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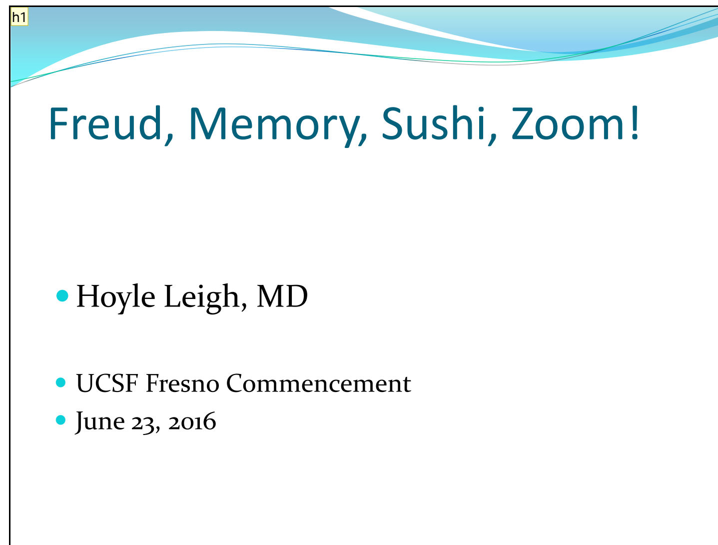

I am asked to share whatever wisdom that might be gleaned from my half century journey in psychiatry, perhaps before memories fade. So, here's a panorama of psychiatry from my developmental perspective.

Slide 2

As s a child growing up in South Korea, I loved mystery novels, especially Sherlock Holmes. Then, I was enamored with Sigmund Freud and psychoanalysis, a very novel idea then – that the mysteries of the unconscious mind could be detected to cure mental illness. Thus I went to medical school to become a psychoanalyst

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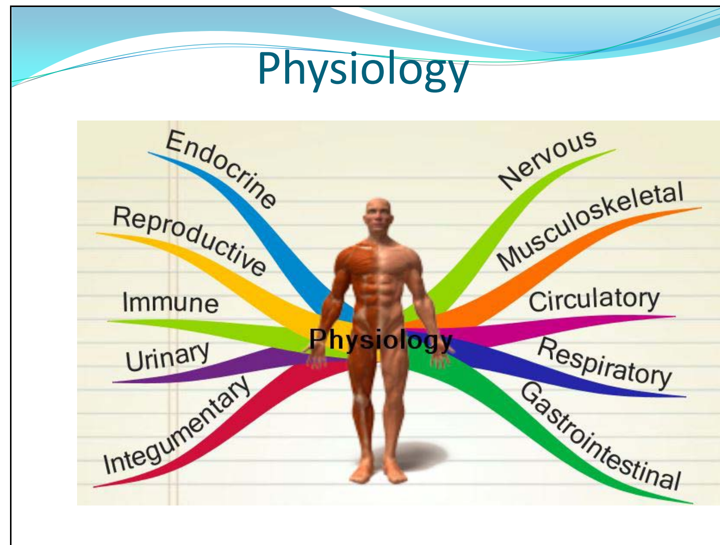


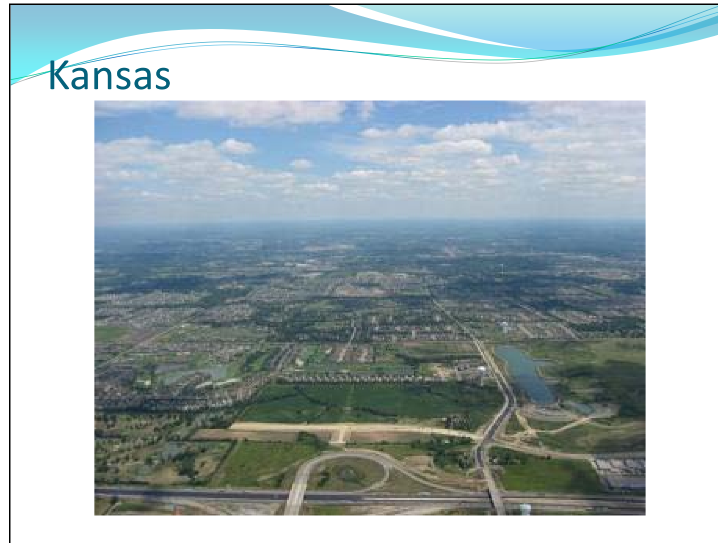
In medical school, though, I fell in love with physiology – how the living system functions together, and realized that all medicine is applied physiology – when physiology goes awry, it becomes pathology. This was a way of zooming out from the workings of the mind to the whole organism.

Slide 4

Brooklyn, NY, 1960s

I came to the US for internship in Brooklyn, NY, and found I had trouble communicating with my patients! Most were Puerto Ricans who spoke little or no English. When time came to decide on my residency, I decided to go to real America where English was spoken.

Slide 5



So, I went off to Kansas City, the geographic center of continental United States.
University of Kansas Psychiatry Department was affiliated with the Menninger Clinic, which was the Mecca of psychoanalytic thinking at that time, and was a major attraction for me.

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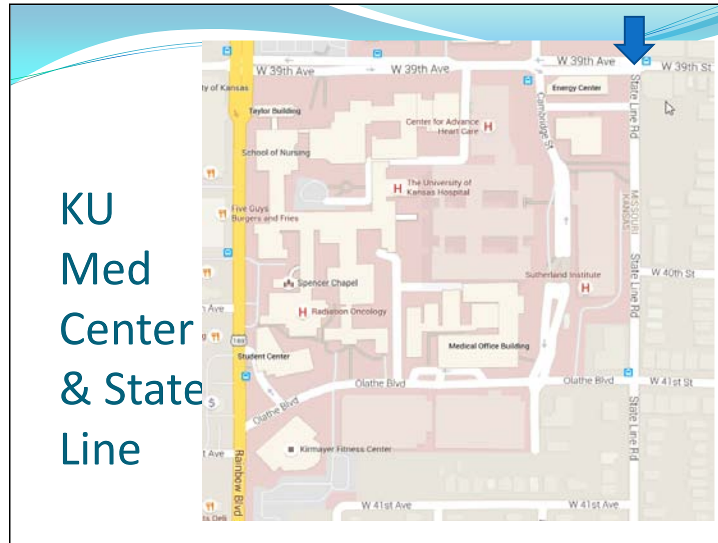
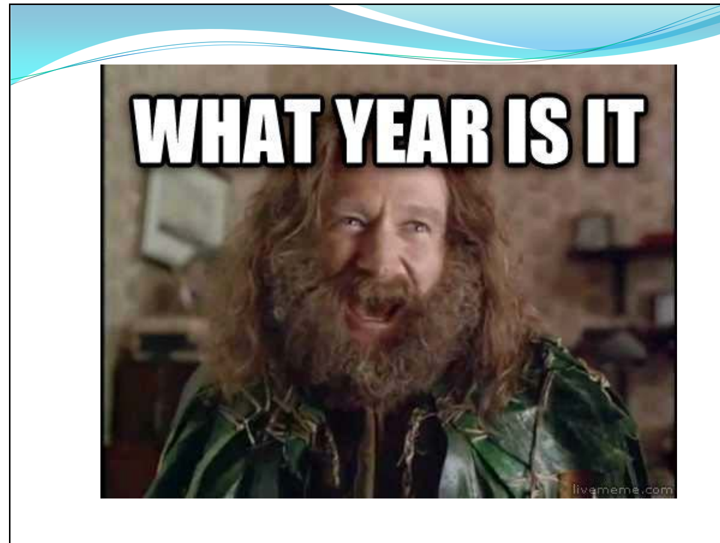


The Med Center was on the Kansas side of the state line, on the other side of which was Kansas City, Missouri. Kansas was a dry state, and Missouri was not. Guess what type of stores dominated the Missouri side of the street?

