

Also highly recommended, and discussing related questions, the superb 90-minute BBC TV program by David Malone *Dangerous Knowledge*, on Cantor, Boltzmann, Gödel and Turing. Currently available at <http://video.google.com>. Just search for “dangerous knowledge.”

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### Note

<sup>i</sup> Gödel regarded Leibniz as a supreme intellect, an opinion that I have come to share. So if anyone knew the answer, it had to be Leibniz. Maybe the key idea was buried, unappreciated, somewhere in the thousands of pages of Leibniz’s *Nachlass*. Maybe, Gödel thought in moments of despair, it had been discovered but deliberately suppressed by forces inimical to human intellectual and moral progress. Clearly, such forces are powerful. Just look at the mess out there!

**Irreducible Mind: Toward a Psychology for the 21st Century** by Edward F. Kelly, Emily Williams Kelly, Adam Crabtree, Alan Gauld, Michael Grosso, and Bruce Greyson. Lanham, MD: Rowman & Littlefield, 2006. 832 pp. \$99.95 (hardcover) ISBN: 0742547922.

This outstanding book is both a celebration and a continuation of F. W. H. Myers’s pioneering and far-reaching empirical and theoretical research, which culminated in his monumental two-volume *Human Personality and Its Survival of Bodily Death* (generously included with the book on a CD). It succeeds admirably in demonstrating the considerable scope and profundity of Myers’s work, and in fact, it makes a very strong case for regarding Myers as history’s greatest psychologist. The book accomplishes this task by tackling head-on the question of whether everything that can or needs to be said about the mind and consciousness can be done solely with reference to physiological states (typically, states of the brain). Not surprisingly, the book’s central contention “is that the science of the mind has reached a point where multiple lines of empirical evidence, drawn from a wide variety of sources, converge to produce a resolution of the mind-body problem along lines sharply divergent from the current mainstream view” (p. 1). So in the tradition of Myers, the authors survey in great detail a range of phenomena that Myers took very seriously and that seem difficult to accommodate in physicalist terms. They argue plausibly that an adequate psychology must comprehensively examine the full range of experiences and behavior falling within its domain—not simply those that are

ordinary and familiar, and certainly not just those amenable to the procrustean and myopic (largely experimental) approaches favored by psychologists afflicted with a bad case of physics envy. Moreover, the authors maintain that many such “‘rogue’ phenomena exist . . . and that the evidence for them has in general become far stronger during the subsequent century” (p. 603).

Like both Myers and his friend William James, the authors defend a principle later expressed nicely by Wind (1967): “It seems to be a lesson of history that the commonplace may be understood as a reduction of the exceptional, but the exceptional cannot be understood as an amplification of the commonplace” (p. 238). Accordingly, they focus primarily on various interesting and unusual human experiences (including, of course, evidence of ostensible psychic functioning) that both challenge received physicalist dogma and also promise to lead to a more satisfactorily synoptic human psychology. Where this more comprehensive approach leads, they suggest, is to a view taken seriously by both Myers and James, namely, (a) that many mental processes are inexplicable in purely physical terms, (b) that the domain of the mental encompasses much more than what is found in everyday waking life, (c) that the more unusual phenomena within that domain are especially important theoretically, and (d) that one of the brain’s principal functions is to regulate conscious awareness by either filtering out or permitting the intrusion of a great deal from the much wider field of an individual’s psychological life.

*Irreducible Mind* is written primarily for “advanced undergraduate and early-stage graduate students, particularly students in disciplines such as psychology, neuroscience, and philosophy” (*IM*, p. xiv). The authors hope to reach these “future leaders of our field . . . before they suffer the ‘hardening of the categories’ that all too often accompanies entry into these highly specialized professions” (p. xiv). But I’m quite sure that seasoned professionals can also learn a great deal from this work. It covers a much broader territory than most will have mastered on their own, it has been written quite carefully, it contains a wealth of references to relevant theoretical and empirical writings, both historical and very up-to-date, and it even includes an annotated bibliography of psychical research.

In the space of a review, I can do little more than survey the range of topics covered in this massive volume. But that should suffice to indicate the book’s value as a reference work, even for those who don’t accept all the authors’ shared or specific theoretical conclusions.

The first chapter, by Edward F. Kelly, begins with a conceptually sophisticated, clear, and (given space limitations) surprisingly thorough history of cognitive psychology. Kelly follows this with a largely sympathetic presentation of John Searle’s arguments against computational theories of the mind. That, in turn, is followed by a balanced critique of Searle’s own biological naturalism. Kelly then prepares the reader nicely for what subsequent chapters consider in greater detail by reviewing the kinds of experiences and abilities that pose the greatest theoretical challenge to prevailing physicalist psychological theories. These include psi phenomena, extreme forms of psychophysical

influence, memory, psychological automatism and dissociation, the unity of conscious experience, genius, and mystical experience.

