reviews

BOOKS • CD ROMS • ART • WEBSITES • MEDIA • PERSONAL VIEWS • SOUNDINGS

The Essential Difference: Men, Women and the Extreme Male Brain

Simon Baron-Cohen

Allen Lane, £16.99, pp 263
ISBN 0 713 99671 4

Rating: ★★★

Men and women have different brains. This notion has been the subject of increasing scientific analysis, media interest, and pulp psychology of the “men are from . . .” variety. Now, Simon Baron-Cohen (professor of psychology at Cambridge University) has drawn on 20 years of clinical and academic experience and attempted to summarise the research on this subject—an impressive proportion of which is his own—and its implications for the future.

Baron-Cohen argues that there are three kinds of normal human brain: “empathising” (type E), “systemising” (type S), and “balanced” (type B, which is a meld of types E and S). With a reader friendly style and using fascinating data, he states his central claim that, on average, men have a type S brain, while the female brain is predominantly type E. There are exceptions, in that some men may have a type E brain and some women a type S brain. He goes on to consider the current (and evolutionary) strengths and weaknesses of these three types of brain.

He defines empathising as having a cognitive and an affective component—you perceive what another person might be thinking and you have an appropriate emotional reaction. Systemising is “the drive to understand a system and to build one.” Its aim is to “discover the causes of things,” allowing control of one’s environment. At its extreme, the author argues, the systemising brain is autistic (what he calls the “extreme male brain”). This explains the islets of ability seen in some autistic people (despite their associated mental retardation) and the narrow, yet often profound, depth of focus in the enthusiasms of people with Asperger’s syndrome (such as, probably, Newton and Einstein).

Some of the data that Baron-Cohen presents are depressingly deterministic. The author’s own team followed up a group of infants at one and then two years of age. They discovered that the higher the levels of prenatal testosterone, the less eye contact the child made as a toddler (with a correspondingly smaller vocabulary). The implication is that by measuring testosterone one can predict a toddler’s potential for empathy. What is new about this line of inquiry is that it opens up a possibility that autism may be connected to prenatal concentrations of testosterone (the research has yet to be done).

Baron-Cohen rightly concludes his exploration of this contentious subject by considering the ethical implications. We now contemplate a future where prenatal sex hormone levels could be altered, so as to avoid the possibility of autism or even a child with a “systemising” brain. Would this serve humanity? Quite rightly, Baron-Cohen defends the importance of brain variety, including the extreme male brain. “Without autism,” argues one of his autistic patients, “we might not have fire and the wheel.” Our difference is essential.

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The Discovery of the Germ

John Waller

Icon Books, £9.99, pp 198
ISBN 1 84046 373 2

Rating: ★★★★★

John Waller offers an in-depth history of what he calls the “extraordinary, albeit bloodless, scientific revolution” that took place between 1880 and 1900. This was a time when medicine underwent perhaps its biggest transformation and the way we think about disease was changed forever. The story he tells reads like a thriller on more than one occasion. He fills in the background from 500 BC and explains the prevailing theories of disease over time—from poisonous miasmas to the humours of the renaissance—in an instructive and amusing manner. He charts through the millenniums the process of discovery that led to the knowledge that disease is not just related to individual qualities of each patient, that there is such a thing as a specific disease, and that one disease would not develop into another through bad luck or improper treatment.

While emphasising the merits of Robert Koch and Louis Pasteur and their teams, Waller makes it clear that the fantastic discoveries of the “big four” pathogens (those causing tuberculosis, cholera, typhoid, and rabies) did not come from nowhere but had been preceded by 2000 years of observation and investigation and by the insights and discoveries of other 19th century scientists. These precursors included the Dutchman Anthony van Leeuwenhoek, who discovered “little animals” in white matter scraped from his teeth, the English epidemiologist John Snow, who proved that cholera is waterborne, the Austro-Hungarian doctor Ignaz Semmelweis, with his work on puerperal fever, and the surgeon Joseph Lister, who discovered the importance of handwashing procedures. The fact that the Koch and Pasteur teams

were in constant competition with each other only served to push forward the march of science, and Waller’s description of this competition makes the book into a real page turner.