Slide 7

The Chair of the Psychiatry Department was trained under Adolf Meyer at Johns Hopkins, who believed that psychiatry was a medical specialty, and that psychiatrists should never lose their medical identity. He wore a white coat, and I have been wearing a white coat at work ever since. Adolf Meyer also developed the Life Chart, which I use in a modified form in my biopsychosocial presentations.

Slide 8



I decided to return to New York after one year in Kansas for two reasons – the pace in Kansas then was a bit too slow, and I yearned to be with my fiancée, who was in Brooklyn with years to go in her nursing school. Now my wife, Vinnie, runs the Psychiatry Intensive Outpatient Program at Kaiser, and we will be celebrating our 49th wedding anniversary this year. She was an excellent reason to leave Kansas behind.

Slide 9

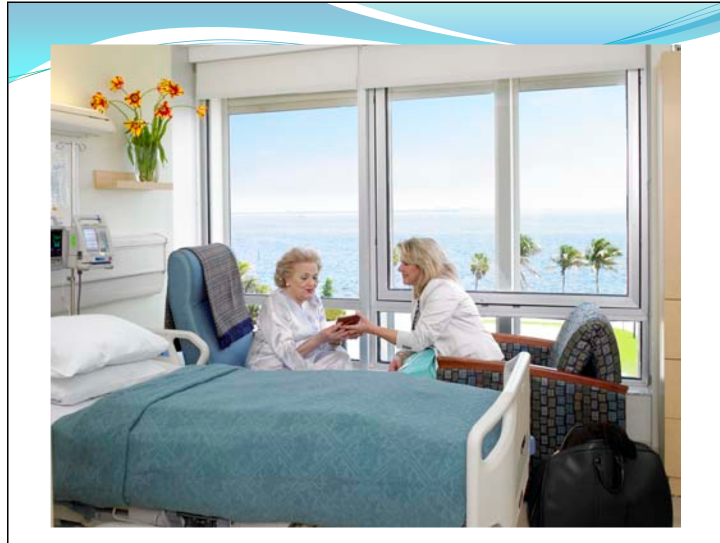
I continued my psychiatry residency at Montefiore Hospital in Bronx, NY. It was then an exciting place for psychiatry, with eminent faculty such as Edward Sachar, Morton Reiser, Herbert Weiner, Myron Hofer, Elizabeth Kubler-Ross – distinguished names in both dynamic psychiatry and psychosomatic medicine.

Slide 10

I found consultation-liaison psychiatry exciting as it bridged medicine and psychiatry. Under the mentorship of Mort Reiser and Myron Hofer, I engaged in a research project, studying the psychological consequences of a changeover of the coronary care unit from an open, four bed unit to a closed cubicle system.

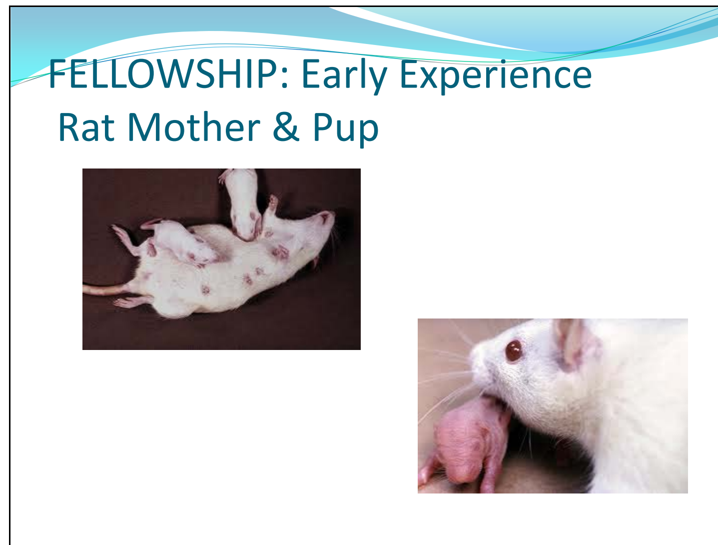
To do Medline search then, I had to give the librarian a bunch of key words and waited at least 2 weeks till the articles arrived. And to do statistics – I hand wrote the raw numbers into a table, then calculated all the values using a slide rule – square roots, sums of squares, t values, etc. It took several hours just to do one t-test. Now, Pubmed search can be done in seconds, as well as any of the statistical tests.

Slide 11



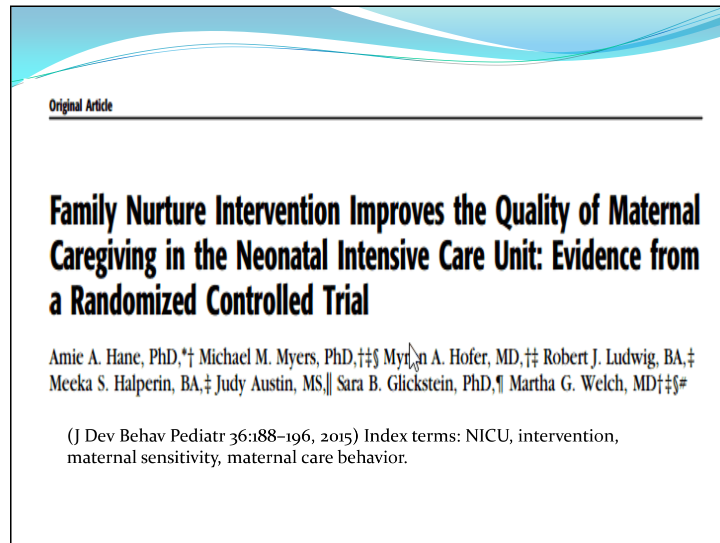
We were surprised and delighted to find that the CCU environment had effects on patient's mood- in the open unit, there was more overt expressed hostility, while in the closed unit, there was more covert hostility.[1] Now we also know that hospital environment can affect outcome and length of stay. Window with a view reduces length of stay[2]

Slide 12



Upon finishing residency, I decided to do a CL psychiatry and Research fellowship, half time each. For research, I decided to study rats under Dr. Myron Hofer - how isolation from peers in infancy affects the rat pup in adulthood. The upshot was that the peer deprived pup grows up to be hostile and fierce! You need early socialization to be civil.[3]

Slide 13



Later, Dr. Hofer was able to actually define the biochemical and neurobiological nature of mother-infant interaction and its loss. Now, as an emeritus Professor at Columbia, he is engaged in a study in the Neotatal Intensive Care Unit where specially trained nurses train mothers of high risk infants in a program of holding, touching and gazing at the infants and calming behaviors, and mutual support. This has begun to show improvement in all aspects of infant health including a decreased risk of autism, as well as improved maternal mental health. Mother-infant interaction can be taught! And the Memory of nurturance in infancy, even pre-term and non-verbal, persists. [4,5] In professional training, mentors provide the nurturance the effect of which lasts throughout your career.

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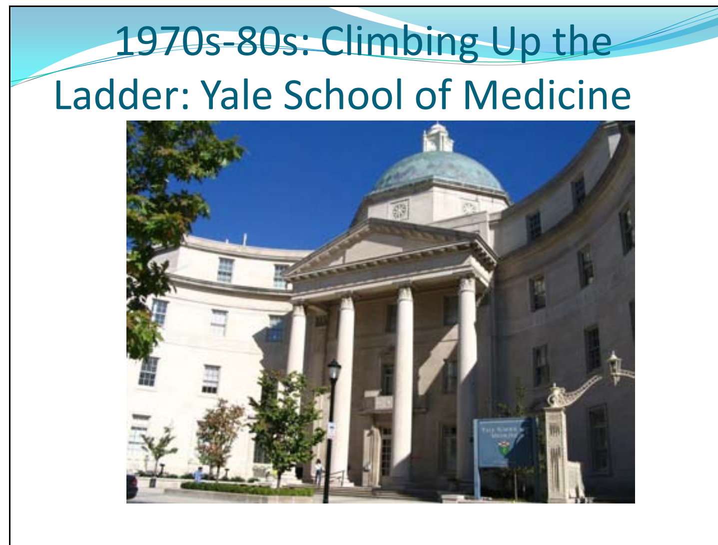


With three publications under my belt, I was able to obtain an Assistant Professorship at Yale School of Medicine.

