

## Virtue and Vice in Health and Illness: The Idea That Wouldn't Die

Medicine is rarely free of political and cultural influence and in the USA, the centuries-old fascination with individualism shapes medical practice and science in ways that are both obvious and obscure. At the obvious end of the spectrum, consider the current health-care reform debate. Opponents of comprehensive reform assert the primacy of the individual, not the government, and as a consequence, promote such policies as tax relief to allow individuals to purchase health insurance and the establishment of health savings accounts. This contemporary debate is only the current manifestation with the American enthralment with the power of the individual to control health. From Christian Science in the mid-19th century to today's bestselling book *The Secret*, self-help movements have held that we have the power to control our lives if only we knew how to harness it. Christian Science urged us to recognise the reality of God and thus, attain our true healthy natures. New Thought, a movement that arose in the USA in the late 19th century, asserted that the power of our minds could heal us if we simply focused on positive thoughts and attempted to banish negative ones from our minds. William James called it "the religion of the healthy minded", with a belief in "the conquering efficacy of courage, hope, and trust, and a correlative contempt for doubt, fear, worry". *The Secret* informed us that to achieve anything we want—health, of course, but in addition, wealth, friendship, and fame—all we have to do is to direct our requests to the universe that will behave like a cosmic vending machine and dispense to us what we desire.

The ability of individuals to control their medical fate expresses itself in multiple ways. Health behaviour, of course, is an aspect of the individual

that increases risk: does a person smoke, exercise, eat a healthy diet? Does he take his medication as recommended? More obscurely, medicine has also focused on another aspect of the relation between individualism and illness: the personal characteristics that raise or reduce the likelihood of becoming sick. The persistence of this approach represents a cautionary tale about social and political influence on medical science.



James Gillray, *An obese gouty man drinking punch with two companions* (1799)

Early in the 20th century, the classic psychosomatic hypothesis best epitomised the role such characteristics played in ideas about the risk of illness. Presented most explicitly by Franz Alexander, it held that repressed emotional conflict was at the core of many physical diseases. Hypertension, for example, was understood to be the product of dysregulation of hostile impulses. Peptic ulcers were the result of unresolved fear and resentment. Asthma, too, had a psychosomatic aetiology: patients suffer from disordered

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## New Strategy for Stimulating Neurogenesis May Lead to Drugs to Improve Cognition and Mood: *Deficits in Pattern Separation Impact Not Only Learning & Memory, but also Mood and Anxiety Disorders*

Researchers at Columbia Psychiatry have developed a new way to stimulate neuron production in the adult mouse brain, demonstrating that neurons acquired in the brain's hippocampus during adulthood improve certain cognitive functions.

In recent years, scientists have been exploring whether stimulating neurogenesis (the formation of new neurons) in the adult brain has a beneficial effect on cognition or mood. Until now, studies have relied on interventions, such as exercise and enriched environments, that affect numerous other processes in the brain in addition to increasing adult hippocampal neurogenesis.

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*InPsych* Editorial Office:

Emily Carey  
David Hellerstein  
Dacia Morris  
Ray Smith  
Eve Vagg  
Rachel Yarmolinsky  
*Questions or comments to*  
[yarmoli@pi.cpmc.columbia.edu](mailto:yarmoli@pi.cpmc.columbia.edu)

Columbia University  
Department of Psychiatry

New York State  
Psychiatric Institute



## Message from the Chairman & Director Jeffrey A. Lieberman, MD

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### Research at Columbia Psychiatry

Research is about the generation of new knowledge through scientific discovery and the application of this knowledge in clinical practice. Both components transform the field of psychiatry. At Columbia Psychiatry research over a wide range of areas has led to important findings in basic and applied research that have produced significant advances in patient care. The depth and breath of the research programs at our institution is immense. On any given day, nearly a thousand research studies are underway here and a similar number of papers are published each year.

In this issue we bring you Dr. Richard Sloan's (Division of Behavioral Medicine) recent article in *The Lancet*, debunking the troubling assumption that "victims of misfortune suffer their fate because they are the kind of people who deserve it" (*see cover*). We review 25 years of research at the HIV Center for Clinical and Behavioral Studies to reduce HIV risk among people with mental illness (*page 8*). We also highlight a recent *Nature* article by Drs. Amar Sahay, René Hen, et al, (Division of Integrative Neuroscience) on how a "New Strategy for Neurogenesis May Lead to Drugs to Improve Cognition and Mood" (*page 5*). Dr. Cheryl Corcoran (Division of Cognitive Neuroscience) discusses her research at the COPE Clinic and we hear also from two of the participants in her research study (*page 11*). Dr. Jonathan Javitch (Division of Molecular

Therapeutics) and colleagues have achieved a remarkable five publications in *Nature* or *Science* (the world's leading scientific research journals) in the last year, most recently with a study of the molecular workings of neural transporters that may eventually lead to insights into drug abuse and depression (*page 4*).

This extraordinary selection just touches the surface of the vast research enterprise at Columbia Psychiatry. We are first in the country in the number and dollar amount of grants and our research complements and informs our superb clinical and educational programs. Every year our wonderful donors generously support our research efforts to find the causes and cures for mental illness.

In addition to funding, superb researchers and the resources of Columbia Psychiatry, our research depends on "ordinary" people, on volunteers who participate in research studies and clinical trials to find new treatments, substantiate best practices, and participate in genetic and imaging studies to elucidate the causes of mental illness.

I want to make it very clear that those who participate in research are anything but "ordinary". They are extraordinary people who are an essential part of the research team. Only with their participation can we make advances in psychiatry and help reduce the burden of mental illness here in New York and around the world.

### The Idea That Wouldn't Die (cont. from cover)

attachment and separation from the mother. Women with breast cancer were characterised as inhibited sexually, unable to deal with anger but having a façade of pleasantness, and a masochistic character structure. Although reports that diseases were caused by these characteristics originally appeared in the scientific literature, they gained widespread public acceptance. By 1950, the success of the psychosomatic hypothesis was complete, as historian of science Anne Harrington has observed. Indeed, in that year, these ideas were even the basis of the hit song *Adelaide's Lament* in Frank Loesser's *Guys and Dolls*.

Advances in medicine have relegated most of these explanations to the dustbin of history. Ulcer, we now know to be the product of the infectious agent *Helicobacter Pylori*, not a repressive personality style. Popular accounts notwithstanding, there is no evidence of a relation between cancer and emotional wellbeing. Similarly, asthma and hypertension have long shed their putative psychosomatic aetiologies. Indeed, recent studies in epigenetics have revealed complex and bidirectional influences between psychosocial factors and disease.

