

SCIENCE

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LETTERS

Mind and Brain

It is ironic in an issue focused on Frontiers in Neuroscience that the editorial introduction by Daniel E. Koshland Jr. (29 Oct., p. 635) does not reflect our current understanding of the relationship between mind and brain. Koshland appears to equate bad parenting and the effects of a poor environment with those of “evil spirits” and suggests that only nonscientists might put these forth as causations in situations of brain malfunction. Is it really possible to be unaware of the rather large literature demonstrating environmental and rearing influences on gene expression and neural development? The false dichotomy that is put forth is perpetuated in the subsequent statement that manic-depressive illness “cannot be successfully treated by counseling or psychiatry,” but is responsive to the chemical lithium. Aside from erroneously limiting the profession of psychiatry to the practice of psychotherapy (one wonders who actually prescribes the lithium), the statement discounts the enormous psychological and social costs associated with manic-depressive illness that are not adequately addressed by medication alone. The criticism of social interventions continues in other observations, such as the statement that retraining programs are not likely to help homeless individuals who are mentally ill. It would be interesting to know from what scientific data base this point of view is extracted, as even individuals with profound and documented organic deficits (for example, stroke) may benefit from retraining programs.

Furthermore, what is the evidence for brain disease in the criminal who stabbed the tennis star? Is a world in which individuals are deprived of individual rights as a result of vague diagnoses of brain malfunction really a societal advance? Koshland might review 300 years of English common law before asserting that forensic evaluations of mental status simply involve brain-damaged criminals being designated as cured by their being “nice to a psychiatrist.”

The scientific method requires both an informed knowledge of the data base and openness to the possibility that one is incorrect in one's assumption; Koshland's editorial consists more of dogma and dialectic than of science.

Victor I. Reus

*Department of Psychiatry,
University of California,
San Francisco, CA 94143*

Response: I have never said, nor do I believe, that counseling or psychiatry are valueless or that environment and bad parenting are without effect on the mind and behavior. I do believe that modern neurobiology has shown that some brain malfunction can be present at birth and that some illnesses, such as manic depression, are far more susceptible to drug therapy than to counseling therapy. There are many psychiatrists who welcome the new knowledge, use it in their practice, and understand its implications and limitations. There are others who resent the new advances and misquote those who see the complexity of nature and nurture. I do not lump all psychiatrists in a single group any more than I lump all homeless in a single group or attribute all brain influences to either nature or nurture.—**Daniel E. Koshland Jr.**

Scientific Evidence and the Courts

The Policy Forum by Kenneth R. Foster, David E. Bernstein, and Peter W. Huber, “Science and the toxic tort” (17 Sept., p. 1509) glosses over matters that severely limit the reach of the U.S. Supreme Court's decision in the case of *Daubert v. Merrell Dow Pharmaceuticals* (1). First, as is true of most product liability cases (or tort cases generally), Merrell Dow's liability was governed by state, not federal, substantive law. The case was allowed in federal court only because of the parties' diversity of citizenship. Second, the Supreme Court's interpretation of federal evidentiary (and other procedural) rules binds only federal courts. Even states that adopt those rules verbatim are free to interpret them as they see fit.

Beyond this, the Policy Forum seems based on two unstated premises. First, it encourages readers to believe that many verdicts in favor of plaintiffs may be too large and are often wrong. No doubt verdicts are sometimes larger than newspaper readers might find warranted, and some are sure to favor plaintiffs erroneously. Yet, given, for example, that sympathy for plaintiffs is offset by more resources being available to defendants, can one assume that erroneous verdicts more often favor plaintiffs? Second, the article seems to assume that, because most judges and jurors are largely untutored in math or