

Irreducible Mind: Toward a Psychology for the 21st Century

Kelly, Edward F., Kelly, Emily Williams, Crabtree, Adam, Gauld, Alan, Grosso, Michael, and Greyson, Bruce. (2007). Maryland: Rowman & Littlefield Publishers, Inc. ISBN: 10: 0-7425-4792-2. xxxi + 800 pp. \$64.00.

Throughout history, scientific revolutions often resulted when brilliant scientists took into account a wide range of previously unknown or dismissed phenomena. Galileo with his telescope and Charles Darwin during his 5 years' long travel in the *Beagle* gathered an enormous mass of empirical evidence that was not considered by most scientists at that time. Their discoveries disproved long accepted paradigms related to astronomy and biology. The end of those stories is well known to us.

Kelly et al. propose something similar in their book. They convincingly argue that scientific psychology needs to enlarge its current timid scope and deal with a much wider range of phenomena if psychology wishes to make a truly significant contribution to the understanding of mind and its relationship with body. Throughout the last century, following a naive and positivistic view of science, psychology progressively abandoned the study of its main subject, the mind. It is worth remembering that, etymologically, psychology means study of the soul or mind. The same may be said regarding psychiatry (medicine of the mind or soul).

Contemporary scientists in psychology and psychiatry usually adopt one of 2 approaches: either their disciplines cannot study mind or mind has been fully explained as a product of brain activity. Much evidence is usually provided to support the latter explanation, often with examples showing that some alteration in mind is produced by brain injury or neurophysiological change. This approach is a dangerous epistemological posture, as the philosopher of science Popper (1963) has stated; finding confirmatory examples of almost any theory is an easy task. According to

Popper, to truly test a theory, we should be committed to look for evidence that could possibly falsify that theory. A good scientific theory withstands vigorous attempts to find contrary evidence.

Kelly et al. argue that examples of psychophysiological concomitance ("for every mental state there is a correlative nervous state" p. 66) are not enough to prove that brain produces mind. First of all, scientists have often "limited their observations of mind-brain correlation primarily to situations in which brain is essentially the independent variable and mind the dependent" (p. 66). Usually the flip side, mind producing brain changes, is ignored. Kelly et al. claim that psychology should resume the approach pursued by some pioneers like William James and Frederic W.H. Myers. These pioneers posited that a true science of mind should seriously take into account all kinds of human experiences before prematurely accepting a theory of mind.

James and Myers were both deeply involved with psychical research and the study of religious experiences and they emphasized that those phenomena should not be dismissed because they have important implications for our understanding of mind. Despite their separation by nearly a century, Kelly et al. and James and Myers both complained that scientists of mind have often neglected those phenomena merely because they cannot be accommodated in the usually accepted views of mind.

The rejection of empirical evidence that does not fit a prevalent paradigm is not uncommon in science. The philosopher of science Kuhn (1970) showed that scientist usually are not able to recognize phenomena not allowed by the paradigm they are committed to:

"Can it conceivably be an accident, for example, that Western astronomers first saw change in the previously immutable heavens during the half-century after Copernicus' new paradigm was proposed? The Chinese, whose cosmological beliefs did not preclude celestial change, had recorded the appearance of many new stars in the heaven at a much earlier date." (Kuhn, 1970, p. 116)

Irreducible Mind is a comprehensive review of empirical evidence that questions the assumption that "properties of minds will ultimately be fully explained by those of brains" (p. xx). The book's authors come from United States, United Kingdom, and Canada, and have different backgrounds relevant to this controversial subject: psychology, philosophy, psychiatry, and history. *Irreducible Mind* begins by presenting a brief overview of contemporary neuroscience followed by a summary of the approach proposed by Frederic Myers to scientific psychology. It is amazing how many modern scientists and clinicians who deal with mind are not aware of an author like Myers, who made so many important contributions to the field.