Nevertheless, a variant of the hypothesis survives to this day, although it now it hides in another place. The classical view expressed a symmetry between the valence of a series of medical disorders and their presumed personality-based aetiologies. Negative characteristics—anger, resentment, fear—were always associated with poorer health outcomes. One can search the literature in vain for diseases associated with positive characteristics. There are no diseases deriving from gratitude. Yet it is precisely in connection with positive personal characteristics that the hypothesis has made a comeback. In the past 20 years, an increasing number of studies in the medical literature have explored the beneficial health consequences of desirable personal characteristics. Consider, for example, the topic of spirituality. In 1991, according to PubMed, 12 papers addressed this topic. By 2009, this number had risen to 524. As reported by a representative paper, survival was longer in HIV/AIDS patients who experienced spiritual transformations compared with patients who were not so transformed even after control for relevant confounders. In another report, patients with headache assigned to a spiritual meditation condition had greater decreases in the frequency of headaches compared to those assigned to other

*(continued on page 12)*

To find out more about participating in research, please call our research referral line at 212-305-6001 or visit us on the web at [ColumbiaPsychiatry.org](http://ColumbiaPsychiatry.org).





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**Melissa Arbuckle, MD, PhD** (Education) has been named an OMH Policy Scholar for the 2011-2012 year, which will provide up to \$8,500. Susan Essock, PhD, will be her research mentor and Lloyd Sederer, MD, will be her policy mentor.



In March, the Department of Defense appointed **Robert Klitzman, MD**, (HIV Center, Bioethics) to serve on the Research Ethics Advisory Panel of the US Army Medical Research



**Stephen Rayport, MD, PhD**, (Molecular Therapeutics) has been appointed as a member of the Neurobiology of Motivated Behavior Study Section at the NIH.

**Stan Arkow, MD**, (9 Garden North) received the Irma Bland Award from the APA for Excellence in Teaching Residents. This award is given to APA members who have made outstanding and sustaining contributions to resident education in psychiatry. Dr. Arkow will receive the award at a special luncheon for residents, medical students and educators during the APA Annual Meeting.



and Materiel Command (USAMRMC) Office of Research Protections. He is the only non-governmental employee on the group. The panel will advise the USAMRMC on complex ethical issues related to the conduct of specific research protocols and programs of research.

**Philip Muskin, MD**, (Consultation-Liaison Psychiatry) is now a Distinguished Life Fellow of the APA, the highest membership status the association bestows.



In January of 2012, **Richard Friedman, MD**, and **Jennifer Downey, MD**, both former Chief Residents at PI and now both on the faculty in the CU Department of Psychiatry, will assume editorship of Psychodynamic Psychiatry. Formerly, the Journal of the Academy of Psychoanalysis and Dynamic Psychiatry, the journal has been re-named in order to focus on the many issues that come up in the practice of psychotherapy using the biopsychosocial model.



From March 18-21 of 2011, **Gaurav Patel, PGY II**, attended the third NIMH-sponsored Brain Camp at Cold Spring Harbor. This is a small and prestigious meeting that brings

together outstanding psychiatry residents interested in research with some of the most distinguished and thoughtful neuroscientists in the country and with NIMH leadership. All attendees were there by invitation only and this year Dr. Eric Kandel attended and gave the opening presentation.

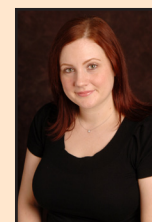
**Michael Goldberg, MD**, (Neurobiology & Behavior) was elected to the National Academy of Sciences this year for his significant contributions to science.



**Ezra Susser, MD, DrPH**, (Epidemiology) has been awarded the American Public Health Association's 2011 Rema Lapouse Award. Dr. Susser was cited for his outstanding contributions to the scientific understanding of the epidemiology and control of mental disorders. In early May 2011, Dr. Susser gave the keynote presentation at the Coalition for Research to Improve Aboriginal Health Conference in Australia.



**Elizabeth Werner, PhD**, (Behavioral Medicine) was selected for the 2011 Child Intervention, Prevention & Services (CHIPS) fellowship. CHIPS is a dynamic interdisciplinary training consortium, created to bolster mental health research in the areas of intervention, prevention, and the provision of services for children and adolescents. Along with a travel award, CHIPS fellows participate in a 5-day, intensive institute at UCLA, where they can forge and develop mentoring relationships with institute faculty and work with them to refine career objectives.



## GrantNews

### New Grants

A K01 grant from the NIMH was awarded to **Leopoldo Cabassa, PhD** (Center of Excellence for Cultural Competence), to support his project "Implementing Health Care Interventions for Hispanics with Serious Mental Illness." The research plan for this project uses a collaborative intervention planning framework that blends principles of community based participatory research and intervention mapping to modify and assess

the feasibility and acceptability of an existing care manager intervention for outpatient mental health clinics. The five-year grant totals \$927,479.

**Christine DeLorenzo, PhD** (MIND), received an NIMH K01 to support her study, "Characterization of a New Metabotropic Glutamate Receptor Subtype 5 PET Ligand." The four-year award totals \$697,884.

**Balasubramaniam Easwaramoorthy, PhD** (Molecular Imaging) received an R21 from NIMH in the amount of \$439,725 to fund

his study, "Development of Dopamine D1 Receptor Agonists for PET Imaging."

An R21 from NIMH in the amount of \$440,250 was awarded to **Antonio Mantovani, MD** (Brain Stimulation), for his study, "Transcranial Magnetic Stimulation for Treatment of Obsessive Compulsive Disorder."

**Maria Sullivan, MD** (Substance Abuse) received an R01 NIDA grant of \$3,223,502 to fund her study, "Improved Strategies for Outpatient Opioid Detoxification" over the next five years.



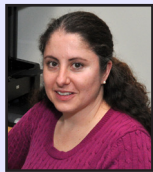
## Chad Abernathy

Chad Abernathy was appointed Director of Budget and Finance on April 1, 2011 and is responsible for the oversight of Columbia based financial operations and budget and reporting processes of the

department.

A native of Washington State, Mr. Abernathy was previously Assistant Director of Clinical Finance and Budgeting in the Department of Surgery at the University of Washington School of Medicine. There he provided oversight and management of departmental financial functions across all sources of funding. Prior to joining the UW, Mr. Abernathy was the Budget Analyst for the Commander Navy Region Northwest. He brings to Columbia Psychiatry over 7 years of experience in financial analysis and operations in civil service and academic university environments.

Mr. Abernathy graduated from the University of Washington Foster School of Business, where he received his degree in business administration with an emphasis in Finance.