Chapter 2, written by Emily Williams Kelly, outlines first the intellectual climate leading to the development of Myers's own views, and then she describes in considerable detail both the distinctive features of Myers's pioneering work and the structure of *Human Personality*. Predictably, she emphasizes Myers's distinction between our relatively limited *supraliminal* (normal waking) consciousness and the more extensive (though not necessarily deeper) *Subliminal Self* that reveals itself in the interesting phenomena discussed throughout *Irreducible Mind*. She also states a theme repeated throughout the book: that—whatever the ultimate merits of his explanatory framework—Myers was the first (and arguably the only) person to have provided a detailed, empirically supported, and (perhaps most important) genuinely comprehensive map of the domain of psychological phenomena. Unlike anyone before him, Myers recognized that an adequate psychology must fearlessly embrace and try to systematize the full spectrum of human experience and performance.

Chapter 3, also by Emily Williams Kelly, concerns the challenges faced by physicalist theories in explaining various forms of psychophysical influence. Kelly surveys a broad range of cases, moving from the relatively familiar (as occur in postponement of death, placebo and nocebo effects, meditation, yoga, stigmata, and dissociation) to even more arcane phenomena studied and documented by parapsychologists. She argues that as the phenomena become more unusual, the received physicalist promissory explanations become increasingly strained and implausible. And in the most unusual cases, for example, documented and apparently intentional changes in another person's body (as in direct mental interactions with living systems [DMILS] experiments, suggestion at a distance, and birthmark reincarnation cases), physicalist explanations fail dramatically. In those cases, physicalists can do little more than ignore or try to impugn the quality of the evidence—tactics which the authors argue plausibly are indefensible.

Chapter 4, by Alan Gauld, covers the topic of memory, a subject that many physicalists believe they have understood for a long time, at least in broad outline, and that they believe can easily be explained by positing some kind of physiological *memory trace* and a mechanism for memory retrieval or trace-activation. Gauld recognizes that physicalists have considerably overstated their case here, and his discussion of the poverty of trace theories is unusually rich and sophisticated. Gauld has an admirable command of the relevant literature in psychology, philosophy, and neuroscience, and he clearly grasps the theoretical errors that most memory theorists commit with varying degrees of innocence. These concern both empirical inadequacies and deep conceptual confusions (*e.g.*, commitment either to an infinite regress of memory mechanisms or else a homunculus who already possesses the mnemonic abilities in question). I should mention that this has been a topic of particular interest of mine for a long time, and one I've addressed on several occasions (see, *e.g.*, Braude, 2002, 2006.)

In Chapter 5, Adam Crabtree considers automatism and secondary centers of consciousness. Generally speaking, this chapter concerns manifestations of seemingly conscious intelligent activity not arising from a person's ordinary waking consciousness. In addition to full-blown cases of multiple personality (or dissociative identity) disorder, Crabtree considers (to use Myers's terms) *motor* automatisms such as automatic writing, speaking, and drawing, and *sensory* automatisms as manifested dramatically in "inspired" literary and musical productions, hypnotic and "idiot savant" phenomena, and also in dreams, anesthetics, apparitions, and hallucinations. He begins by summarizing the views of Myers and some of his major contemporaries (Pierre Janet, William James, Morton Prince, T. W. Mitchell, William McDougall, Sigmund Freud, and Carl Jung). That is followed by a discussion of recent theoretical work on the topic of dissociation, focused primarily on the writing of Ernest Hilgard and myself. I was particularly interested to find Crabtree claiming that my Kantian defense (in Braude, 1995) of psychological unity underlying multiplicity is "one of the most persuasive arguments to date for the reality of Myers's ultimate Subliminal Self" (p. 340). I admit that's not something I had considered at the time, and I'm grateful to Crabtree for pointing me in that direction. After this largely historical survey, Crabtree discusses the limitation of sociocognitive and neurobiological accounts of the phenomena in question, and he concludes the chapter by considering connections between automatism and the paranormal. To some extent, this chapter also touches upon the role of automatisms in expressions of creative genius, a topic which is examined in great detail in Chapter 7.