Slide 15

It was the turbulent 70s, the Viet Nam War era with massive demonstrations and social upheaval including the sexual revolution. It was also an era of change in psychiatry. While antipsychotic drugs like chlorpromazine had been around for a while, with the availability of Social Security Disability and SSI, there was pressure to discharge patients from long-term state hospitals, and treat them in Community Mental Health Centers

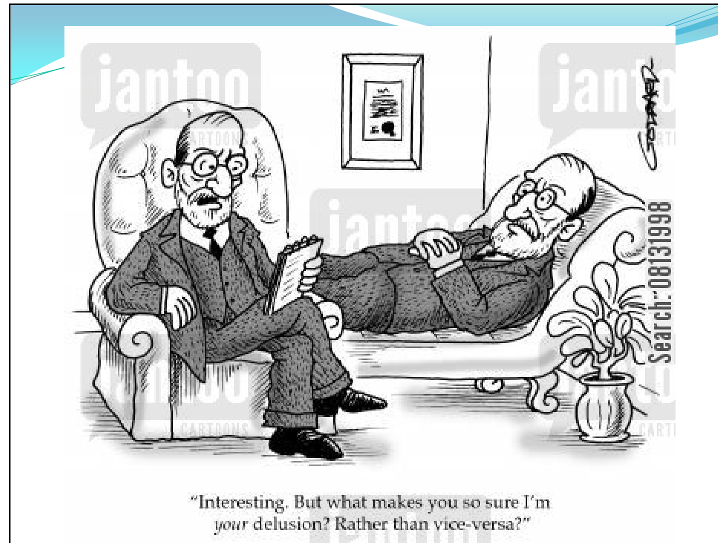
Slide 16

Psychopharmacology was ascendant, and catecholamine theory of affective disorders seemed to explain depression and mania. In the Soviet Union, psychiatry was misused by diagnosing dissidents with "Sluggish Schizophrenia", and forcibly incarcerating them and "treating" them with neuroleptics to deliberately cause the negative symptoms of apathy and lack of motivation.[6,7]

Slide 17

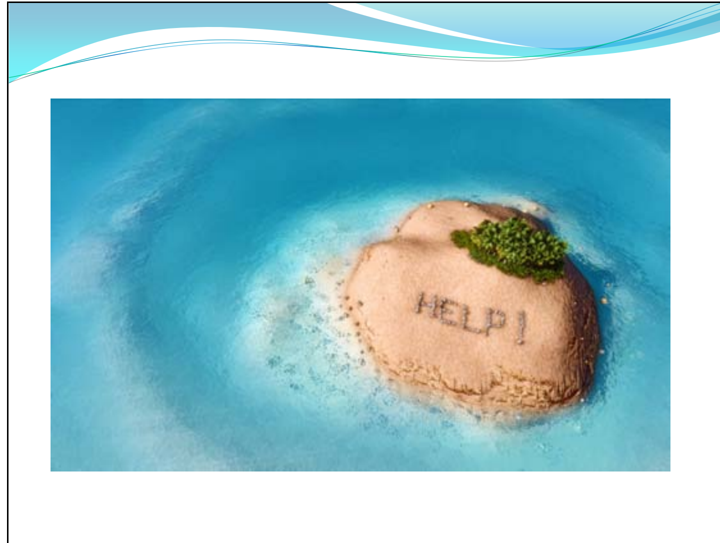
Nevertheless, I enrolled in the psychoanalytic institute in New Haven to fulfill the dream that led me to a medical career. Psychoanalytic training then involved personal analysis for five sessions per week, the cost of which per month equaled my entire paycheck. In a panic, I ran to the Chair, who arranged for me to be a consultant at the VA Hospital – the federal employee's medical coverage covered 80% of psychoanalysis. Whew!

Slide 18


"Interesting. But what makes you so sure I'm *your* delusion? Rather than vice-versa?"

The didactics were held on weekends – full day Saturdays and half a day on Sundays. Forget about having your own time with family! I soon felt rebellious at the dogmatism of many of the faculty who were openly contemptuous of anything but psychoanalysis – drugs, behavior therapy, biofeedback –all for the birds.

Slide 19



The institute was an island of repressive dogma despite the sea change of sexual revolution, which itself was brought on by Freudian liberation of sexuality. Furthermore, the time commitment for psychoanlaysis -two analytic cases plus didactics was about 25 hours a week, which you had to add on to your regular work week of at least 50 hours as a junior faculty. I took an indefinite leave of absence.

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Excting things were happening beyond psychoanalysis. DSM III now replaced the psychodynamic DSM II. Nevertheless, I continue to use the psychoanalytic technique of zooming into patients' affect that leads to their unconscious, a very useful tool. Behavioral Medicine, denoting the use of behavioral psychology techniques such as biofeedback in medicine, now became popular. I collaborated with Gary Schwartz, an eminent psychologist, in treating essential hypertension with biofeedback.[8-10]

Slide 21

Up to this point, to a large extent, psychiatrists were either dynamic psychiatrists or descriptive psychiatrists. Dynamic psychiatrists were psychoanalysts of various stripes, Freudian, Jungian, Adlerian, etc, and they were the dominant force. Descriptive psychiatrists or Kraepelinians were mostly based in State Hospitals and saw psychiatric illness as medical disease.

Slide 22

Now, the neo-Kraepelinians, in the form of biological psychiatrists, were becoming dominant, armed with their drugs: Librium for anxiety, Elavil for depression, chlorpromazine for psychosis, and Lithium for mania. Psychologists were also coming in, with the tools of biofeedback and cognitive behavioral therapy.

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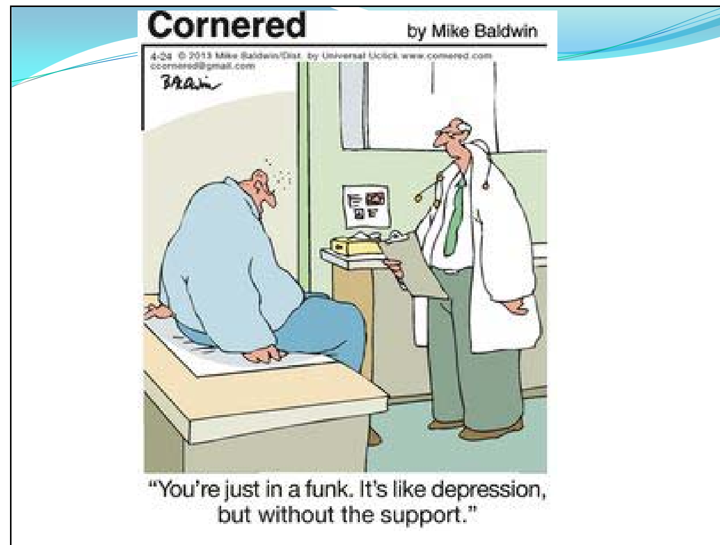
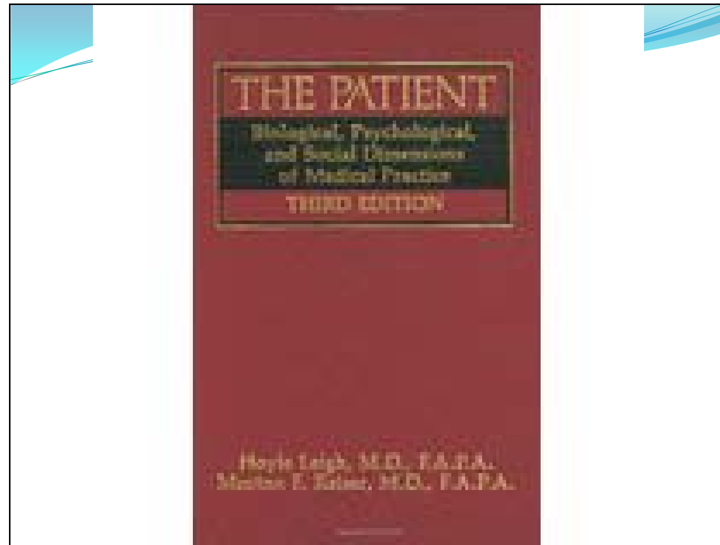


How should the future psychiatrist be trained in this flux? George Engel proposed the Biopsychosocial Model in contradistinction to the reductionistic biomedical model, but it was not entirely clear how the model could actually be utilized in medical and psychiatric practice.