## Christine Benanti

Christine Benanti joined the Department of Psychiatry in December 2010. Reporting Directly to Avalon Lance, Interim Department

Administrator and Chief Financial Officer, Ms. Benanti is working as a chief internal consultant, working on complex finance and operations projects to vastly improve the accuracy and

timeliness of highly complex fiscal transaction, finance reporting and operational processes for the department. She has a strong background in finance and operations, and is able to translate and apply her previous experience and expertise to our academic environment.

After obtaining her Bachelor's degree in Mathematics from Wellesley College, Ms. Benanti earned her Master's in Business Administration, with an emphasis in finance, from Columbia University. Prior to joining Columbia, she spent seven years in product development at Dalcomp, a subsidiary of Thompson Financial, followed by 10 years in investment banking at J.P. Morgan. Most recently, she was a Quantitative Specialist in J.P. Morgan's Tax-Exempt Capital Markets Group where she oversaw the execution and structuring of the department's larger and more complex transactions.



## Jay Gingrich, MD, PhD

We are pleased to announce the appointment of Jay Gingrich, MD, PhD, Professor of Clinical Psychiatry, to the position of Director and Sackler Professor of the Sackler Institute for

Developmental Psychobiology at the Columbia College of Physicians and Surgeons and the New York State Psychiatric Institute. In this capacity, he will have administrative and programmatic responsibility for proposing the appointment of faculty and direction of activities of the Sackler Institute. Dr. Gingrich will be succeeding Dr. Myron Hofer, who is the inaugural Director of the Sackler Institute at Columbia University and has served in this capacity for a decade.

Dr. Gingrich graduated from the University of Kansas with a B.S. in Chemistry Magna Cum Laude and Phi Beta Kappa. He pursued his graduate education in medicine at Duke University where he received his MD and PhD in Cell and Molecular Biology. He came to Columbia for his postgraduate training in psychiatry. Following his completion of a research fellowship in translational neuroscience, he has been on faculty and in the Division of Developmental Neuroscience and an investigator of the Sackler Institute.



## Neil McClure

In March 2011, Neil McClure joined the Department of Psychiatry as Director of Human Resources and Faculty Affairs. Mr. McClure has over

12 years of progressive experience as a Human Resource Professional in private sector and academic environments. Most recently, he was Human Resources Client Manager at Columbia University Medical Center.

In his new role Mr. McClure is responsible for the oversight of all aspects of Columbia related human resource management for the department, and is providing a critical integration across human resources, faculty affairs and financial (payroll) processes. He will interface with Columbia HR offices, and with Research Foundation and the State human resources offices.

Mr. McClure is a graduate of Fairfield University and Sacred Heart University where he earned a Master of Arts in Industrial/Organizational Psychology and a Bachelor of Science in Psychology, respectively.

## Research News

### Molecular Movements of Neural Transporters Unveiled: New Discoveries May Lead to Insights Into Drug Abuse and Depression

A team of scientists from Columbia University College of Physicians and Surgeons and Weill Cornell Medical College has shed light on the molecular workings of transporter proteins, molecular machines embedded in the cell membranes of neurons that modulate the transfer of signals between cells and recycle neurotransmitters.

The research, published online April 24, 2011 in the journal *Nature*, reveals with extraordinary detail how the molecule performs its task, says senior author Dr. Jonathan Javitch, the Lieber Professor of Experimental Therapeutics and Director of the Division of Molecular Therapeutics in the Department of Psychiatry at Columbia University, "We're looking at an unprecedented molecular level at the mechanics of this protein and how the binding of the substrates causes conformational changes," Dr. Javitch says. "We think that our observations have broad relevance to how other sodium-dependent transport processes work." This level of understanding may ultimately lead to improved treatments for psychiatric disorders and increase our understanding of how drugs such as cocaine work.

*(The study's equally contributing lead authors are Dr. Yongfang Zhao of the Center for Molecular Recognition and psychiatry at Columbia University; Daniel Terry, a graduate student in the Blanchard and Weinstein labs, enrolled in the Tri-Institutional Program in Computational Biology and Medicine at Weill Cornell Medical College; and Dr. Lei Shi, assistant professor of physiology and biophysics and of computational biophysics at Weill Cornell Medical College. The study is also co-authored by Dr. Matthias Quick, assistant professor of clinical neurobiology in psychiatry and in the Center for Molecular Recognition at Columbia University Medical Center. The senior authors are Dr. Harel Weinstein, chairman and Maxwell M. Upson Professor of Physiology and Biophysics, and director of the Institute for Computational Biomedicine at Weill Cornell Medical College, Dr. Scott Blanchard, associate professor of physiology and biophysics at Weill Cornell Medical College and Dr. Jonathan Javitch, the Lieber Professor of Experimental Therapeutics in Psychiatry and professor of pharmacology in the Center for Molecular Recognition at Columbia University Medical Center)*

For more information on this research, please go to [ColumbiaPsychiatry.org/news](http://ColumbiaPsychiatry.org/news)



## New Strategy for Stimulating Neurogenesis May Lead to Drugs to Improve Cognition and Mood

*Deficits in Pattern Separation Impact Not Only Learning and Memory, but also Mood and Anxiety Disorders*

*(continued from cover)*



The research, led by René Hen, PhD, professor of Neuroscience and Pharmacology, in the Departments of Neuroscience and Psychiatry at Columbia University and the New York State Psychiatric Institute, appears in the April 3 issue of the journal *Nature*. Amar Sahay, PhD, a postdoctoral fellow, is the lead author on the study.

After boosting the number of neurons in the hippocampus, an area of the brain involved in memory and mood, the researchers tested the mice in both learning and mood-related tasks and looked for changes in behavior. The researchers found specific effects on learning tasks that involve a process called pattern separation, which is the ability to distinguish between similar places, events and experiences.

“This process is crucial for learning because it enables us to know whether something is familiar or novel,” said Dr. Hen. “If it is familiar, you move on to the next bit of information; if it’s novel, you want to be able to recognize that it’s new and give it meaning. These mice, with just more adult-born neurons, and no other changes in the brain, basically learn better in tasks where they have to discriminate between similar contexts.”

Earlier strategies for manipulating neurogenesis, according to the investigators, were broader and less specific. “In addition to stimulating neurogenesis, these earlier methods exerted many other effects on the brain. As a result, you never knew with these older manipulations what’s due to neurogenesis, or what’s due to the other effects that these manipulations cause,

and, indeed, what we find is that when you stimulate just adult neurogenesis, you actually get a subtle effect. Unlike broader manipulations, it does not affect all forms of learning, it’s very specific to tasks that require pattern separation,” said Dr. Hen.