After these 2 chapters, the next 4 chapters present and discuss the implications of a wide range of important but neglected psychological phenomena. Following Myers' expository methods, for each category of phenomena, Kelly et al. start with more common examples and gradually move to more extreme and challenging phenomena. These include psychophysiological influence (psychosomatics, placebo, dissociative disorders, physiological changes induced by hypnosis, distant mental influence), memory, mental automatism (dissociative identity, motor automatism, trances, mediumship), near death phenomena and related phenomena (near-death experiences, out-of-body experiences, lucid dreams, apparitions, and deathbed visions), genius (creative inspiration and creative personality), and mystical experience. Based on old and more recent evidence presented, the last chapter reexamines Myers' theory of personality. As the book's authors consider findings from nearly a century of psychical research, the book ends with a useful appendix that contains an annotated bibliography of the field.

The main conclusion of this book is that in light of the evidence currently available, if one takes into consideration all the evidence and not only a narrow range of phenomena (as usual in contemporary psychology and cognitive science), our current mainstream theories regarding the mind-body problem are seriously flawed and unable to explain a wide range of human experi-

ences. Following James and Myers' lead, Kelly et al. propose that instead of the brain producing mind, the brain may work as a *filter* for manifestations of mind in our daily life. The authors argue that brain may function "as an organ which somehow constrains, regulates, restricts, limits, and enables or permits expression of mind" (p. 607).

To support this controversial claim is the main purpose of this 800-page book with nearly 1800 references. *Irreducible Mind* is a good review, a kind of field guide that summarizes and puts into perspective a wide range of important, interesting, and neglected human experiences. The book is a scholarly one, providing readers with important historical facts, while at the same time conveying up to date information about current developments in neuroscience.

On the down-side, sometimes the book becomes repetitive regarding its main claims and some parts, such as the chapter related to memory, are hard to follow. Because the authors wish to provide support for their conclusions, the book came to be quite long, which may bother some readers. However, the reader may focus only on chapters related to specific topics of greater interest. Another limitation is that the book primarily reviews studies performed in Europe and North America. Because the kind of psychological phenomena discussed in this book often involve spiritual and psychical experiences, a wider transcultural approach would be welcome. Finally, because *Irreducible Mind* talks about scientific paradigms and the limits and methods of science, it would be helpful to include the thoughts of experts in the philosophy of science.

These weaknesses do not undermine the value of this book. Kelly et al. deserve to be praised for their courage and scholarship in dealing with such a controversial topic. Whether or not one agrees with the authors' conclusion, their comprehensive review is thought provoking and useful in providing challenging evidence and ideas regarding the mind-body phenomena.

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The Descent of Madness: Evolutionary Origins of Psychosis and the Social Brain

Burns, Jonathan (Ed.). (2007) New York: Routledge Taylor & Francis Group. ISBN 13: 978-1-58391-743-5. ix + 275 pp. \$35.95.

It is human nature to seek meaning in experience. This pursuit is at the heart of *The Descent of Madness: Evolutionary Origins of Psychosis and the Social Brain*. In this thoughtful and broad-minded book, Burns uses evolutionary theory as the conceptual framework for the interpretive synthesis of research on the origin and nature of schizophrenia. He artfully constructs a comprehensive, interdisciplinary theory of madness using research and theory from such diverse fields as developmental psychology, neuroscience, paleoanthropology, and primatology. Burns alternates between scientific specificity and general philosophical reflection, giving detailed evidence to support his theses while keeping the reader aware of the ethical and sociocultural implications of his claims. He maintains an impressive balance of breadth and depth as he constructs his response to the difficult question: *why* do schizophrenia and other psychoses exist? What does their presence within the range of human experience *mean*?