Slide 24



With Morton Reiser, my mentor, and Alvan Feinstein, an eminent internist and medical theoretician, I developed the Patient Evaluation Grid (PEG) to operationalize the biopsychosocial model around a patient. The PEG is a simple grid formed by three horizontal lines intersected by three vertical lines which represent nine areas of information to be obtained

Slide 25

The Patient Model

- Leigh, Feinstein, & Reiser (1980): Operation-alization of Biopsychosocial Model- Patient Evaluation Grid (PEG)

Dimension	Context		
	Immediate	Recent	Background
Biological			
Personal			
Social			

The horizontal dimensions – biological, psychological, and social are intersected by the three vertical time contexts – current, recent, and background.[11] What PEG allows is to zoom in on significant items in any of the nine squares, for example, an experience of hospitalization at age 5 in the social dimension background context, and zoom out and relate it to the anxiety the patient feels now- psychological dimension, current context.

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ELSEVIER SAUNDERS

THE MEDICAL CLINICS OF NORTH AMERICA

Med Clin N Am 90 (2006) 713–758

Operationalizing Integrated Care on a Clinical Level: the INTERMED Project

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Joris P.J. Slaets, MD, PhD[b], John S. Lyons, PhD[d],
Corine H.M. Latour, CNS, RN[e],
Nynke van der Wal, ANP[b], Peter de Jonge, PhD[b,f]

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This framework gave rise to other attempts, including the Intermed, developed by Fritz Huyse in the Netherlands[12-14]. Patient Evaluation Grid became automatically generated in a computer program I created which also printed out a narrative history and mental examination of the patient, a precursor to EMR in psychiatry.

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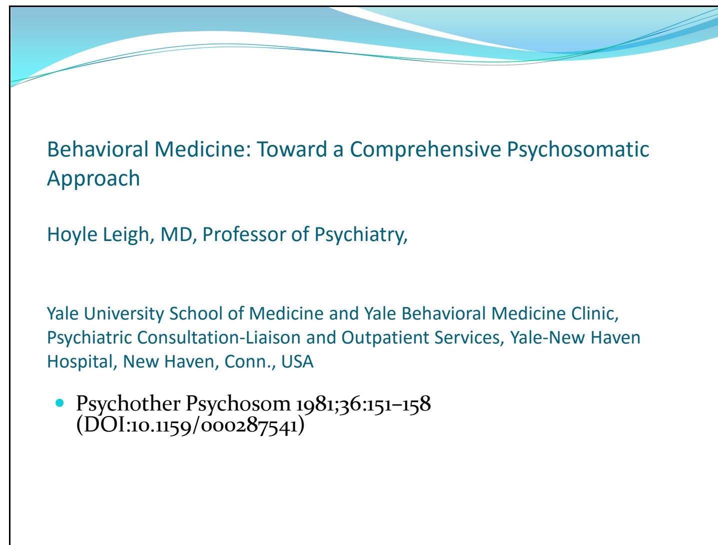

The Yale Behavioral Medicine Clinic was established by me as director and Gary Schwartz as Co-director. In this clinic, to which fellows in consultation liaison psychiatry and psychology interns rotated, we used the Patient Evaluation Grid for comprehensive evaluation and treatment of the patient in the biological, psychological, and social dimensions

Slide 28

We defined the role of the psychiatrist as the physician diagnostician and coordinator of care, in collaboration with psychologists, nurses, and social workers. We provided integrated care long before this term became popular.[15-18]

An important behavioral medicine research conducted in the Center was about essential hypertension. We were impressed by how optimistic in attitude many of the hypertensive patients were, and wondered whether they might be like opiate addicts.

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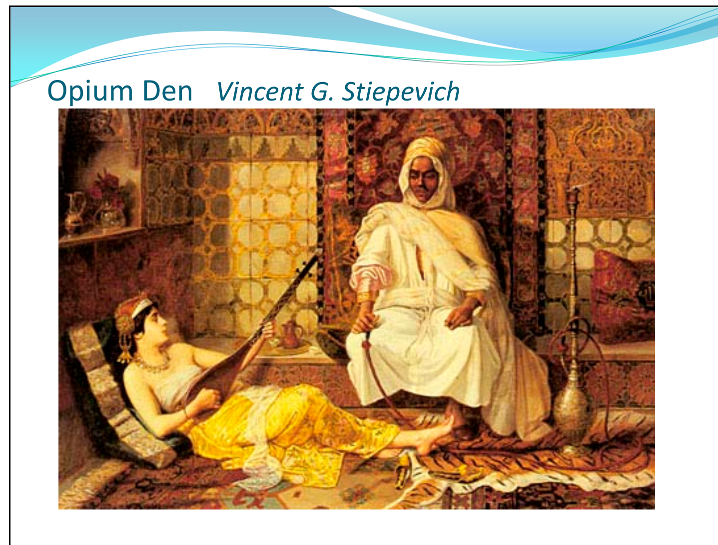

Recalling my rat handling days I remembered that there was a genetic strain of rats that invariably became hypertensive, and that they had a high level of central endorphin levels. In fact, many of our hypertensive patients used an optimistic, nonchalant attitude, which is called repressive coping defined by psychological measures.

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The repressive hypertensives also had greater blood pressure lability as well as decreased monocyte count. Family history of hypertension also coded for repressive coping style. Furthermore, we were able to block this effect by using naloxone and naltrexone. Larry Jamner, Gary Schwartz, and I formulated that increased endorphins may underlie the repressive coping style which in turn enhanced the risk of physiologic lability to stress and eventual hypertension.[19,20] Karl Marx called religion the opium of the masses. Might repressive coping be literally the opium of the weak?

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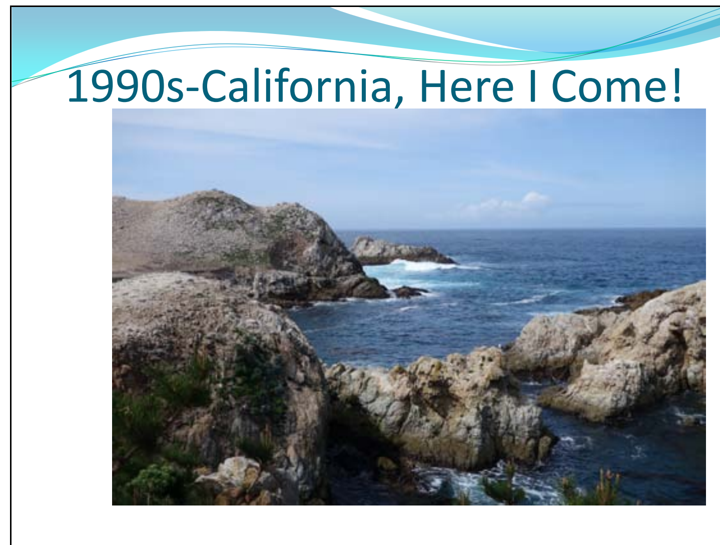
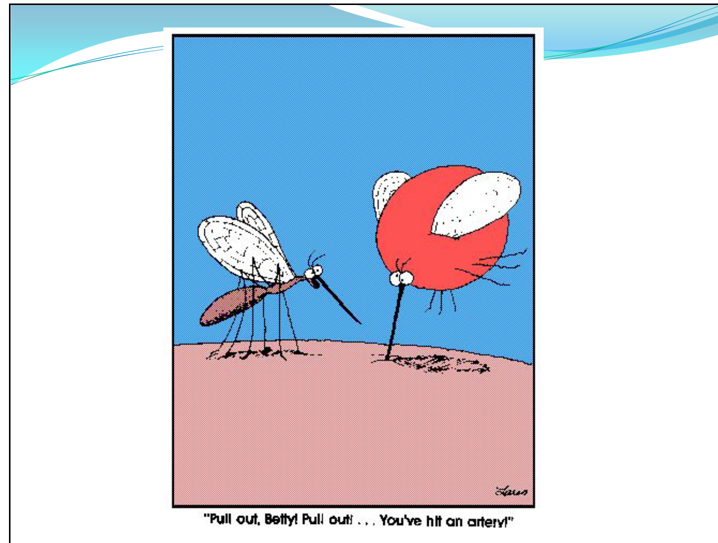


As 1980s were drawing to a close, I was getting a bit tired of the perpetual gray skies and rain in New Haven, and was attracted to sunny California and UCSF. Finding San Francisco a bit too expensive, I settled for UCSF Fresno, as Vice Chair, Co-director of Psychopathology Course in SF necessitating weekly trips to SF, Director of Residency Training in Fresno, Chief of Psychiatry at the VA as well as director of the newly established UCSF Fresno Behavioral Medicine Center.