Pattern separation is not only important for learning; it may also be important for anxiety disorders, including post traumatic stress disorder (PTSD) and panic disorder. People with PTSD, say the researchers, have a more generalized fear response, so that when they are placed in a situation that reminds them of even one aspect of their trauma, they frequently have a full fear response.

“I think a good example of this is someone who has developed PTSD as a result of 9/11. For them, the simple sight of an airplane or high tower may be enough to reawaken the initial traumatic episode and bring back the full aversive memory. Sometimes these generalizations become so pervasive that people basically don’t want to leave their home anymore because everything reminds them of the original event,” said Dr. Hen.

The normal adaptive response, say the authors of the study, is to separate similar events or experiences. “Even though I may remember 9/11, when I see an airplane over NYC, I am able to recognize that it’s a different situation and process it accordingly, while someone in the same situation with PTSD may re-experience the traumatic memory of 9/11 and have a panic attack. So this may be one reason why stimulating neurogenesis to improve pattern separation may contribute to treatment of some of these anxiety disorders,” said Dr. Hen.

Enhancing pattern separation, by either the method the Columbia researchers used, or other strategies, may also be useful in treating some of the learning deficits seen in people with normal or pathological aging, such as Alzheimer’s disease. In fact, there is already evidence that pattern separation declines during normal aging.

“This paper, as a consequence, may stimulate a whole area of research in humans to try to determine who in the population may have a pattern separation deficit, and whether it is restricted to the emotional domain, or is present even while performing tasks devoid

of emotional salience. Once these studies are done in humans, it may be possible to treat these people with specifically targeted drugs or more personalized therapies,” said Dr. Hen.

The researchers say that the genetic strategy used to stimulate neurogenesis in their experiments can be mimicked pharmacologically, potentially leading to the development of new drugs to reverse pattern separation deficits. One such class of drugs the investigators are currently testing – BAX inhibitors – works by blocking cell death.

“These drugs are basically doing the same thing that we did with our genetic manipulation—namely, increasing the survival of the young neurons which normally undergo a process of cell death that eliminates at least half of these neurons. Now instead of dying, the neurons will go on to survive,” said Dr. Sahay.

Some BAX inhibitors have been developed for stroke research, where the goal has also been to prevent neurons from dying. The Columbia researchers plan to begin testing the BAX inhibitors in mice shortly. And if they produce cognitive benefits, the testing will be extended to clinical trials to determine if there’s also a beneficial effect in humans.

“I think we’re getting closer to harnessing neurogenesis to improve cognition and mood in humans. This research may also help explain a bit of a mystery in the field, which we still don’t understand, regarding how the hippocampus can be involved with both cognition – which is its classic function – and in mood and anxiety-related functions. Perhaps the fact that pattern separation affects both the cognitive and mood domains is the beginning of an answer to that paradox,” said Dr. Hen.

*- Karin Eskanazi*

*Authors of the Nature study are Amar Sahay, Kimberly N. Scobie, Alexis S. Hill, Colin M. O’Carroll, Mazen A. Kheirbek, Nesha S. Burghardt, André A. Fenton, Alex Dranovsky and René Hen. This study was supported in part by: the National Institute of Mental Health (NIMH); National Alliance for Research on Schizophrenia and Depression (NARSAD); New York Stem Cell Initiative (NYSTEM); Ruth L. Kirschstein National Research Service Awards (NRSA); and the Sackler Institute of Columbia University.*



## GRAY MATTERS AT COLUMBIA SPRING BENEFIT LUNCHEON

On Tuesday, May 3, 2011 Congressman Patrick Kennedy joined Jeffrey A. Lieberman, MD, Chairman of Psychiatry at Columbia University Medical Center, returning Mistress of Ceremonies Donna Hanover, and over 320 guests at The Plaza Hotel for the **Gray Matters at Columbia** Spring Benefit Luncheon. Each year the **Gray Matters at Columbia** Fellowship is awarded to young scientists exhibiting outstanding performance in the genetics of brain disorders.

Congressman Kennedy, who cofounded *One Mind for Research*, a newly formed national coalition that is seeking new treatments and cures for neurologic and psychiatric diseases of the brain, noted that "The best investment that any of us can make, in our personal lives and in the future of our country... is unlocking the mysteries of the brain through investment in brain research..."

Also highlighted at the luncheon was the Sidney R. Baer, Jr Foundation, for its generous support of a named fellowship in schizophrenia research.

The 2010 recipients of **Gray Matters at Columbia** Fellowships are Holly Moore, PhD, Alla Landa, PhD, Christoph Kellendonk, PhD, Susanne Ahmari, MD, PhD, and Catherine Clelland, PhD.

**Gray Matters at Columbia** extends sincere thanks to its underwriters: Patricia Cayne, Patricia Rosenwald, Monica Sagner, Petra Stelling, The Sallie Foundation, Novartis Pharmaceuticals Corporation and Sunovion Pharmaceuticals Inc.



Mariam Azarm, Rosemarie Lieberman, Dana Buchman, Jeffrey Lieberman, MD, Elena Patterson, Suzanne Sunshine Mendel



Rosemarie Lieberman, Charlotte Ford, Patrick Kennedy, Garen Staglin, Anne Ford, Tina Sloan



Judith Joseph, MD, Steven Roose, MD, Edmund Griffin, MD, PhD, Suzanne Ahmari, MD, PhD



Patrick Kennedy, Donna Hanover, Jeffrey Lieberman, MD



Patrick Kennedy addressing the audience



Farah Moinian, Rosemarie Lieberman, Sylvia Lyon Rodman, Mary Elliott, Patsy Kahn, Molly Ballantine



Catherine Clelland, PhD, Laura Rodriguez Murillo, PhD, Jeffrey Lieberman, MD, Holly Moore, PhD, Carolyn Rodriguez, MD, PhD



The Grand Ballroom



Barbara Trachtenberg, Sunny Spector, Lori Rosenfeld, Carol Dorfman



George Handran, Holly Moore, PhD



Paula Zahn, Farah Moinian



Michael Terman, PhD, Kelly Posner Gerstenhaber, PhD, Brian Fallon, MD



## Pioneering Neuroscientist Honored With The Mortimer D. Sackler, M.D. Prize for Distinguished Achievement in Developmental Psychobiology

**Dr. Fernando Nottebohm's Work Sheds Light On Birth Of Nerve Cells In The Adult Vertebrate Brain**



The Mortimer D. Sackler, M.D. Prize for Distinguished Achievement in Developmental Psychobiology recognizes researchers who have advanced our understanding of the developmental processes of mind, brain

and behavior that contribute to normal development, and of the origins of mental illness. The prize aims to foster international cooperation among scientists and promote public understanding of their work. The prize is presented jointly every two years by the Sackler Institute for Developmental Psychobiology at Columbia University College of Physicians and Surgeons and the Sackler Institute for Developmental Psychobiology at Weill Cornell Medical College. The first prize was awarded in 2008 to Dr. Avshalom Caspi of King's College, London, and Duke University.