Chapter 6, by Emily Williams Kelly, Bruce Greyson, and Edward F. Kelly, deals with near-death experiences (NDEs) and related phenomena such as out-of-body experiences (OBEs), lucid dreams, and apparitions. Following the general pattern of the previous chapters, the authors survey the outstanding features of the phenomena in question, and then they consider, in considerable detail and with extensive references to the empirical and theoretical literature, the limitations of more or less traditional physiological and psychological explanations. In their view, "the central challenge of NDEs lies in asking how these complex states of consciousness, including vivid mentations, sensory perception, and memory, can occur under conditions in which current neurophysiological models of the production of mind by brain deem such states impossible" (p. 421). This challenge for received neuroscience, they argue, is most acute when NDEs occur under conditions of general anesthesia or cardiac arrest. Like the other chapters in *Irreducible Mind*, this chapter is a superlative review of the relevant data and issues.

Chapter 7, by Edward F. Kelly and Michael Grosso, tackles the topic of genius. One of its aims is to combat two related and prevailing tendencies in orthodox science: (a) to treat genius as "nothing special," that is, as if (in Wind's terms) it's a mere amplification of the commonplace, and (b) to analyze genius as a mechanistic, rule-governed phenomenon. So Kelly and Grosso briefly survey savantism, in which remarkable abilities occur in individuals despite their suffering from related disabilities, for example, calculating savants who cannot

add the change in their pockets. Then they consider the role of automatism in genius, especially, the inspirational uprushes manifested in music, literature, and mathematics. Their assault on mechanistic analyses of genius focuses on the nature of meaning generally and analogy in particular. They argue, correctly in my opinion, that neither can be explained in purely structural terms independent of an irreducible background of interests and the perspectives of agents against which certain things are more relevant than others. Part of the problem, of course, is again that of the homunculus, noted also in Chapter 4 by Gauld in connection with trace theories of memory. Myers had seen genius as a manifestation of successful interaction between supraliminal and subliminal processes, and Kelly and Grosso conclude the chapter by noting apparent links between the “transcendent or transpersonal aspect” (p. 491) of genius and the topic of mysticism (discussed in the next chapter). As they see it, one of Myers’s great achievements in this arena was his appreciation and analysis of “the impressive *phenomenology* of genius—reflected in the concept of ‘inspiration’ as being literally ‘breathed into’ by the Muses, a god or daemon, or whatever—while reinterpreting it entirely in naturalistic, functional terms” (p. 491).

Chapter 8, also by Kelly and Grosso, continues with the book’s general theme that “psychology *must* take account of the full range of human experience or be reduced to a caricature, a defacing, of what it means to be human” (p. 495). The authors effectively defend Myers’s and James’s view that mystical experience is an important part of the proper subject matter of psychology, and they argue at length that despite considerable variability, mystical experiences nevertheless exhibit important regularities. Moreover, they want to show that the core introvertive mystical experience has “characteristics . . . [that are] *not* mechanical, physical, or computable” and which appear to “transcend time and space, the sensory, the imaginal, and the rational” (p. 574). At the same time, Kelly and Grosso also contend that mystical experience cannot be understood as merely a subjective illusion. They argue that it makes a genuine form of contact with reality “beyond the normal limits of the mind-body system as conventionally understood,” apparently revealing in particular “the underlying source of our ordinary, everyday experience of intentionality and selfhood” (*ibid*).

*Irreducible Mind* ends as it began, with a chapter by Edward F. Kelly. Entitled “Toward a Psychology for the 21<sup>st</sup> Century,” this chapter begins by summarizing some of the main points of the earlier chapters and reviewing crucial features of (and remaining puzzles over) Myers’s comprehensive theory of human personality. Then it addresses the topic of postmortem survival, offering a compact but generally fair assessment of the pros and cons of the survival and rival super-psi hypotheses (along with a modest preference for the former). I lament only that Kelly neglected to mention how survivalist accounts seem actually to *require* psychic functioning of nearly or exactly the magnitude and scope posited by super-psi alternatives but which survivalists claim is a flaw in those alternative accounts (see Braude, 2003, for more details). Next, Kelly briefly discusses Myers’s views on evolution, noting in particular how Myers posits

“some global creative tendency in the universe, however slight, that results over time in increasing richness and complexity in biological forms” (pp. 601–602).

At this point, Chapter 9 becomes more relentlessly philosophical as Kelly considers how “a psychological ‘filter’ theory of the Myers/James sort can be adapted to the framework of contemporary science” (p. 605). Kelly wants to resist the temptation to think of a filter theory as requiring a narrowing or loss of function. Instead, he argues that “by thinking of the brain as an organ which somehow constrains, regulates, restricts, limits, and enables or permits expression of the mind in its full generality, we can obtain an account of mind-brain relations which potentially reconciles Myers’s theory of the Subliminal Self with the observed correlations between mind and brain, while circumventing the conceptual difficulties . . . in transmission models” (p. 607). Kelly proposes to tackle this by considering both non-Cartesian dualist-interactionist and neutral-monist alternatives. And that leads him to take seriously proposals by physicist Henry Stapp and the process philosophy of Alfred North Whitehead.