Slide 32



. It took me ten years to admit that this was an impossible combination of jobs, and settled down again running the CL Service and devoting time to teaching and research

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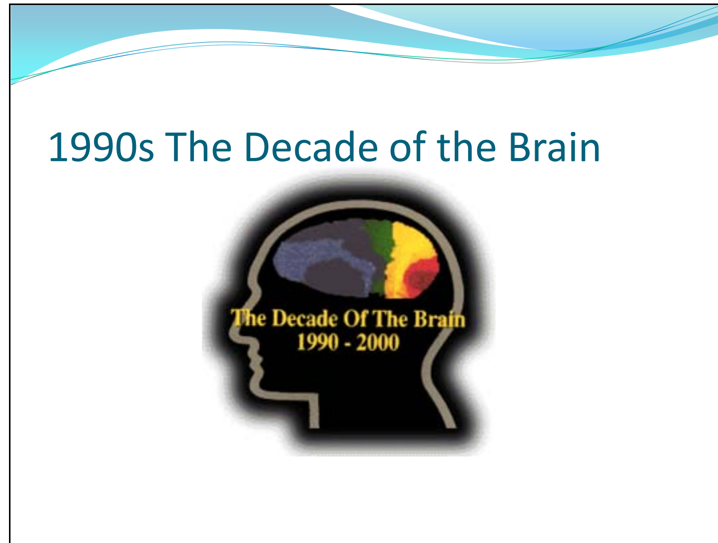

The 1990s was the Decade of the Brain and of the Human Genome Project, which was completed in 2003. I continued my work on endorphinergic mechanisms of repressive coping and hypertension with Larry Jamner, whom I had recruited to UCSF Fresno from Yale, who is now a professor at UC Irvine.[19,20]

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Coming back to CL psychiatry was a welcome change from my mostly administrative work. CL psychiatry, however, was changing. While at Yale, as director of the CL Service at Yale New Haven Hospital, I received an NIMH grant to assign residents to do liaison work with medical and surgical departments. Psychiatry residents were able to provide education and collaborative care to medical and surgical services free of charge! The budget cutting Republican administrations put an end to these NIMH grants, and in the era of cost-conscious managed care, no one was willing to pay for liaison psychiatry! Consultation-liaison psychiatry became in effect just consultation psychiatry.

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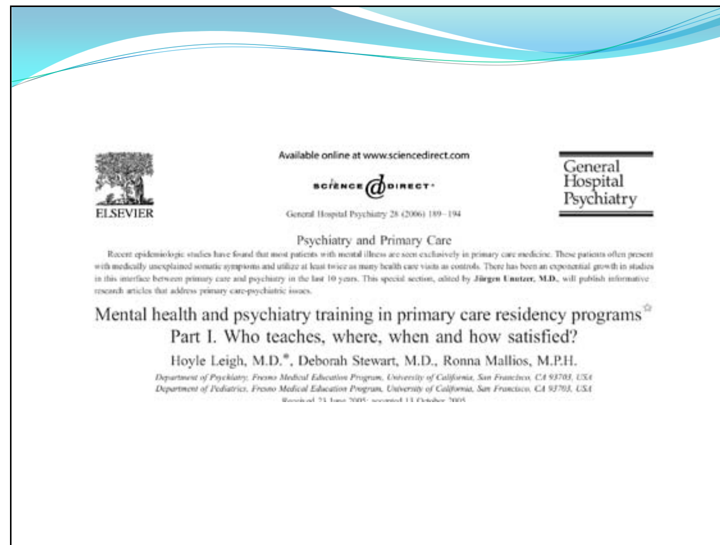

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General Hospital Psychiatry 28 (2006) 189–194

General Hospital Psychiatry

Psychiatry and Primary Care

Recent epidemiologic studies have found that most patients with mental illness are seen exclusively in primary care medicine. These patients often present with medically unexplained somatic symptoms and utilize at least twice as many health care visits as controls. There has been an exponential growth in studies in this interface between primary care and psychiatry in the last 10 years. This special section, edited by **Jürgen Unutzer, M.D.**, will publish informative research articles that address primary care-psychiatric issues.

Mental health and psychiatry training in primary care residency programs ☆
Part I. Who teaches, where, when and how satisfied?

Hoyle Leigh, M.D.*, Deborah Stewart, M.D., Ronna Mallios, M.P.H.

Department of Psychiatry, Fresno Medical Education Program, University of California, San Francisco, CA 93703, USA
Department of Pediatrics, Fresno Medical Education Program, University of California, San Francisco, CA 93703, USA

Direct teaching of medical students and doing consultations with medical patients, however, made me acutely aware of the need to formally train primary care physicians in psychiatry now that there were no designated liaison psychiatrists. In collaboration with the then Associate Dean Deborah Stewart, and Ronna Mallios, our statistician, I conducted a national survey of psychiatry teaching in primary care training programs and found that all primary care specialties except family practice felt that their psychiatry training was deficient and desired more training.

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Psychiatry Training for Primary Care Physicians and the Implementation of the ACA: Pragmatic and Conceptual Issues

- **Hoyle Leigh, M.D. (Chair)**
  Professor of Psychiatry, UCSF
- **Jon Streltzer, M.D.**
  Professor of Psychiatry, University of Hawaii
- **Seth Powsner, M.D.**
  Professor of Psychiatry and Emergency Medicine, Yale
- **Don Lipsitt, M.D.**
  Professor of Psychiatry, Harvard
- **Beena Nair, M.D.**
  Associate Clininical Professor of Psychiatry, UCSF

My colleagues Don Lipsitt of Harvard, Seth Powsner of Yale, Jon Streltzer of University of Hawaii, and our own Beena Nair conducted a series of workshops at the APA annual meetings spanning ten years on how to teach psychiatry effectively in primary care training programs.