The prize honors one of the most creative scientists in the field of developmental

psychobiology, the late Mortimer D. Sackler, M.D., who began his career as a psychiatrist and pioneer researcher in biological psychiatry in the late 1940s at the New York State Department of Mental Health. During this early period, he published more than 40 papers in peer-reviewed journals, which highlighted the role of early childhood development in later psychiatric illness. In the early 1950s, Dr. Sackler, with his brothers, founded the pharmaceutical company known today as Purdue Pharma. The original prize was a gift in honor of Dr. Sackler's 90th birthday from his seven children, and the prize was endowed in 2009 by a gift from The Mortimer D. Sackler Foundation, Inc.

<http://columbiapsychiatry.org/news/pioneering-neuroscientist-honored-mortimer-d-sackler-md-prize-distinguished-achievement-develop>

### MENTAL WELLNESS LECTURE SERIES

MOOD AND DEPRESSION ACROSS THE LIFESPAN

Columbia Psychiatry held its inaugural *Mental Wellness Lecture Series* on Tuesday, March 22, 2011 at The Carlyle Hotel. The lecture was moderated by Dr. David Kahn and featured speakers Drs. Bradley Peterson, Elizabeth Fitelson and Steven Roose. Drs. Jeffrey Lieberman and Andrew Gerber joined the panel for a question and answer session, which was followed by a cocktail reception.



*Pictured left to right: Drs. Steven Roose, Jeffrey A. Lieberman, Bradley Peterson, Elizabeth Fitelson, David Kahn & Andrew Gerber*

## COLUMBIA PSYCHIATRY GIVING

**The Frontier Fund** is the annual fund of Columbia Psychiatry and provides critical support for our core mission. The name is inspired by the brain itself – one of the last true frontiers of exploration and discovery, and the focus of our vital research at Columbia Psychiatry. The four supporting opportunities within the Frontier Fund are the Young Investigators, Clinical Research and Treatment, Education and Outreach, and Chairman's Initiatives. Columbia Psychiatry is proud to be an international leader in the field of psychiatric medicine, and gifts to the Frontier Fund make a significant difference in our work. We are extremely grateful to our dedicated supporters for their generosity.

To learn more about the Frontier Fund or to make a gift, please contact Emily Carey at 212-543-5942 or [eac2149@columbia.edu](mailto:eac2149@columbia.edu). Thank you for your support of Columbia Psychiatry!

**Two Decades of Research and Intervention: Reducing HIV Risk Among People with Mental Illness**



*In the early 1990s, HIV Center researchers began interventions with homeless men with mental illness at a shelter in Washington Heights*

Amidst the many psychosocial problems facing people with mental illness, a major challenge is to avoid acquisition of HIV through unprotected sex or unsafe drug injection practices. Substance abuse, unstable housing, poverty, stigma, and a host of other circumstances can all increase vulnerability to infection, leading to exceptionally high rates of HIV within this population. For over 20 years, people with severe mental illness have been a focus of HIV Center research, with a particular emphasis on the development and evaluation of interventions to reduce HIV-related risk behaviors.

In 1989, a team led by Francine Cournos, M.D., embarked on the first NIMH-funded research project on seroprevalence among psychiatric inpatients in a large state mental hospital and an acute care community service inpatient unit. The team identified comparatively high overall prevalence and similar rates among men and women. Using standardized instruments developed by the HIV Center, the team found high levels of HIV risk behaviors among psychiatric inpatients and outpatients.

Based at the Fort Washington Men's Shelter in Washington Heights, Ezra Susser, M.D., M.P.H. and Dr. Cournos provided mental health and HIV-related services for high-risk mentally ill homeless men suffering from schizophrenia or other psychotic disorders. After documenting seroprevalence and describing HIV risk behaviors in this population, the team developed and tested interventions to reduce the frequency of unprotected sex among homeless women and men with severe mental illness. The interventions are highly focused, use skill-training methods that have been proven

effective with schizophrenia, target barriers to behavior change, take into account the patterns of sexual relationship among these patients, and address the relationship between psychiatric symptoms and risky sexual behaviors.

Next, Pamela Collins, M.D., and her colleagues developed the HIV prevention curriculum, "Our Selves, Our Bodies, Our Realities," to help women with severe mental illness reduce risky sexual encounters and thus their risk of HIV infection. Her work has also examined the contribution to women's HIV risk behaviors of social stigma related to mental illness and ethnicity. She developed an instrument to assess devaluation and discrimination both in the setting of sexual relationships and due to ethnic group membership; internalized stigma related to sexual attractiveness; and experiences of discrimination prior to and after diagnosis with a mental illness.

Extending this line of work internationally, Milton Wainberg, M.D., along with Dr. Cournos, has been working in collaboration with Brazilian researchers, mental health care providers, and a community service agency. The project, "Brazilian HIV Prevention for the Severely Mentally Ill" is grounded heavily in community-based participatory research (CBPR), and is being implemented and tested in public health clinics in Brazil. Dr. Wainberg and colleagues have adapted and pilot-tested a provider-delivered intervention to reduce risk behavior among patients with severe mental illness. This work is part of a full-scale randomized controlled trial in nine municipal mental health care clinics in Rio de Janeiro.

A number of other HIV Center studies focus less specifically on mental illness but include important mental health components.

Dr. Wainberg recently received a NIDA grant for a U.S.-based study of "HIV/STI Prevention for Adolescents with Substance Use Disorder in Treatment." The study is an adaptation of family-based intervention for HIV/STI sexual risk reduction that address multiple contexts of risk for this high risk population. The intervention will be implemented in outpatient substance use treatment facilities that will build the clinics' capacity to help families under their care to more comfortably address the adolescents' sexuality, while also promoting youths' safer sex practices and reducing HIV/STI sexual risk behaviors.

Kate Elkington, Ph.D., an Assistant Professor of Clinical Psychology in the Columbia University Department of Psychiatry, is also conducting research with adolescents who have mental health and substance use problems. She was recently funded by NIMH to undertake "A Family-based HIV-Prevention Intervention for Youth on Probation." The study will identify the HIV/STI risk reduction needs of youth on probation and then develop and pilot-test a family-based HIV/STI intervention for youth on probation with a view to a larger scale behavioral intervention trial.