Within an evolutionary framework, this question of purpose can be rephrased: why has the selectively disadvantageous schizophrenic genotype persisted despite the reduced fertility and increased early mortality of its carriers? Burns is critical of the accepted evolutionary explanation, called the adaptationist model, which holds that the

schizophrenic genotype is "selected *for*" because some people on the schizotypal spectrum have reproductively advantageous traits. As an alternative to this hypothesis, Burns presents his own "pleiotropic model" of natural selection, which holds that the "selection *of*" the schizophrenic genotype is a consequence of the intimate relationship between the schizophrenic genes and a set of genes that are not only adaptive but fundamental to the human capacity for survival. These "adaptive genes" are the ones responsible for regulating the neurodevelopment of the social brain, or the cortical connectivity necessary for social cognition.

Burns offers a phenomenology of psychotic experience to support his understanding of schizophrenia as a disorder of social cognition. He describes emotional and interpersonal detachment, as well as the deterioration of metarepresentation and theory of mind, as the characteristic features of the disorder. He grounds his descriptive symptomatology in cognitive science, citing the range of impairments found in the social cognition of schizophrenic patients, including the judgment of eye gaze direction and the processing of emotional and neutral facial expressions. He presents the "disconnectivity" hypothesis of schizophrenia, which holds that there is a functional disconnect between the prefrontal and parietal cortices in schizophrenic patients. The communication between these 2 cortices is responsible for the recognition of self-generated stimuli as internal phenomena, so the dysfunction of this connection causes schizophrenic patients to mistakenly attribute internal phenomena to an external source. Burns describes imaging studies that have been done on schizophrenic patient in detail, and argues that the 3 major white matter cortical connections between the prefrontal and parietal cortices serve as the biological substrate for the social brain, a claim now well substantiated by modern social neuroscience. He argues further that these are precisely the areas that show structural abnormalities in psychotic patients.

Burns concludes that it is the increased cortical connectivity necessary for complex social cognition that makes the brain susceptible to the neurodevelopmental abnormalities that result in psychotic illness. Increased complexity

yields greater vulnerability. The more intricate the interconnection necessary for social dexterity, the more opportunity for complicated genetic interactions and insults. There is nothing shocking about this conclusion, but it is important because it reveals the duty toward those afflicted. According to Burns, schizophrenics pay the price for the rest of humanity's capacity for complex interpersonal relationships. They carry the burden of evolutionary changes in neurodevelopment. It is the duty of the healthy, then, to create a society where the mentally ill can find their place. Burns' conclusion is welcome and inspiring, and anyone interested in the alleviation of suffering will benefit from his lyrical blend of information, interpretation, and compassion.

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Briefly Noted

A History of Modern Experimental Psychology: From James and Wundt to Cognitive Science

Mandler, George F. (2007)
Cambridge (MA): MIT Press.
ISBN 978-0-262-13475-0. xx +
287 pp. \$34.00.

In the 1940s, near the mid-20th century mark, Fritz Redlich, then chairman of Yale's department of psychiatry, taught his residents that psychiatric practice rested upon a kind of 3 legged stool. The first leg was biology, encompassing all of the identifiable factors determining human behavior. The second leg was psychoanalysis, understood as evolving beyond Freud in directions influenced by other fields. The third leg included all of the social and psychological sciences. Experimental psychology had special status as a basic science for psychiatry, just as physiology in that era was considered a basic science for internal medicine. The department's location in the Institute of Human Relations, home for such luminaries as Neal Miller, John Dollard, Irving Janis, Carl Hovland, Fred Sheffield and others,

along with the regular presentations by visiting psychologists to which all interested psychiatrists were invited, facilitated the development of research-minded clinicians sympathetic to the nonclinical fields which could inform their work.

At the dawn of the 21st century, however, psychoanalysis has been virtually read out of the field of psychiatry. But although it appeals to a relatively small group of devotees, many of its basic principles survive under the rubric of psychodynamics and are put to use in various forms of psychotherapy. The biological sciences have expanded to include fields of study ranging from neurochemistry to pharmacology and beyond. Few psychiatrists are engaged in social science research and almost none are conversant with experimental psychology.