As Waller himself says: “Only the term ‘revolutionary’ can convey a proper sense of the magnitude of the change that medical practice has undergone.” The previous cynicism with which doctors greeted medical remedies was replaced by sound scientific knowledge. Discoveries about germs paralleled advances in public health, and their combined insights led to fundamental changes in general health and standards of living—and did so in a mere 100 years.

A useful bibliography of source material rounds off this remarkable little book. My only criticism: an index would have been useful.

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Items reviewed are rated on a 4 star scale
(4=excellent)

Now let's have evidence based politics

Panorama: Fiddling the Figures
BBC 1, 29 June at 10 15 pm

<http://news.bbc.co.uk/1/hi/programmes/panorama/3013062.stm>

Rating: ★★★

From education to health care, almost no area of the United Kingdom's public services seems spared New Labour's obsession with measuring achievement. If the consumer—be that patient, pupil, or commuter—is to get a better deal, then maybe some degree of target setting is a good thing. But in the NHS in particular, fears have been increasing that targets have been skewing priorities and encouraging short termism.

Last month the Audit Commission claimed that hospitals had met government targets on waiting times and patient care through financial cunning, diverting money earmarked for services such as computers, medical equipment, and building maintenance (*BMJ* 2003;326:1229). Last Sunday's *Panorama* took up this theme and explored whether targets were harming the very people that they were meant to protect. The picture that emerged, through interviews with managers and clinicians in Oxford and London, was one of an NHS in which patients were being deceived.

Hospitals appeared gripped by a culture of fear in which managers—like conscientious pupils sitting standard assessment tests—seemed terrified of not getting full marks. A former chief executive claimed that not hitting certain targets was “a sackable offence” and a consultant described how managers gave him zero minutes to see a patient whom they didn't deem to be a clinical priority. Several of the managers who spoke to *Panorama* about the ruses used to hit targets did so anonymously, their words spoken by actors. It seemed that talking openly could be career limiting.

This was dramatic television complete with spooky, tinkly background music reminiscent of a *film noir* and, inexplicably, shots of people driving round in cars. *Panorama* did not pull its punches. But in explaining the conflicts that managers, doctors, and nurses face as they try to balance targets against clinical priorities, the programme was a model of clarity.

The proliferation of performance targets in the NHS is mind boggling. In total there are 62 different ones, and the nine that matter most to managers are the ones that affect how many stars—one, two, or three—a hospital gets. These mainly concern waiting times. For example, the government promised that by March of this year, 90% of patients in accident and emergency would be seen and treated within four hours. Hospitals were told that their performance on this would be judged over just one week, the last week in March, and they were given three months to prepare.

At the Homerton Hospital in London, one of those awarded three stars—the government's top ranking—and chosen to be one of the first foundation hospitals, 97% of

Keith Willett: targets must make clinical sense

patients in A&E were seen and treated within four hours during the last week of March. But in the first week of March the figure was 80%, below the government target. What made the difference? Rachel Willingham, a senior nurse in A&E, explained: “We had extra doctors and nurses and more senior doctors on the shop floor all the time, and we did actually have an extra nurse as well.” But some hospitals had to cancel non-urgent operations to meet the target, so that A&E patients needing a bed would not have long waits.

The Homerton's chief executive, Nancy Hallett, admitted that, with the pressure off, the hospital had since been unable to maintain the level of performance it had achieved in the last week of March. “We had a post-week dip where I think we all took our eye off the ball,” she said.