In addition, ongoing studies with significant mental health components are being conducted by other HIV Center investigators, including work with HIV-affected families run by Claude Ann Mellins, Ph.D. and studies on adherence to medication regimens headed by Robert Remien, Ph.D.



Are you a Columbia Department of Psychiatry alum? We'd like to hear from you! Let us know how you're doing so we can share the news with your fellow classmates.

Please send your news (including year of graduation) to [morrisd@pi.cpmc.columbia.edu](mailto:morrisd@pi.cpmc.columbia.edu).

## 1950s

**Seymour B. Jacobson, MD**, class of 1957, retired from private practice in 1993. He reports that, "Early in private practice, I became interested in the mental disorders of late life and was subsequently largely involved in geriatric psychiatry both in private practice and in institutional settings." His institutional appointments included Director of Medical Education at Harlem Valley Psychiatric Center. He was also chairman of both the Section on Psychiatry and the Section on Geriatric Medicine of the N.Y. Academy of Medicine.

## 1960s

Class of 1968 alum, **Charles Bowden, MD**, received a new NIMH grant that "utilizes chaos theory to provide a non linear computation to chart trajectories of the course of bipolar disorder to serve as a tool to guide treatment selections." He was reappointed as co-chair the Bipolar Guidelines Taskforce of the World Federation of Societies of Biological Psychiatry. He also writes, "My only major moves are between work in San Antonio and Telluride where we ski and golf. Not new, but both our daughters are Columbia (main campus) grads."

**Doug Skelton, MD**, who graduated in 1967, keeps a busy schedule. He reports that "After 16 years as a dean of medicine and 3 years as SVP for medical affairs I left Mercer University seven years ago to become a district public health director for eight coastal Georgia counties... I have been very involved in an effort to create an independent Department of Public Health in Georgia and the bill to do so awaits the Governor's signature. On May 22nd Mercer University is dedicating a library conference room in my name and using it to display memorabilia from my years as dean."

On a personal note: "Jane and I have two children and three grandchildren. " And, finally, he adds, "Psychiatry was my first love, public health my second. I intend to give my second love several more years."

## 1970s



**John Oldham, MD**, class of 1971, former director of the NYS Psychiatric Institute, was the 22nd recipient of the *Edward Sachar Award*. "John's influence on the culture and direction of psychiatric research administration, psychiatric

treatment and education here and nationally are extraordinary," said David Strauss, MD, at the special grand rounds where the award was given on April 29, 2011. The Sachar award recognizes extraordinary contributions to the field of psychiatric research.

## 1980s

**Gregory Dalack, MD**, class of 1989, became Chair of the Department of Psychiatry at the University of Michigan in April, 2010. "It is a privilege to lead the department I have been a member of since 1992."

Class of 1983 graduate **Jonathan Silver, MD**, announced publication of the second edition of his book, *Textbook of Traumatic Brain Injury*. Bob Woodruff, the ABC news correspondent who was injured while embedded with the military in Iraq, wrote the book's foreword.

## 1990s

Class of 1996 graduate **Risa Fishman, MD**, is living in Rockville, Maryland, working at Washington Hospital Center in Washington, DC, and was recently made Medical Director of their Outpatient Behavioral Health Clinic.

In Sept 2010 **Linda Brzustowicz, MD**, class of 1994, became chairperson of the Department of Genetics at Rutgers.

## 2000s

Class of 2010 graduate **Suzanne Garfinkle, MD**, and her husband Michael Garfinkle "welcomed the birth of our first child, Theodore Charles Garfinkle, now 7 months old. Returned to my child fellowship at Mount Sinai and got the AADPRT Ginsberg teaching award. Now one more year of fellowship, and my private practice in Union Square is going well."

**Beata Zolovska, MD**, class of 2010, is currently pursuing a Child Psychiatry Fellowship at NYU.

**Toya Clay, MD**, Class of 2006, is currently Director, Illinois DocAssist Program (IDA); IDA is a statewide program for pediatric primary care providers offering phone-based consultation, educational, and referral services for psychiatric issues; University of Illinois-Chicago (UIC). She also has a combined psychotherapy and psychopharmacology practice in Oak Park, IL, where she sees patients as young as five through adulthood. She works with families and couples as well.

Since graduating from the residency program in 2002, **Jordan Karp, MD**, was recently promoted to Associate Professor of Psychiatry, Anesthesiology, and Clinical and Translational Science at the University of Pittsburgh School of Medicine. He is PI of a R01 testing a stepped care approach for older adults with low back pain and depression. Dr. Karp was recently awarded a grant from NARSAD to continue his study of buprenorphine for treatment-resistant depression. He is medical director for geriatric psychiatry at UPMC Pain Medicine at Centre Commons at the University of Pittsburgh Medical Center.

## Residents' Corner – Matthew Erlich and Sharat Parameswaran

In 2009, the New York State Office of Mental Health's (OMH) medical director Lloyd Sederer, MD, had an idea about how to enhance the quality of prescription practices throughout the state. The idea was taken up by Commissioner Hogan and was just taking form when then first year residents **Matthew Erlich, MD** and **Sharat Parameswaran, MD** received a golden opportunity to participate thanks to the recommendation of residency program graduate Christina Mangurian, MD. They became part of the work group that piloted an innovative intervention to try to change how doctors in New York State prescribe antipsychotics and improve patients' response to treatment.

Drs. Erlich and Parameswaran came to psychiatry from backgrounds in marketing and computers, respectively. Those career paths proved valuable to the workgroup that Dr. Sederer convened. Drs. Erlich and Parameswaran's interests in public psychiatry issues helped facilitate the group's first task: to devise a decision-tree for what would become **SHAPEMEDS**. Dr. Sederer sat up and took notice: "It became clear that these two would be invaluable resources in terms of constructing an effective tool – one that was very concise, science-based and one that could be translated into an electronic tool."

**SHAPEMEDS** is best described as a checklist that clinicians use to monitor the care of psychiatric patients: what is the optimal dose for the patient receiving an antipsychotic? What side effects is he/she experiencing? What are the patient's concerns? For both residents, a concept that acknowledged patients' roles in their own recovery was congruent with their own philosophy of patient care.



Dr. Parameswaran's passion about "empowering" patients took root long before he started his residency at PI and Columbia. Prior to going to medical school he was hired to do computer work at a state psychiatric hospital in California. It was there that he developed an interest in psychiatry. Specifically, he said, "I've always been very interested in the bigger picture. How do we provide care to groups of patients? What are we doing in larger systems to help improve the care of people with mental illness?"

