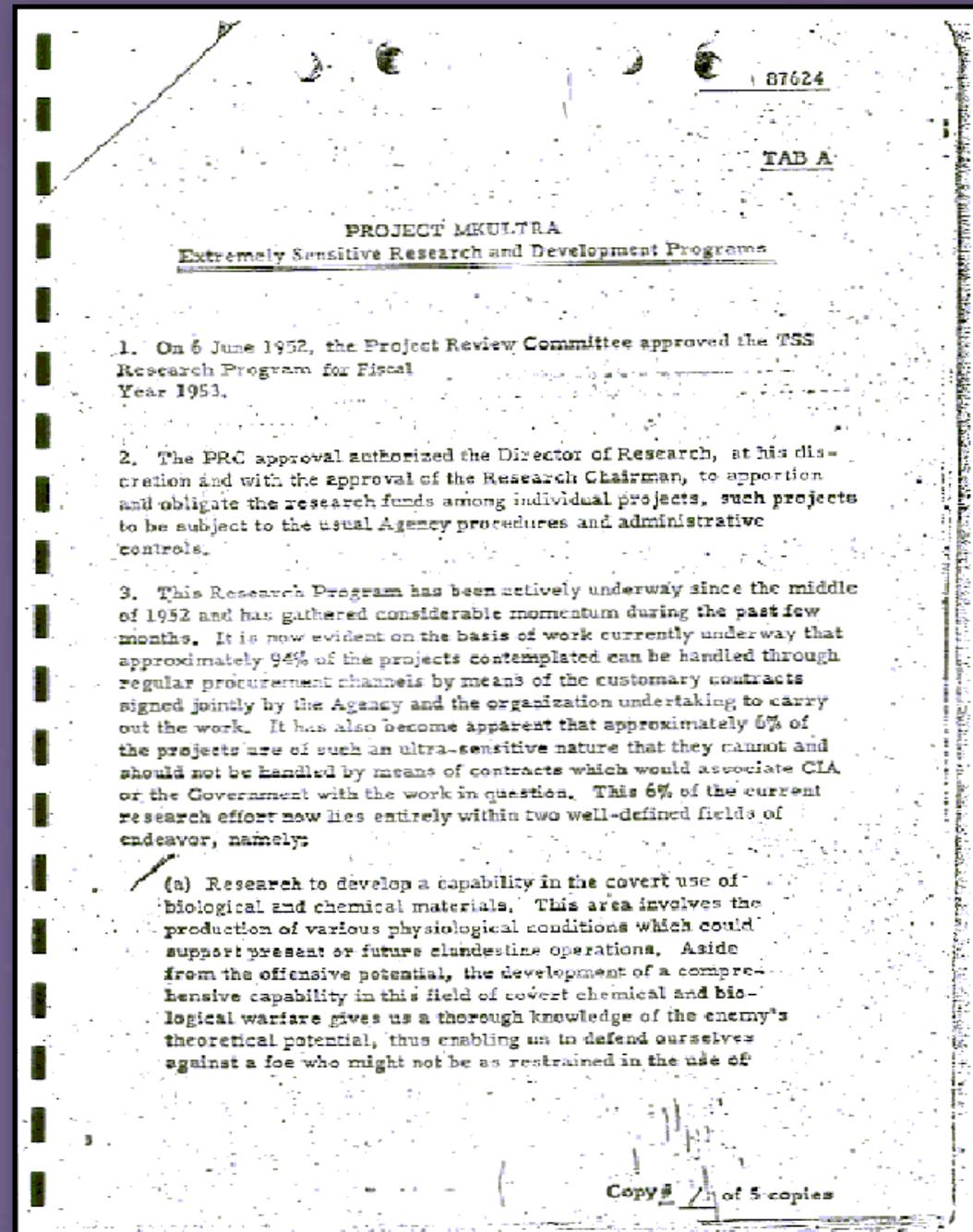
William Creasy,
Army Chemical Corps

“warfare is never
pleasant”

Allen Dulles (1953)
Brian as a "malleable tool"

Project MKULTRA

Newspaper article "CIA Infiltrated 17 Area Groups, Gave Out LSD"
removed due to copyright restrictions.



Website about Operation Midnight Clmax removed due to copyright restrictions.
See: <http://www.mistersf.com/notorious/index.html?notciaacid.htm>

Project MKULTRA

Defense Advanced Research Project Agency

“DARPA is really about The Brain.”

-- Amy Kruse, *DARPA Tech*, 2005

From National Security to Consumerism

*“Oxytocin Increases Advertising’s Influence: Hormone Heightened Sensitivity to Public Service Announcements”
from Science Daily removed due to copyright restrictions.*

See: [http://www.sciencedaily.com/releases/
2010/11/101115160404.htm](http://www.sciencedaily.com/releases/2010/11/101115160404.htm)

Lie Detectors?

Photo of a polygraph test being administered removed due to copyright restrictions.