To illustrate how patients were being compromised because of the blunt targets that were being set, *Panorama* introduced Keith Willett, a consultant trauma surgeon at Oxford Radcliffe Trust. He explained how important it was that road injured patients who had sustained hip fractures had surgery within the first 10 days. “While the fracture is fresh we can manipulate and move the fragments, we can access that area, and we have an 80% chance of being able to give that patient essentially a normal hip for life,” he said. Now, because of targets, most of these patients had to wait more than 10 days, by which time, Dr Willett said, the fracture started to heal and the scar tissue bound down vital structures. “The result will either be that you can't do the surgery, or we may have complications, or we just may fail to get the sort of accurate reconstruction that is necessary to change the patient's outcome. The patient will be disabled for life.”

Dr Willett believed in targets, but only if they made what he called “clinical sense.” He said, “In medicine, in nursing, we aren't allowed to bring in new therapies or treatment without fully evaluating them. They have to be evidence based. We have to look at whether they achieve what they set out to achieve and what the side effects might be.” He added: “It would be lovely to see some evidence based politics in the health service.”

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WEBSITE
OF THE
WEEK

Rare cancers An article in this week's *BMJ* (p 47) looks at strategies for overcoming problems with research into rare cancers. Just as the small number of cases makes it hard to do randomised clinical trials, so the lack of support groups and online help are a serious omission for patients. Breast cancer, prostate cancer, and skin cancer have well organised campaigns, networks, and awareness programmes. But what about people who are diagnosed as having a rare cancer?

www.cancerguide.org/rare_cancer.html defines what “rare” really is and explains that doctors may not know much more about the cancer than the patient. There are advice and tips on searching the medical literature and on finding out who the experts are.

The Rare Cancer Alliance (www.rare-cancer.org/index.html), an organisation formed by patients, has pulled together the information that exists on the internet to create a readable site.

As diagnosing cancer always involves a pathologist, www.thedoctorsdoctor.com seems a sensible place to go. This website claims to help patients get information about laboratory and test results, but the information it provides is immense and uses complicated medical terms.

Some of the rarer cancers—for example, leiomyosarcoma, a tumour of smooth muscle—do have dedicated support groups. www.leiomyosarcoma.org/staging/welcome.htm is a well presented site, with tutorials on various aspects of the disease.

Many of the sites that I found mentioned the Association of Cancer Online Resources (www.acor.org/types.html) as having useful mailing lists for both common and rare cancers. It's not obvious from the site as it is a set of email listservs to join, but the support these provide does come recommended.

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PERSONAL VIEW

What it's really like at the coalface

What's wrong with the NHS? I know this will sound a little like a school homework exercise, but perhaps if we all sat down and wrote down our wishes then the changes that doctors want might move higher up the political agenda. Here are my thoughts and wishes as I leave the NHS. If you would like to mark them out of 10 and let me know then please do so.

I qualified in 1974 and have worked in the NHS since then. I am a GP principal working in Leominster, Herefordshire—a market town set in lovely countryside. I have been here for the past 20 years. I am in a partnership with five others, all very reasonable people. We are based in premises that were converted for the purpose, and we manage a dispensing branch surgery. Leominster has a local community hospital for which we cover inpatient care. I have just offered my resignation from practice, which will be effective this summer, when I will be 53 years old. Why now?

One of the major difficulties of practising medicine is the unrelenting pressure. Patients present with problems, and many are easy to deal with. However, a substantial number of patients present with problems that are potentially serious, and these patients need a correct diagnosis. As soon as one problem has been solved others replace it. Problems do not stop coming just because there is a practice meeting.

General practice has become more complex over time, and, in order to manage, business meetings have become an integral part of the day. We also have meetings with various parts of the primary care trust—more and more people seem to want to come to introduce themselves to us. We need to meet with all the varied parts of the general practice team. We meet with our staff in order to coordinate staff roles. The trust even pays us so that we can manage a half day of education four times a year. This is marvellous, compared with the old days, isn't it? Well, yes, but it does further squeeze the available day into a smaller pot. Locum cover helps us deal with the immediate problems but does not solve the ongoing problems.