For Drs. Parameswaran and Erlich to both arrive at the starting point of what has evolved into a remarkable demonstration of a successful academic-public partnership, they both contend that they had to have been exactly where they were – Columbia University Medical Center and New York State Psychiatric Institute (NYSPI).

As Dr. Erlich eloquently phrased it, "Columbia is a very generous institution... We have access to the nation's top thinkers." Some of those individuals comprise **SHAPEMEDS'** prominent cast of characters. Among them, department of psychiatry chairman and NYSPI director Jeffrey Lieberman, MD; Mental Health Services and Policy Research division chief Susan Essock, PhD; Scott

Stroup, MD, MPH, also in the Mental Health Services and Policy Research Division and; Greg Miller, MD, of OMH. Of Dr. Lieberman, Dr. Erlich noted "He has encouraged us and mentored us. He's a big champion of residents."

Their journey over the last two years has been fruitful intellectually and personally. According to Dr. Erlich, he and Dr. Parameswaran have a "mutually enjoyable and beneficial partnership. We complement each other." About a year after beginning

work on the checklist, they were awarded an OMH Policy Scholar grant: "Implementation Strategies and Evaluation of **SHAPEMEDS**, an OMH Antipsychotic Mediation Care Pathway."

Though both residents are modest about their contributions to **SHAPEMEDS**, which has been piloted at seven OMH centers in New York State, Dr. Sederer is far less reticent: "These guys were just phenomenal," he recalled.

Dr. Erlich graduated from Bowdoin College in 1997 with a degree in History and Classics and completed medical school at Columbia University College of Physicians and Surgeons. He earned the National Institute of Mental Health's Outstanding Researcher Award in Psychiatry last year.

Dr. Parameswaran received his bachelor's degree in biomedical engineering in 1997 from Northwestern University McCormick School of Engineering. He completed medical school at Oregon Health & Science University. He was recognized as an APIRE Janssen Resident Psychiatric Research Scholar in 2009-2010.



## Liskin Award Recipients- Tejal Kaur and Megan Jessiman

This year's Barbara Ann Liskin Resident Award and Medical Student Award was presented to **Tejal Kaur, MD**, and **Megan Jessiman, MD**, respectively. The Liskin Prizes in Psychiatry are awarded each year to two women in memory of Barbara Ann Liskin, a class of 1979 P&S graduate. The resident awardee is selected based on her commitment to clinical administration while the medical student recipient is chosen based on the parallels between her goals and ideals and those of Dr. Liskin's.



## Participating in a Research Study / Conducting a Research Study: The View from Both Sides

Participants in research studies help others by contributing to medical research. They also can play an active role in their own health care, gain access to new research treatments and, at Columbia Psychiatry and New York State Psychiatric Institute, receive the highest quality care provided at no-cost. Call 212-305-6001 to find out more about research and see if participating in a research study is the right choice for you.

In the story below, we hear from two participants in a research study about figuring out who is at risk for developing psychosis. They are helping to find out what are the biological mechanisms underlying psychosis, as well as developing safe, effective interventions for those who are at risk. Dr. Corcoran, director of COPE (Center of Prevention and Evaluation) discusses the COPE program and what they hope to achieve.

### Two Participants' Stories

Sally (not her real name) is a 25-year-old playwright from Queens, NY. She supports herself as a copywriter and writer's assistant. Sally, with short dark hair, looks like an artist; it was surprising to learn that she once worked for a car company. But that was four years ago, before she became a research study participant at COPE, the Center of Prevention and Evaluation. Sally's life was more complicated then; she was experiencing hallucinations and panic attacks – and realized she had problems she couldn't cope with on her own. There was also the matter of her job. What was she doing working in the auto industry, anyway?

After a roommate suggested she contact a university for affordable treatment, Sally came to Columbia. After a few screenings she was referred to COPE, a clinic that studies people who are not fully psychotic, but have disturbing symptoms that interfere with their lives.

### A Researcher's Perspective

Cheryl Corcoran's research focuses on teens and young adults at heightened clinical risk for developing psychosis, as compared with their peers. As director of COPE, the Center of Prevention and Evaluation, she and her team evaluate and follow youths who are having psychotic-like experiences, such as unusual thoughts or perceptual disturbances, and who have difficulty socially and at school or at work.

"In our program we characterize people fully," said Dr. Corcoran, who started her research in psychosis risk while at Yale. "We ask lots of questions, do brain imaging and electrophysiological studies - all in the service of figuring out who's really at risk of developing psychosis." COPE investigates the biological mechanisms that underlie the risk for psychosis as well as its evolution with the aim of developing safe, effective interventions for those people who are truly at risk.

COPE also offers treatment to its participants. Because there is no evidence-based treatment for psychosis risk yet, behavioral interventions like individual and group therapy are used, as well as medications that target the depression and anxiety so common among these teens and young adults. Antipsychotics are not routinely used at COPE to

Alex is 23. Unemployed after a brief stint as a busboy, he is living in City Island. He recalled that before joining the study almost four years ago, he was "maybe a little depressed, and a little anxious, too." His mood didn't escape the attention of friends and family he said: "...I was sitting at home all day and I just - didn't do anything." Though he made it to his senior year, he failed his classes in the last semester, due in part, he thinks, to his not feeling well.

He is candid about his progress, "I haven't gotten much better, to be honest," he said. But he added, "I was feeling certain ways and I didn't know why and now I know exactly why." He attributes this



treat the psychotic-like experiences individuals have, or to try to prevent psychosis, as these medications have serious side effects, especially for young people.

But, even before the subject of treatment is introduced, Dr. Corcoran is quick to point out, great care is taken by her and her team to address the unique vulnerability of the people with whom they work "It can be very scary for them to hear they may be at risk for mental illness." It is perhaps reassuring for them to learn that, based on past history in the program, more than two thirds of those who participate at COPE do not develop psychosis. And for those who do, Dr. Corcoran and her team will provide medication. Typically, people who develop schizophrenia languish in the community for up to two years untreated, which is one reason why enrollment in COPE can be tremendously valuable for both the participant and his or her family, even if he or she does develop a psychotic disorder.

Working to develop an effective evidence-based treatment, clinical trials are starting now at NYSPI for young people with psychotic-like experiences,

new understanding to the one-on-one therapy he receives at COPE. "I always avoided the problems but the more I confront them in therapy, the better I get at confronting them outside the therapy," he said.

Sally, who is also in individual therapy, said she has seen some improvement as a result of the work with her therapist and the medication she takes for her anxiety. "Mentally I've gotten a lot better. The problems don't consume me like before." Professionally, there's been a turning point, too. "I don't know what I would have done without it [COPE]. It was getting to the point where it was infringing on my work."