The Polygraph Test

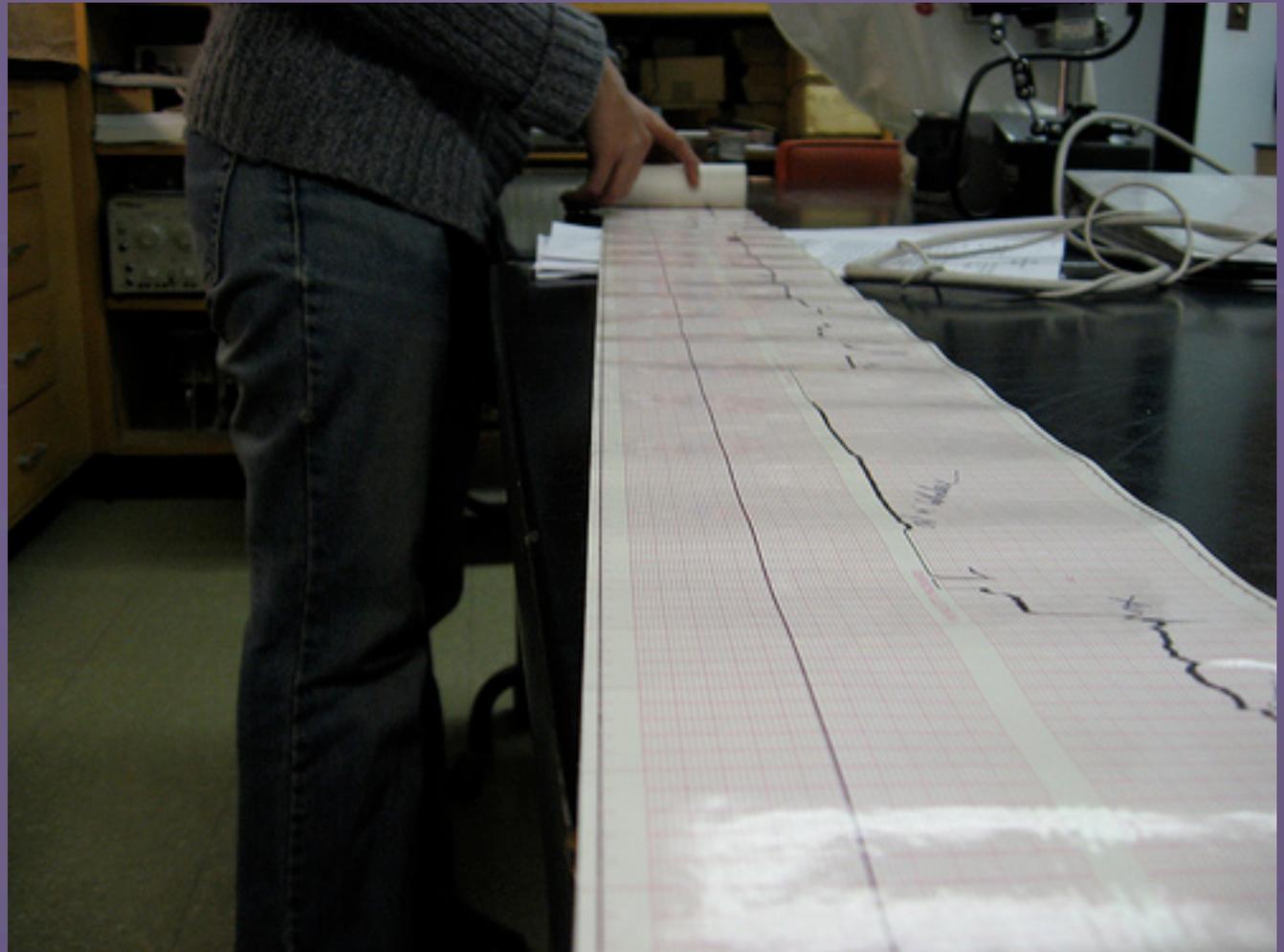


Photo by [puckrockscience](#) on Flickr.

Image from No Lie MRI removed due to copyright restrictions.
See: <http://www.noliemri.com>

Article "Brain Scan Lie-Detection Deemed Far From Ready For Courtroom," Alexis Medriga, removed due to copyright restrictions.

See: <http://www.wired.com/wiredscience/2010/06/fmri-lie-detection-in-court>

Website for Berenson-Allen Center for Noninvasive Brain
Stimulation removed due to copyright restrictions.
See: <http://www.tmslab.org>

Transcranial Magnetic Stimulation

Poster for "Eternal Sunshine of the Spotless Mind" (2004)
removed due to copyright restrictions.

- Treat mental illness
- Enhance mood, pleasure
- Enhance studying?
- Remove memories?
- Control behavior?

Article removed due to copyright restrictions.
Taiwar Sanjiv K., Shaohua Xu, et. al. "Behavioural neuroscience: Rat navigation guided by remote control." *Nature* 417 (2002): 37-38
See: <http://www.nature.com/nature/journal/v417/n6884/full/417037a.html>

Implants and Virtual Realities

Images from "The Matrix" (1999) removed due to copyright restrictions.

What is possible vs. what is science fiction?
What are possible good uses, what are likely abuses?

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