We are encouraged to take on more and more from secondary care. While I am in

favour of this in principle, it does require resources.

The recurring local bed crisis puts ever more pressure on GPs not to admit people as acute patients. We are advised that many acute admissions are not necessary, but none of our patients ever seems to be discharged without being admitted. So where is my inappropriate admission? I am no longer able to admit people as acute patients to the community hospital because it is already full with patients dumped by the acute hospital. Because I do not know those patients and they are usually not local, discharging them takes considerably longer than if they were my own patients.

Obviously this further slows the process of finding a bed.

In the old days the hospital would open an extra ward to cope with the extra pressure during winter. Now it is so obsessed with meeting targets on

waiting lists that acute admissions have a lower priority. But they are my priority. I am left holding the baby, and when something goes wrong it is my problem, not the hospital's.

Casualty is overstretched. A recent communication from casualty suggested that patients waiting in ambulances were not its responsibility. Will I be called to an ambulance outside accident and emergency to see one of my patients who is still waiting to be offloaded?

It's a similar scenario for outpatient waits. The consultant cardiologist writes letters chastising me because my patient's treatment differs from what is stated in my referral letter. As some six months may have passed since my original referral this is hardly surprising.

Increasing waiting times in secondary care create great anxiety among patients, which often remains even if the final diagnosis is not serious. It is not uncommon for a wait for ultrasonography to extend almost indefinitely, even in serious cases. Then there is a further wait for computed tomography. Then a wait for a biopsy, then possibly a further biopsy. Six months have passed, and no treatment plan has been decided on for a patient who clearly has a malignancy. Why do I always have to be chasing the hospital? Yet my consultant colleagues are always helpful and courteous.

We have lost sight of patients and have been made to be obsessed with ticking boxes that can be audited. Will the new contract just give us more boxes to tick?

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SOUNDINGS

A secret revealed

Two months ago I went to France for the European rugby semi-final between Munster and Toulouse. As francophile as Belloc (every civilised man has two native countries, his own and France), I wanted to look like a local, so I wore a pair of stylish shorts.

At half time, like the other 40 000 in attendance, I had to visit the bathroom, and it was there that I had a most revealing and refreshing experience. As we stood shoulder to shoulder in the men's urinal, rejoicing in the sensual delights of what Thomas More described in *Utopia* as one of life's great pleasures, I began to feel little droplets tinkling pitter-patter, like the tap-dancing feet of Astaire, on my bare legs.

I should emphasise that, unsanitary as this may seem, of itself it was not an unpleasant nor disturbing experience, like having a controversial obituary written about me in the *BMJ*. The droplets, no doubt influenced by the vast amounts of beer and wine consumed, were softened and diluted, like a renaissance fountain in an Italian piazza on a hot and humid day or like the caress of gentle rain on naked and hungover skin on a soft Irish morning in spring. The sunlight created whimsical little rainbows in the mist, and despite a few shoves from behind and many playful cries of "vite, vite," a congenial ambience of masculine bonhomie and good fellowship thrived.

But I have been brooding, and what once seemed innocent has since opened a Pandora's box of doubt and excessive personal daintiness. There is a bigger, less romantic picture; obviously this is happening all the time. It is happening to each one of us, but we don't notice it because we are wearing trousers, and it is our unfortunate trousers that bear the brunt of other people's enthusiasm and exuberance and inaccuracy.

The experience has significantly modified my behaviour. I'd always had an insouciant attitude to other people's body fluids, and been quite comfortable with my body, outgoing and chatty even in those most intimate moments as the sphincters open, whereas now I am reserved and taciturn and require large amounts of space and privacy before voiding.

I am particularly circumspect of those in the company with a vigorous stream. Can you identify the streamer in your group? He could be sitting next to you right now.

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We welcome submissions for the personal view section. These should be no more than 850 words and should be sent electronically via our website. For information on how to submit a personal view online, see <http://bmj.com/cgi/content/full/325/7360/DC1/1>