The issues here are too complex to address adequately in the context of a review. So I’ll just note briefly that, despite another very nice discussion of the shortcomings of contemporary cognitive science and modularity views in particular, I found this to be the least compelling part of *Irreducible Mind*. For example, I’m unpersuaded that a reference to consciousness is required in the interpretation of quantum formalism, but I’ll leave it to more qualified commentators to pursue that issue. It also wasn’t clear to me why the position Kelly next describes and in part attributes to Stapp qualifies as non-Cartesian. Cartesian dualism is (and is often considered synonymous with) *substance* dualism. It posits two distinct kinds of stuff in nature—mental and physical—and it’s usually contrasted with what philosophers call “property dualism,” according to which the mental and the physical are two distinct languages, levels of description, or sets of descriptive categories, neither of which is fully translatable into the other, and both of which pick out genuine features of nature. So I don’t fully grasp in what sense the Kelly/Stapp position described in Chapter 9 is non-Cartesian. It still seems to be a kind of substance dualism, with “consciousness” or “mind” naming one of the substance-types. Indeed, in this section, Kelly still writes about brain processes relating to an “associated psychic entity” (p. 616). He claims to have “re-introduced the psyche, conceived as a second and distinct type of existent . . . with which . . . body is somehow associated” (p. 630). Regrettably, Kelly doesn’t directly address the issue of whether “consciousness” or “mind” are supposed to name a kind of thing or substance, or whether they nominalistically merely stand for a certain class of events (as “the weather” stands for the class of meteorological events and not a meteorological substance). So one cannot be sure exactly what position is being defended here.

I’m also puzzled by Kelly’s description of a neutral monist alternative to conventional physicalism. Neutral monism is typically considered to be a view according to which nature has no preferred or privileged, intrinsically correct description. Rather, it can be correctly (though incompletely) described in more

than one way. (It's accordingly easy to see why neutral monists are often property dualists—or better, property pluralists.) Spinoza provides a classical example of this view. However, Kelly's presentation of a neutral monist alternative seems to waver between a genuine neutral monism and a kind of idealism, positing mentality of some sort as a basic feature of basic ontological furniture. For example, to the extent I can understand Whitehead, I'm surprised to see him invoked as a representative neutral monist. It would seem that Whitehead's animism takes nature, *at a basic level of description*, to be active in a way usually associated with the mental. I was even more surprised to find that Leibniz, a classic idealist if ever there was one, also gets classified as a neutral monist. (In Leibniz's view the world is composed of simple *souls* called "monads," and the physical world is a logical construct out of their varying *perspectives* or points of view.) In fact, I've never understood how Whitehead's species of atomism escapes some core failings of physicalistic atomism. Indeed, as far as mechanistic credentials are concerned, it seems to me that the principal difference between a worldview laid out in terms of Whiteheadian occasions of experience and mechanistic physical theories is a relatively trivial change of "hardware." Moreover, both types of reductionism strike me as clinging obstinately to the fallacious "small-is-beautiful assumption" (Braude, 1997).

Despite these reservations, I applaud Kelly's willingness to explore unconventional approaches to the problems dealt with so inadequately by received physicalistic approaches to the mental. Besides, these final-chapter speculations occupy only a very small portion of an otherwise superlative book. So I can wholeheartedly recommend *Irreducible Mind*. It's a terrific achievement: a stellar research tool for students and professionals alike (no matter what their theoretical presuppositions might be), a welcome and timely examination and defense of a great pioneer in the study of human nature, and also a sophisticated, provocative, and thoughtful assault on mechanistic and reductionistic psychophysical theories.

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## References

- Braude, S. E. (1995). *First Person Plural: Multiple Personality and the Philosophy of Mind*. Rowman & Littlefield.
- Braude, S. E. (1997). *The Limits of Influence: Psychokinesis and the Philosophy of Science*. University Press of America.
- Braude, S. E. (2002). *ESP and Psychokinesis: A Philosophical Examination (Revised Edition)*. Brown Walker Press.
- Braude, S. E. (2003). *Immortal Remains: The Evidence for Life After Death*. Rowman & Littlefield.
- Braude, S. E. (2006). Memory without a trace. *European Journal of Parapsychology*, 21(Special Issue), 182–202.
- Wind, E. (1967). *Pagan Mysteries in the Renaissance*. Penguin.