

# We may be left handed, but don't we have rights?

They may no longer be social outcasts but left-handed people are still stigmatised. **Anne Johnstone**, a southpaw, demands some dextrous consideration for the sinister 10%

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authority on left-handedness. His *Right Hand, Left Hand, the Origins of Asymmetry in Brains, Bodies, Atoms and Cultures*, is just out. It's a heavy book in both senses and the scientific theory is likely to boggle your brain, whichever way it happens to be wired up. Happily, the technical stuff is leavened by so many fascinating ideas and anecdotes that it's hard to imagine any self-respecting southpaw not feeling compelled to read on. At this point an admission is in

50-50 split in handedness, yet humans are 90% right-handed. According to McManus, somewhere during our evolutionary history, humans developed a gene for right-handedness, which he terms D (for dextral). He believes this was associated with the development of language in the left half of the brain. As we are cross-wired, so that the left hemisphere of the brain controls the right-hand side of the body, the right hand came to be used for dextrous tasks like making stone implements.

"Blimey, you're rare. You're very rare. Only 1% of couples are both handed and even then the children of two left-handers have only a one in three chance of being left-handed," we'd known about you last year, I have got the lot of you into the book," he declares. I shiver. It's bad enough having a rare blood group and now... Now, I feel a downright freak. So why did the C gene develop? McManus's explanation forms part of the wider agenda of his interest in the function of asymmetry in the uni-



LEFT OUT: Anne Johnstone, second from right, with husband Alastair Balfour

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He has spent the intervening years probing the big questions about laterality, in an attempt to fill in some of the gaps in the history of left-handedness: Why are most people right-handed? Are left-handers more or less talented than right-handers in certain ways? What is the relationship between handedness and speech or reading disorders? Why has the proportion of left-handers in Britain quadrupled in a century and will it carry on rising?

Now professor of psychology and medical education at University College London, McManus, a right-hander himself, has become a global

authority on left-handedness. His *Right Hand, Left Hand, the Origins of Asymmetry in Brains, Bodies, Atoms and Cultures*, is just out.

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At this point an admission is in order. No, my interest in this subject is not entirely journalistic. As a left-hander, married to a left-hander, with an entirely left-handed brood, we do sometimes feel like what McManus calls "the last neglected minority". I was once electrocuted by an iron flex.

My other half writes in an illegible crabwise scrawl, bequest of the days when schoolboys used real ink. Our son was still rendering his name as Abam at eight. We're all pretty useless with keys, screwdrivers, scissors, can-openers, and table laying. We have a tendency to drink from other people's glasses, though the explanation may not be entirely genetic.

The story of left-handedness begins in the animal kingdom. Our closest relatives, chimps for instance, have a

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Sometime between two million and 5000 years ago some left-handedness crept in. We know this because since around 3000BC depictions of activities like painting, writing, and weapon-throwing show a 90-10 split between right and left-handedness – roughly the same proportions as the British population today.

McManus posits the theory that a second gene developed in some of our forebears. He calls it the C gene (for chance). DC children (who inherit one D and one C gene – one from each parent) have a one in four chance of being left-handed. CC brains are rarer, but even then the chances of being left-handed are only 50%.

The shy admission that my family is 100% left-handed elicits a huge crackle of interest down the phone.

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So why did the C gene develop? McManus's explanation forms part of the wider agenda of his interest in the function of asymmetry in the universe.

## Considering there are now so many of us, why do designers take so little notice?

"Whenever anything gets complicated this asymmetry appears. You see it everywhere, in atoms, in chemicals, in physical systems. There's a big story lurking there," he says.

He suspects that as the human brain became more complex, the C gene enabled the left hemisphere of the brain to accommodate other faculties apart from language. "In these DC brains you could get things side by side that you wouldn't find in a right-

handed brain and these combinations may be advantageous," he says.

Aha! So it's true, we lefties are cleverer. Well no, it ain't that simple.

McManus says that though there is evidence from America that a disproportionate number of left-handers have an IQ of 140+ (genius level), he doesn't find it entirely convincing. "Average IQ is pretty much the same between right and left-handers but there seems to be a wider variation among left-handers. There is certainly a large excess of them among people with a low IQ. My suspicion is that it's not IQ-related but more a question of cognitive style."

For instance, someone with a DC brain in which language and symbols happen to be on the same side may turn out to be a wizz at maths or music. "There are some good statistics on this. For example, there's an excess of left-handers in British symphony orchestras. They're also well represented in architecture and the visual arts," he says.

Curiously, Picasso, often held up as a left-handed genius, wasn't left-handed at all. Leonardo da Vinci certainly was, though McManus suggests that, like others who write in mirror-script, he may have been originally trained to write with his right hand.

The downside to the left-handed story is that those with too much crossover

between brain hemispheres – those rare CCs – can have "higgledy-piggledy" brains. This may explain why so many of those with conditions such as dyslexia, autism, and stutters are left-handers.

"I'd like the government to look seriously at the rate of left-handedness in schools and ask whether these pupils have problems," he says. He suspects an alarming proportion do and describes official ignorance on the subject as "mildly scandalous".

"The brain of a left-hander can be randomly rearranged to produce either a happy or an unhappy accident. It's like looking down a kaleidoscope, then shaking it. The resultant pattern may be much better or extremely dull."

**L**EFT-HANDERS, especially women, are also far more likely to suffer from a left-right confusion. "It's all to do with their brains being more symmetrical," says McManus. So, at last, I have an excuse for being such a duffer with keys and corkscrews.

Why are there four times as many left-handers in Britain today than 100 years ago? The figures are 13% of men and 11% of women. "It's not a renaissance of left-handedness," says McManus, "they've always been

around, but in Victorian times the numbers went down dramatically for cultural reasons. It's not only that children were forced to write with their right hands but also because, as left-handers were viewed as socially odd, they found it harder to find partners and when they did, probably married later and had fewer children. So fewer C genes were being passed on. Now left-handedness no longer has a stigma attached to it, the proportion of them is returning to normal. It hasn't changed much for 30 years and my guess is that it'll stay about the same now."

Considering there are now so many of us, why do product designers take so little notice of us? Good question, says McManus. Sometimes, it's just aggravating. I spent years fighting with pens chained to the right of bank tills until the Royal Bank of Scotland introduced left-handed cheque books, with counterfoils on the right.

In other cases, says McManus, it's potentially dangerous: "Power saws and microwaves are all designed for right-handers. It's scandalous that 10% of people can't use them properly."

Yes, it's still a cruel old right-handed world out there.

**Right Hand, Left Hand, by Chris McManus (Weidenfeld & Nicolson £20).**



LEFT OUT: Anne Johnstone, second from right, with husband Alastair Balfour and their children Adam, Eleanor, and Laura. Each is left-handed in a 90% right-handed world. Picture: Chris James