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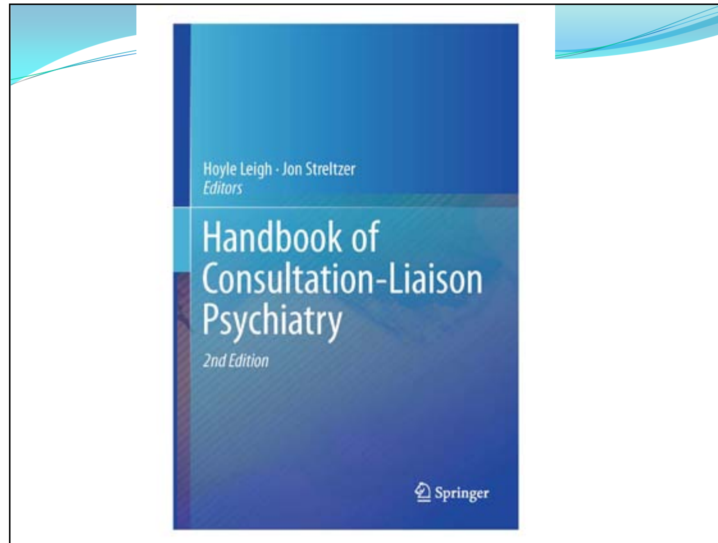

I also wrote the textbook, *Handbook of Consulation-Liaison Psychiatry* with Jon Streltzer, which had a second enlarged edition published last year. Beena Nair contributed two chapters to this book. [21,22]

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RESEARCH Original article

Telepsychiatry appointments in a continuing care setting: kept, cancelled and no-shows

Hoyle Leigh*, Herbert Cruz† and Ronna Mallios‡

*Department of Psychiatry, University of California, San Francisco, Fresno Medical Education Program, Fresno; †Kings View Corporation, Fresno; ‡University of California, San Francisco, Fresno Medical Education Program, Fresno, USA

Summary

We reviewed the appointment data for a psychiatry service in California that provided consultations and also therapy through telepsychiatry. Over an 18-month period, there were 7523 telepsychiatry appointments and 115,148 conventional (face-to-face) appointments. A higher proportion of the telepsychiatry appointments was kept (92% telepsychiatry vs. 87% non-telepsychiatry). Also, telepsychiatry appointments were significantly less likely to be cancelled by patients (3.5% vs. 4.8%) and significantly less likely to be no-shows (4.2% vs. 7.8%). These findings were similar in three of the four counties where the service was delivered. However, one county was different, and further examination suggested that the morale of the staff and patients may have contributed to the unenthusiastic acceptance of telepsychiatry. We conclude that telepsychiatry can be used effectively in continuing care settings as well as in evaluation settings, and that staff and patient morale are important factors in successful telepsychiatry.

Telepsychiatry was an answer to the shortage of psychiatrists in some remote rural areas. Our faculty, Herb Cruz of Kings View Health Care pioneered telepsychiatry in which I participated. Our program was somewhat different from most other telepsychiatry programs in that we offered continuing care rather than just consultations or evaluations. Herb Cruz and I published a paper showing that continuing psychiatric care was well accepted by telepsychiatry patients and that in this setting, telepsychiatry appointments were kept better than conventional appointments.[23]

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Dealing with my patients, I became increasingly impressed with the role of early experience in health and illness – a throwback to my rat handling days in New York when I found early peer deprivation resulted in permanent change in behavioral and physiologic reactivity. Epigenetics – how early experience turns genes on or off, was now a new frontier of medical research. But how, exactly, is the experience stored in the brain? As memories, of course.

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Memory and Information as Synaptic Growth

Information in the brain is
Stored as memory, clusters
Of neurons interconnected
With potentiation and new
Synaptic growth.

19-4 Long-term memory and the prion-like CPEB protein. As a result of a prior stimulus, the sensory cell's nucleus has sent dormant messenger RNA (mRNA) to all axon terminals (1). Five pulses of serotonin at one terminal convert a prion-like protein (CPEB) that is present at all synapses into a dominant, self-perpetuating form (2). Dominant CPEB can convert recessive CPEBs to the dominant form (3). Dominant CPEB activates dormant messenger RNA (4). The activated messenger RNA regulates protein synthesis at the new synaptic terminal, stabilizes the synapse, and perpetuates the memory.

- From Kandel E: In Search of Memory p274

But how are memories stored? They are, of course, neural connections as Eric Kandel, the first psychiatrist to win the Nobel Prize, demonstrated. [24,25]. It dawned on me that memory stored as neural connections in the brain must be identical to memes – information that comes from outside – milieu, culture.

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Only depicts viral nature of memes

That is, incoming memes in the form of visual stimuli, i.e. reading, auditory stimuli by hearing, reading through touch as Braille, ultimately result in neural connections that form units of information, regardless of the mode of original sensation. "Water" is water whether the meme comes in as a picture in a bottle, in a glass, the sound "water" or spelled w-a-t-e-r, or wasser in German or agua in Spanish. The term, *meme,* was coined by Richard Dawkins, the evolutionary biologist, and connotes the unit of information in culture that replicates in brains.[26] Gerald Edelman, a Nobel laureate, described the natural selection of neurons in somatic time[27,28].

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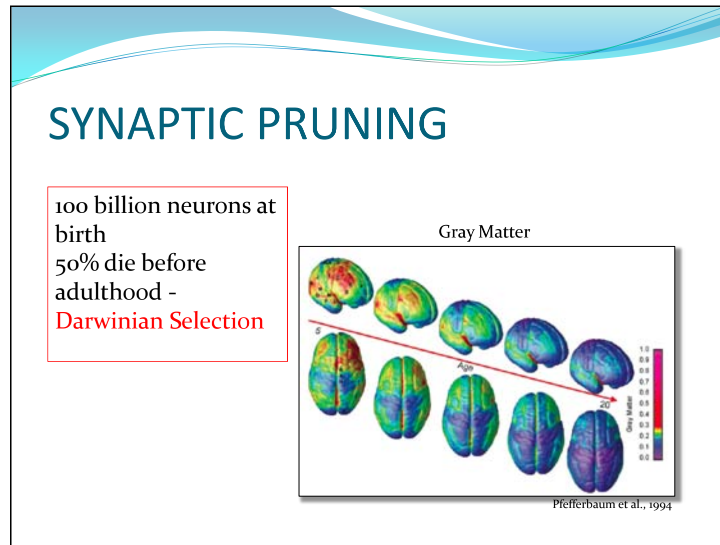

Synaptic Pruning is a catastrophic massacre of brain cells. We are born with about 100 billion neurons. By the end of adolescence, about half of the neurons are dead. This seems to occur in all mammalian species, and may in fact be conducive in enhancing efficiency of the brain in adulthood. Who gets pruned?
Connected neurons, especially strongly interconnected neurons seem to be resistant to pruning. Edelman's Darwinian natural selection for the neurons favors good connections. Memes may play a role in the pruning - strongly connected pathogenic memes may enhance predisposition to pathology. In fact, there is evidence that abnormal pruning occurs in schizophrenia. Strongly connected healthy memes may overcome pathologic ones.

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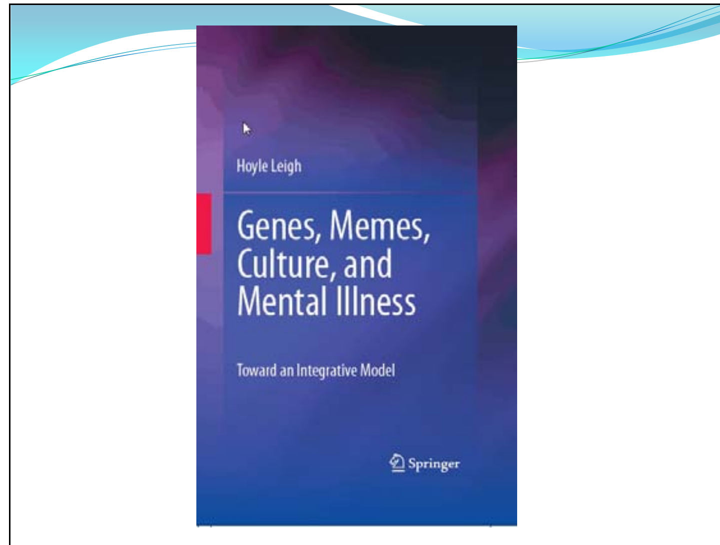
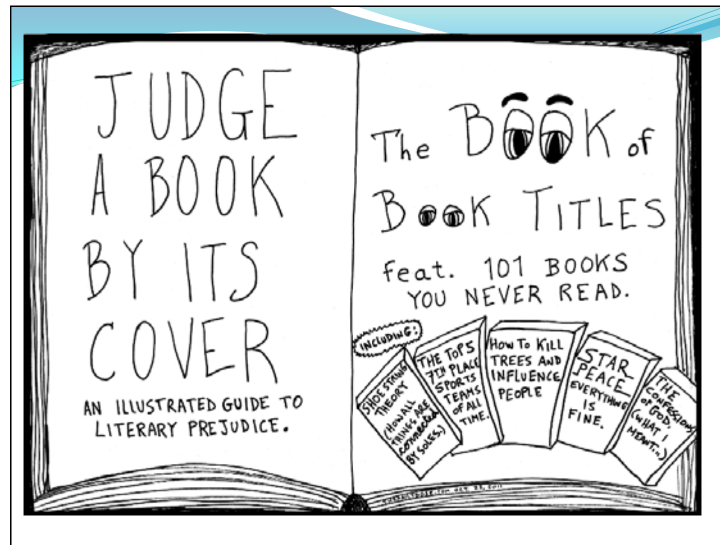


