

guilty only of sloppiness in reprinting tables from a previous publication while in the body of the text referring to an increase in the number of twins.

The real villain in all of this is not so much Burt or his apologists but those who found his results so to their liking that they accepted them unquestioningly for so many years. These people now have a new focus of attention, the Minnesota Study of Twins Reared Apart, partly because Burt is still too hot to handle and partly because this study now has more than Burt's 53 pairs. Many papers have resulted from this research group but they are long on anecdotes and short on details concerning age of separation, age at reunion, who actually reared them — as amazing as it sounds, in previous (relatively small but nevertheless, actual) studies of separated, identical twins, many of the twins were never really separated but sometimes it is doubtful that they were identical and not fraternal! Furthermore, the raw data is not freely available to researchers who have a different agenda. And just to make the reader more skeptical, one of the main financial supporters is an organization with a clear racist intent.

One last point stressed by Kamin which is often overlooked as the nature-nurture proponents swap statistical and often highly technical attacks is the vital issue: should we be doing these studies at all? Intelligence is a very incendiary topic and bound to be misinterpreted no matter how carefully phrased in the antiseptic prose of statistics. There are some areas where science should not tread. That goes for statistics as well.

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The Left-Hander Syndrome; The Causes and Consequences of Left-Handedness by Stanley Coren. New York, NY: Free Press, 1992, 308 pp. \$24.95 (paper).

Frankly, we aren't fond of lefties. By "we" I refer to my well-over-forty squash buddies who are properly annoyed when a southpaw opponent forces us to play in a mirror-image manner. Instead of playing by instinct, we consciously have to reverse the court in which we start serving, reverse shot placements, etc. Besides, there is the nagging doubt that if your opponent can play so well left-handed, just imagine how much better he must be when using his right hand.

A larger "we" is the predominantly right-handed world designed by and for the overwhelming majority of us. Can openers, work benches, computer keypads, soup ladles and scissors are just a few of the implements most of us don't realize are inherently anti-left-handedness. As Stanley Coren in his book, *The*

Left-hander Syndrome, puts it, left-handers are invisible and thus no accommodation is made for them. That is, even though they consist of about 10% of the population, we — except for squash, racquetball or tennis players — either ignore them or pretend they don't exist.

But Coren gives evidence that left-handers have been with the human race ever since there was such a primate. Furthermore, the 10% figure has been more or less constant from the beginning and in addition, pertains to all races and regions of the globe.

At first blush, left-handers seem the least oppressed of minorities. No one is liable to paraphrase that famous pre-civil rights saying: "How would you like it if a left-hander married your daughter?" Even the most p.c.-oriented individual wouldn't dream of rising to prominence on the platform of an "Affirmative Action hiring policy for left-handers"; no bank has ever red-lined someone for being left-handed. In a world full of prejudice based on race, religion, gender affiliation and any other aspect of humanity, left-handedness would seem to be utterly unnoteworthy other than for the awkwardness in dealing with scissors, soup ladles and can openers.

Not so, says Coren citing the stereotypical traits and language we used to designate lefties: clumsy, weak ("left in English comes from the Anglo-Saxon work *lyft*, which means 'weak' or 'broken'"), illegitimate, flighty, temperamental, unlucky, wicked. According to Coren, "Both the Jewish and Christian traditions are strongly right-handed in their traditions and practices." The Hebrew word for left is related to Satan; blessings and benedictions for Jews and Gentiles are always given with the right-hand. Good is on the right, evil on the left; "the sign of the cross is always performed with the right hand, even if the person is left-handed." In fact, "handism in the form of bias against left-handers exists in virtually all the major religions to much the same extent."

Thus, we have a strange contradiction. Symbolically, left-handedness is looked down upon while people who are left-handed don't suffer with regard to employment, housing or any other socio-economic indicator. The quickest convincing proof that portsideers don't bump up against a glass ceiling is the fact that each of our last three president — Reagan, Bush, and Clinton — is left-handed. Nevertheless, Coren shows that statistically, being left-handed is a symptom that something has gone amiss.

In order to demonstrate this, he gives the reader a fascinating tour of neurophysiology and biology as well as psychology. For one thing, he distinguishes between handedness and sidedness; the two are not necessarily synonymous. For another, he discusses pawedness; animals lower on our hierarchical scale, unlike us, are about evenly divided. His treatment of the connection between handedness and the opposite side of the brain is perhaps the most interesting reading for subscribers of the *Journal of Scientific Exploration*. The title of Chapter 7, "Psycho-Neural-Astrology" indicates a debunking of the right brain-left brain cocktail conversations of non-scientists.

But the most interesting part of the book for the general public is his assertion that lefties die younger than the rest of us. He concludes this from analyz-

ing baseball data, one of the few collections of numbers which has handedness as a variable. "In effect, the data showed us that for any given age, the percentage of left-handers who will die run around 2 percent higher than the rate for right-handers." Further, "The oldest left-hander made it to age 91 and the oldest right-hander made it to age 109, an 18 year difference!"

To explain such a discrepancy, Coren invokes his used-piano analogy: a used piano may look fine but should the one key you press not move, the implication is that it is likely that some others won't either. Left-handedness is analogous to the faulty key with the other keys representing such things as decreased longevity and propensity to have certain diseases. Indeed, diabetes, Crohn's disease, myasthenia gravis, Hashimoto's thyroiditis, depression and alcoholism have a much higher incidence among left-handers.

To explain the above consequences of left-handedness, Coren postulates that difficult pregnancies and/or difficult births cause some malfunctions, one of which is left-handedness. The simple explanation that left-handedness is a recessive trait doesn't appear correct because if both parents are left-handed then the offspring is still twice as likely to be right-handed as left-handed. He held the simple genetic explanation for years and "Abandoning the idea that left-or right-handedness was a genetically variable trait was personally quite painful."

His pain represents an opportunity for others because the data is far from conclusive. And unlike I. Q. studies, left-handedness carries little incendiary baggage. Much more data-gathering and theorizing needs to be done before the constancy, causes and consequences of left-handedness can be settled. While Coren views left-handedness as a sign of pathology, we right-handed squash players might hold to a more historical, Judeo-Christian interpretation: diabolical.

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Luna: Myth & Mystery by Kathleen Cain. Boulder, Colorado: Johnson Books, 1991, 202 pp. \$15.95 (paper). ISBN 1-55566-070-3. (Johnson Printing, 1880 South 57th Court, Boulder CO 80301.)

The moon appears larger or smaller depending on how we view it. Glimpse it near the horizon with trees or buildings intervening, and it looms large. View it high in the sky against a backdrop of stars and planets, and it seems small. Does the moon really change size? As unsuspecting photographers discover to