Mandler's volume is a *tour de force* that might capture the interest of a few psychiatrist readers of this journal. It could do much to alleviate the scientific illiteracy of many of today's young psychiatrists for whom science is embodied mainly in trials of new psychotropic drugs. Mandler ties the evolution of contemporary psychology to the evolving social and political contexts in which it developed. He takes the reader to the most recent development in this field, that of cognitive science, a product of the post-World War II revolution in information and communication.

This is no dry recounting of facts and dates. It goes from the meaning and history of the concept of mind, through the psychology of thought and memory. It explores among other topics the Freudian development of the systematic unconscious, the destruction of psychology in 1930s Germany, and the rise of the United States as the center of investigations in the field. Any clinician who takes the time to absorb this volume's offerings will be amply rewarded.

Assessment of Malingered Neuropsychological Deficits

Larrabee, Glenn J. (Ed) (2007)
New York: Oxford University
Press. ISBN 978-0-19-518846-2.
xiv + 386 pp. \$69.50.

Malingering refers to the exaggeration and/or fabrication of symptoms (in the

case of this volume, neuropsychological deficits) as a way of achieving some external goal. Frequently encountered goals include escape from punishment for presumed criminal behavior, or legal compensation for injury or malpractice. It should not be confused with factitious disorder in which intentional production of symptoms is motivated by the need to assume a sick or disabled role, or to resolve (usually unconscious) conflict. The prevalence of malingering in both civil and criminal contexts has been estimated, according to sources quoted in this volume, as approaching or exceeding 50%.

Despite the huge volume of research on this topic the need remains for a comprehensive review of the procedures available for assessing malingered deficits. The editor accomplishes this in 13 chapters written by 14 authors, mainly psychologists, in addition to himself. This is a valuable resource.

How People Change: The Short Story as Case History

Tucker, William (2007) New York:
Other Press. ISBN-13: 978-1-
59051-212-8. xiii + 322 pp. \$35.00.

Experienced clinicians know that with time and repetition an individual patient's case history acquires narrative form. The case history, as it were, becomes a short story. Medical school teachers have turned this around, utilizing selected gems from literature, including short stories, to illustrate the significant elements which recur in the case histories of people with a variety of illnesses. The post-World War II era, in particular, concurrent with (although not necessarily caused by) the rise of psychoanalysis as a core explanatory model for relationships in general, has seen many attempts, by both physicians and professional humanists, to use fiction as a vehicle for teaching human relations to medical students and residents. Sometimes the designated emphasis has been on interpersonal ethics, or the bioethical puzzles posed by advancing technology; sometimes the focus has been on what might be called the philosophy of medicine; but the background issue and the primary concern of physician teachers has always been with empathy and the doctor-patient relationship. Their concerns, inev-

itably, have been colored by their own professional specialties, most often that of psychiatry.

In the present instance the author, an experienced clinician, is a psychiatrist. He is clearly conversant with Freudian thinking, but more sympathetic to the ideas of Erik Erikson, which acknowledge human plasticity and the capacity for change throughout the life cycle. The 16 short stories that make up the bulk of the volume have been chosen to illustrate the

process of change in patients engaged in therapeutic relationships. They have been produced by writers well known to educated Western readers: Anton Chekhov, Jean Rhys, Delmore Schwartz, Ruth Jhabvala, Katherine Anne Porter, D.H. Lawrence, Richard Wright, Katherine Mansfield, Flannery O'Connor, James Joyce, Albert Camus, and Nicolai Gogol. Chekhov is represented by 3 stories and Joyce and Rhys by 2 each. There are stories for each of Erikson's 8 stages of the life cycle,

except for the first, "basic trust versus basic mistrust (0–18 months)". Because they are intended as texts for workshops considerable emphasis is placed on methods of analysis and guides for discussion. Every clinician reader may not agree with Tucker's analytic approach, but all will find it interesting and food for reflection. The final sections of the book, discussing the stories and indicating their applicability to clinical work, add significantly to its usefulness.