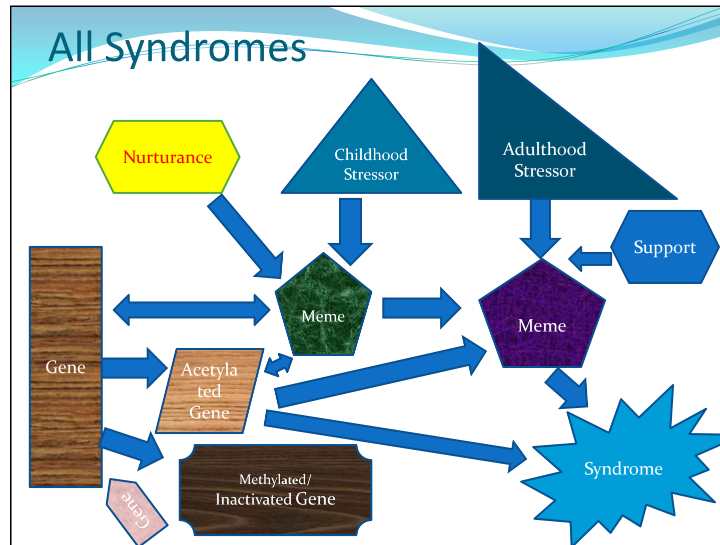
I wrote in my book, *Genes, Memes, Culture, and Mental Illness*, that memes are bits of information, portable memory, that reside in our brains, in air waves, in books, DVDs, computers, or any other media.[29-32] In infancy, we are like organisms in a Petri dish, absorbing both nutrient chemicals as well as memes - bits of information absorbed through imitation as well as active learning - how to walk, point, smile, and talk

Slide 44



Memes are stored in the brain as memory, both of personal experience and absorbed memes from culture - values, morals, traditions, taboos. Memories of early nurturance and abuse as well as memes absorbed from others such as "You are no good",   Also prejudices and stereotypes, e.g., "because you are female...", "because you are black...", etc.

Slide 45



In the book I propose an infection model of mental illness - early infection by pathogenic memes causing epigenetic changes in vulnerable individuals, which, coupled with recent and current stressor, results in a final common pathway descent into a major syndrome such as depression

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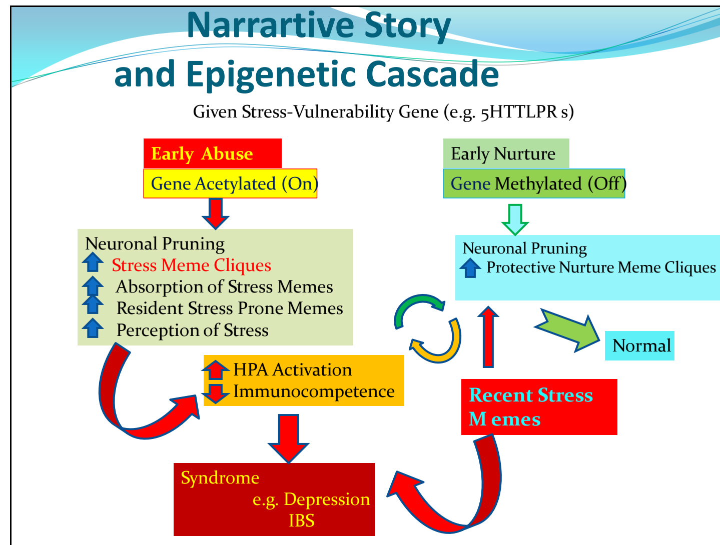
I emphasize memetic prevention in the form of education, especially of critical thinking as a tool for meme filtering and processing. I also propose memetic treatments that includes broad spectrum meme suppression such as mindfulness, yoga, dance, music, and exercise and call for the development of novel specific neutralization techniques for pathologic memes.

Slide 47



CENTRALITY OF NARRATIVE STORY

An important exercise I implemented in any teaching venue is the *Biopsychosocial Rounds* in which a narrative story and formulation are emphasized. I am convinced that an effective method of helping a patient is through the *Story* - the story of the patient's life.

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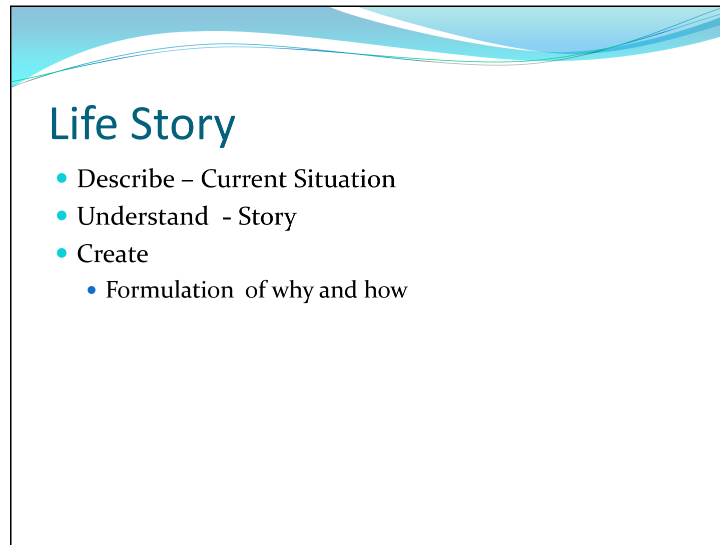

Follow the formula of *Describe, Understand, Create.* Describe the patient's current state and problems, understand the patient by listening to the story, then create a formulation, how the patient got to be the way they are. This always involves genetic influences, early memetic exposures and possible infections, the development of coping techniques, formation of a sense of self, memetic support systems, and recent stresses

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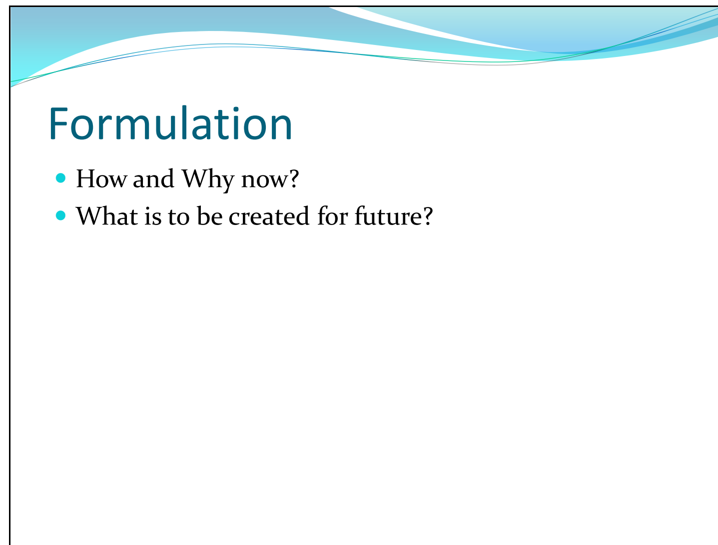

. Once the patient and you come to agree on the formulation, and this may take some time, you and the patient are at a point to create a logical future. The patient is knowable only as a story, and doctor patient relationship is the story of an interaction of stories. Like a novel, each story can be enlarged or contracted, and each part of the story can be zoomed in or out, so you may examine in detail a critical event, and then see how it fits in with the life story of the person, who may be the patient.