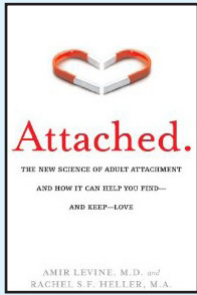
Though their experiences have been different, both Alex and Sally talk about their increasing ability to identify problem areas. As Sally put it: "It's hard to recognize problems as problems. It's like being in a bad relationship and you don't recognize it until its over, and then you can say, god, that was terrible!"

specifically targeting the "negative symptoms" so common in young people at risk for psychosis. Negative symptoms include low motivation and low pleasure, especially in social settings. Even more than psychotic-like experiences, these negative symptoms contribute significantly to the social difficulties young people at COPE have, and to the problems they have at school or at work. Some of the persistent problems described above by Alex, fit this description of "negative symptoms," which are so disabling for these young people, even for those who never develop psychosis.

The overall aim for COPE and the new clinical trials is to understand the neurobiology underlying psychosis risk and development, and its associated features of negative symptoms, anxiety and cognitive problems (attention and memory), so that successful and safe early intervention can be developed for young people who are grappling with these symptoms.

COPE, which started recruitment in 2005, follows individuals for up to four years. To learn more about participation, call 212-543-5874 or visit their website at [www.copeclinic.org](http://www.copeclinic.org).

For more information about participating in research studies, visit our website at [www.ColumbiaPsychiatry.org](http://www.ColumbiaPsychiatry.org), or call 212-305-6001.



## Attached: The New Science of Adult Attachment and How It Can Help You Find—and Keep—Love

Authors: Amir Levine, MD and Rachel Heller, MA

Publisher: Tarcher/Penguin

December, 2010

According to psychiatrist and neuroscientist Amir Levine and social psychologist Rachel Heller, one's adult romantic partnerships have patterns similar to those one has as a child with one's parents. Our individual attachment styles are thus, they conclude, hardwired into our brains. Focusing on three main attachment styles (secure, anxious, and avoidant), the authors explain the biological facts behind our relationship needs, teach readers how to identify their own and loved ones' attachment styles, and warn of the emotional price of connecting with someone with drastically different intimacy needs. Teaching readers communication skills to breach these differences, the authors stress that people have very different capacities for intimacy, and that partners must ensure each other's emotional well-being. Chock-full of tips, questionnaires, and case studies, this is a solidly researched and intriguing approach to the perennial trials of "looking for love in all the right place" and improving existing relationships.

## Virtue and Vice in Health and Illness: The Idea That Wouldn't Die *(continued from page 2)*

meditation or relaxation practices. Another example is forgiveness, in 1991, the topic of a single paper. In 2009, it was the subject of 44 papers. Forgiveness has been linked to a decreased likelihood of hypertension and with reduced risk of externalising disorders. In a small randomised trial, fostering a sense of compassion, another virtue, through a specialised meditation practice attenuated the IL-6 response to laboratory challenge compared with participation in a health discussion control group. Patients with HIV/AIDS and a compassionate view toward others were, it was reported, significantly more likely to be long-term survivors compared with those lacking this view.

Similarly, studies on optimism have also experienced a dramatic rise; in 1991, 67 papers addressed this topic but in 2009, there were 308. Coronary artery bypass surgery patients who were optimistic were significantly less likely than their pessimistic counterparts to be rehospitalised for such problems as post-surgical infections or myocardial infarction. In a study of almost 100,000 women, optimists, compared to pessimists, had lower age-adjusted rates of coronary heart disease and total mortality. Most expansively, physician Walter Larimore has claimed that "honesty, self-control, love, joy, peace, hope, patience, generosity, forgiveness, thankfulness, kindness, gentleness, goodness, faithfulness, understanding, and compassion" are all a means towards better mental and physical health. The intent could not be clearer: virtue is not merely associated with better health but is causally related to it.

The transformation of the hypothesis is thus complete: rather than document associations

between negative characteristics and poor health conditions, some researchers now seem to be committed to establishing that positive personal characteristics are associated with better health. The antonymic successor to the classical view has achieved acceptance as widespread in the scientific literature and in American society as a whole as its predecessor did in the mid-20th century and the transformation is entirely consistent with the meta-narrative about the belief in agency, the idea that we have the power to influence outcomes. It is, as Dana Becker and Jeanne Maracek have put it, "the siren call of American individualism".

But the meta-narrative is not merely normative; it also is prescriptive. Because we can control significant outcomes, we have the responsibility to do so, especially in the case of health and illness. In the 1970s and 1980s, a series of studies, some in *The Lancet*, reported that patients with cancer or AIDS who had a "fighting spirit" had better outcomes than those who were resigned to their diagnosis. The implication, that patients ought to fight rather than resign, is clear. If positive thoughts are what make us healthy—and that's what these studies as well as their 19th-century predecessors suggest—then we can and should think positive thoughts and if we don't we are responsible for the resultant disease. The meta-narrative thus introduces a moral dimension.

The dogged persistence of the search for symmetry between personal characteristics and health reflects this meta-narrative. A century ago, the sick were emotionally inexpressive or overtly hostile. Today, they lack compassion, forgiveness, and a spiritual orientation. Only the flawed, never the

virtuous, become ill. Sickness transforms them into moral outsiders, different from the rest of us, deserving of their fate, and they join other outsiders whose misfortune—lacking a job, being hungry or homeless, or being an immigrant—elicit the attempts we see so frequently today to justify those conditions by attributions of character flaws. In the 19th century, mission crusaders offered temperance pamphlets to tubercular immigrants. Today, patients with AIDS may be offered spiritual transformations.

H L Mencken cautioned against those who debase their theory of the healthful with their theory of the virtuous. But the meta-narrative of agency/responsibility does precisely this. It identifies a connection between personal characteristics and good or bad fortune that has a moral dimension: victims of misfortune suffer their fate because they are the kind of people who deserve it. This conflation of morality with science is, as epidemiologist Petr Skrabanek put it, "a social movement dressed up in scientific language". Science, medical or otherwise, does not exist in a vacuum, and political, cultural, and social forces may lead it astray. Early in the 20th century, the Gestalt psychologist Wolfgang Kohler commented "it is the obligation of each scientific generation to make explicit the implicit assumptions of its predecessors". 100 years later, medical scientists would be wise to consider this admonition in studies that link health to personal virtue and vice.

**Richard P Sloan**

*Nathaniel Wharton Professor of Behavioral Medicine, Columbia University Department of Psychiatry (This article originally appeared in The Lancet, Mar 12, 2011, Vol. 377 No. 9769)*