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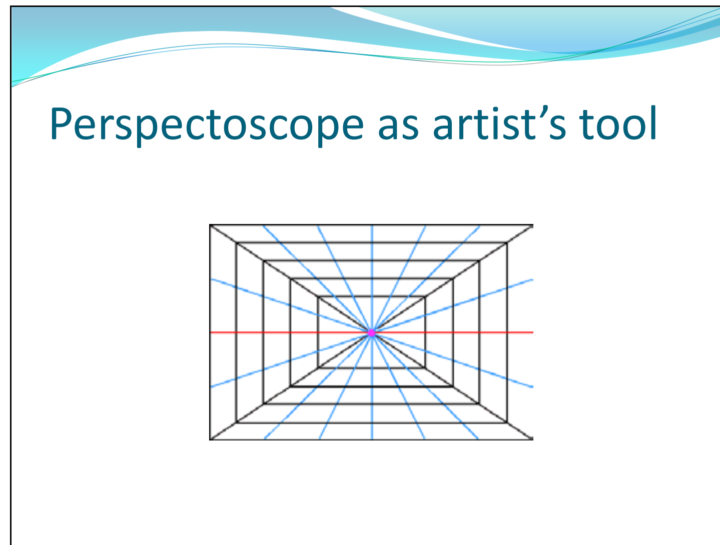

Use the Perspectoscope you already possess - did you know you had it? I do not mean the tool used in drawing, but a perspectoscope of focus. Yes, with the Perspectoscope, zoom in and zoom out on any patient or any person, and you have a powerful tool to understand the person as a person. Perspectoscope can be used also on any entity that has a history - on a society, a nation, the world, the cosmos. Perspectoscope enlightens us to develop perspectives - the whole and the place of nows within it.

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In spite of great advances in neuroscience, in the near term, we are still stuck with the same less than satisfactory drugs for symptomatic treatment, forcing sequential or concurrent polypharmacy, only to the profit of the pharmaceutical companies. Our psychotherapeutic modalities are inefficient and still based on dogmatic theories. We have seen how political power affects mental health

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NEW REPUBLIC

Senator James Inhofe on Climate Change: "God Is Still Up There"

BY REBECCA LEBER

At a conference of climate-change deniers in Washington on Thursday, Oklahoma Senator James Inhofe showed his audience a slide of global temperature trends and said, "If you look, you'll see God is still up there."

For Inhofe, the chair of the Senate Environment and Public Works Committee, global warming is "the greatest hoax"—the title of an entire book he wrote on the subject. And nearly every year, he delivers the keynote address at the Heartland Institute's annual International Conference on Climate Change, now in its tenth year.

And there are politicians who deny facts – like climate change, and the effect of early nurturance in prevention of mental illness, and yes, violence. I saw liaison psychiatry wither and die as the NIMH grants were cut - whether the resurrected liaison in the form of "integrated care in medical homes" will survive with continued funding through Obamacare remains to be seen.

My perspectoscope tells me, however, that the future is bright in the long run.

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When I started out, psychiatry was at its infancy. Now it has reached adolescence. Now we have tools to look into the living brain, manipulate specific areas with magnetic waves, we can look at the molecular composition of living tissues, and we know the human genome.

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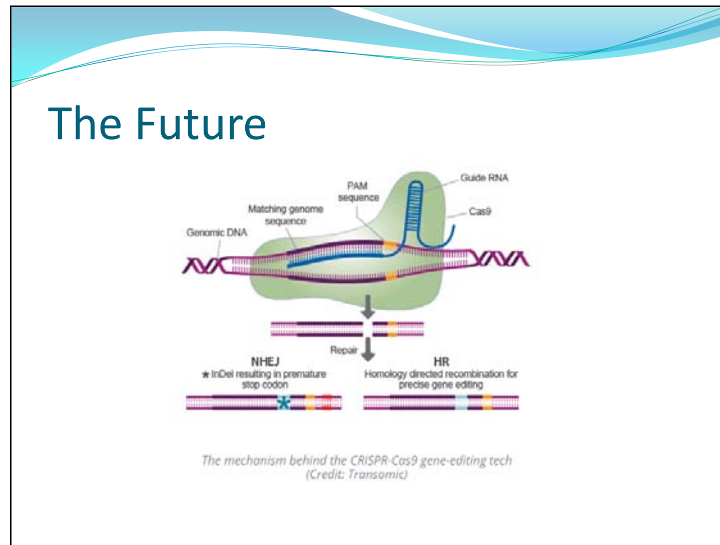

We can also edit the genes thanks to the CRISPR technology developed by Jennifer Doudna. of UC Berkeley and her colleagues. She is widely expected to win the Nobel Prize this year[33,34]. We have the foundations to map information in the brain, i.e. memes in the brain. I believe that within this century, there will be an integration of psychiatry, neuroscience, and psychology, to form a new medical discipline, perhaps relegating forever of the term psyche to psychics. -Memetic Medicine? Informational Medicine?

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To the graduates, as we exchange mutual congratulations and bid each other farewell, remember that the neurons that are resistant to pruning are the well connected ones. Protect yourselves. Reinforce connections. Be well connected to your patients and to the professional networks. And your loved ones. And be well connected to new knowledge.. Welcome surprises. And use the Perspectoscope in whatever you do.

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Oh, and about the Sushi. I was impressed by a talk by Robert Sapolsky of Stanford who studied innovators and pioneers in science and found that they were the first ones to venture to eat Sushi in America.

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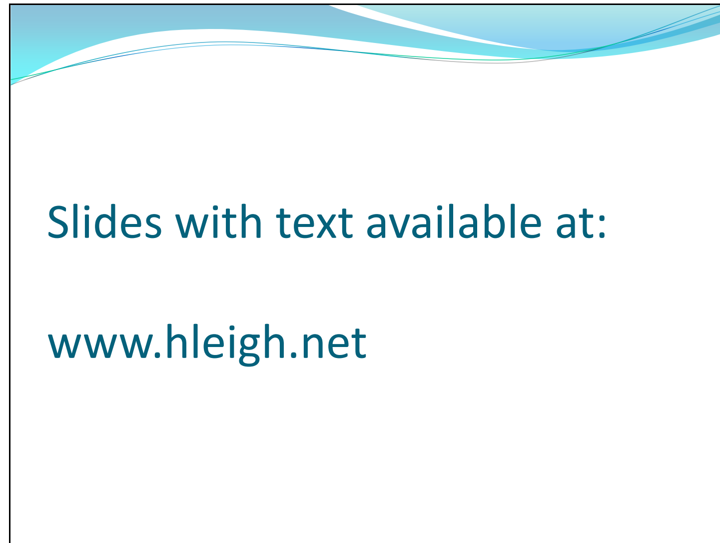
Eat sushi. Enjoy.

Thank you!

Slide 58



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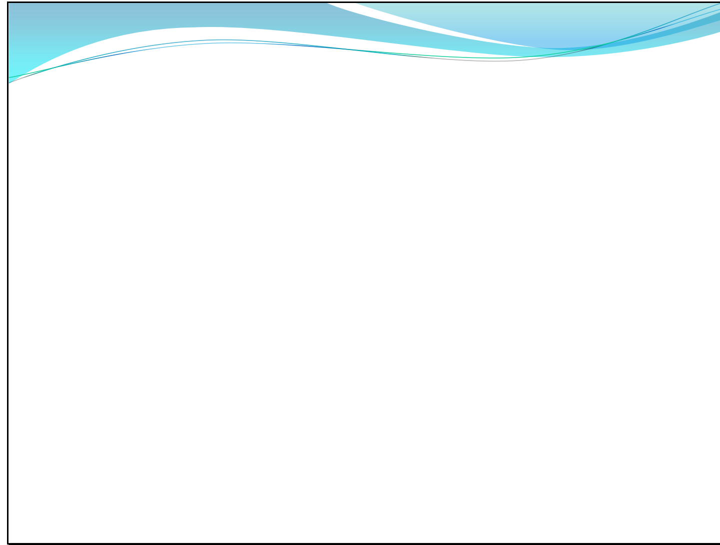

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