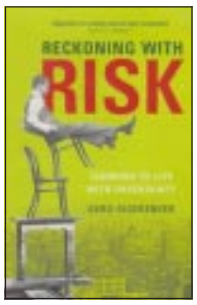
reviews

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

Reckoning with Risk: Learning to Live with Uncertainty

Gerd Gigerenzer



Allen Lane, £14.99, pp 310
ISBN 0 713 99512 2

Rating: ★★★

In healthcare, information often comes in the form of numbers. Professionals are expected to make good quality judgments based on this evidence. Patients are often assumed to be less numerate than professionals and to have less ability to interpret healthcare evidence. As a result, many healthcare workers feel that one of their roles is to help people to understand the choices open to them by acting as interpreters of the evidence, particularly amid uncertainty.

There is some evidence to support the idea that the public has problems understanding risk. Research dating back to the 1960s has found that professionals' ideas of risk are often different from those of lay people. The public tends to overestimate the frequency of uncommon health risks and to underestimate the frequency of common risks. Many lay people have trouble recognising estimates of statistical uncertainty, and so it seems reasonable to conclude that healthcare staff should be able to offer support to people in understanding the consequences of treatment choices.

Gigerenzer, a scientist at the Max Planck Institute in Berlin, argues that while healthcare staff like to see this as part of their role, most of us struggle to understand numeric measures of risk and uncertainty. Researchers presented UK service commissioners with details of four cardiac surgery services and four breast cancer screening programmes. The effectiveness of each service and each screening programme was shown in a different form: as a relative risk reduction, an absolute risk reduction, the number needed to treat, or the number surviving treatment. Commissioners preferred the service and the screening programme in which relative risk was reported, as the advantages appeared largest. Only three of 140 commissioners realised that all of the cardiac surgery services and all of the breast screening programmes showed exactly the same results, presented in different ways.

Lest clinicians smile at the innumeracy of service commissioners, Gigerenzer reports numerous studies showing similar problems in clinical practice. In studies in the United States and Germany, experienced doctors struggled to work out the likelihood that a woman in her 40s who had a positive mammogram on routine screening but who had no other risk factors would prove to have breast cancer after further investigation. Supplied with the relevant statistical information, only two out of 48 German doctors and five out of 100 US doctors were able to work out the correct answer, so limiting their ability to provide advice to the woman.

Problems with this type of calculation are not confined to doctors. One of Gigerenzer's students embarked on a tour of 20 professional HIV counsellors, who seem to have done their best to answer his questions on personal risk, and on his likelihood of being infected with HIV, should he test positive. Many were very knowledgeable about HIV and AIDS, and well able to provide good clinical information. They struggled badly, however, when trying to answer his questions on risk. Most denied the existence of false positive tests, and only one came close to being able to tell him the likelihood of his being truly infected were he to test positive.

Gigerenzer suggests that special interest groups take advantage of our corporate numerical blindness by presenting results in certain ways. Pharmaceutical company advertisements and press releases from researchers frequently offer relative risk rather than absolute risk reduction. He quotes a leaflet prepared by doctors who favour hormone replacement therapy, which gave the advantages in the form of relative risks but the adverse effects as absolute risks, so guiding patients towards the decision the doctors thought best.

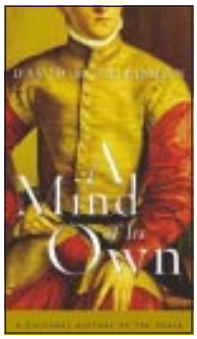
This makes gloomy reading for everyone who thinks professionals should understand the treatments they offer, and that patients should have the opportunity to give informed consent. Most of the staff quoted in the book wanted to understand numerical measures of risk, and they reported feelings of inadequacy at the difficulties they had in interpreting information for patients. Gigerenzer's answer is to teach professionals to think in terms of frequencies, rather than relative probabilities, and he offers reasonable evidence that professionals can learn these skills and apply them to new problems in their own clinical practice. Perhaps we should make a collective acknowledgement of the legacy of numerical anxiety that was often the residue of traditional undergraduate training, and learn what to do about it.

Cameron Stark *consultant in public health medicine, Highland NHS Board, and honorary senior lecturer Highlands and Islands Health Research Institute, Inverness*
crs@hihri.abdn.ac.uk

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

A Mind of its Own: A Cultural History of the Penis

David M Friedman



Robert Hale, £20, pp 368
ISBN 0 7090 7110 8

Rating: ★★★

Those after a good snigger may find themselves somewhat disappointed with this tome—it is not a lighthearted Christmas stocking filler. Friedman delivers an academic study of the penis, remaining intellectually serious and deadpan throughout (give or take the occasional double entendre). The only sense of "nudge, nudge, wink, wink" is to be found in the chapter headings—"The Demon Rod," "The Gear Shift," "The Measuring Stick," "The Cigar," "The Battering Ram," and "The Puncture-proof Balloon"—but even these turn out to be serious and academic in intent.

A Mind of its Own is educational and entertaining by virtue of an amazing amount of information gathered from a wide range of mythical and medical, cultural and scientific, historical and humorous sources. It is the casually presented details and conclusions that provide food for thought. The carefully chosen illustrations add to the impression of gravitas that the author seems to be aiming for. Naturally enough, the history that Friedman is detailing concerns that of his own, predominantly Western, culture.

Friedman starts his discourse in biblical times, proceeding through the histories of ancient Greece and Rome, where the penis was an object of cult worship and veneration, a life giving force. The takeover of the Western world by Christian monotheism has had far-reaching results, and the "sacred staff" became "the demon rod, the corrupter of all mankind." The story of Abélard and Héloïse and the works of Thomas Aquinas come in for close scrutiny. As does Heinrich Kramer's and James Sprenger's guidebook for witchhunters, the *Malleus Maleficarum*—witches were accused of having come into contact with the devil's own member.

The era of the "theological penis" is followed by the discovery of the "biological penis"—from Leonardo da Vinci, to Andreas Vesalius and his students, to 19th century Americans. Friedman describes in great detail mankind's successes and failures in grasping the biology and science behind the male organ. For him the climax of that era is probably the discovery of the existence of spermatozoa by Dutchman Antony van Leeuwenhoek.

White explorers and colonial powers around the world in the 19th and 20th century were obsessed with what they saw as the penile superiority of Africans—with appalling consequences. Friedman compellingly documents the reflection of actual historical events in art and literature—William Faulkner's novel *Light in August*, which contains a graphic lynching scene, and the oeuvre of US photographer Robert Mapplethorpe are striking examples.

"The Cigar" is all about the cigar smoking "father" of psychoanalysis, Sigmund Freud. It follows his professional path and the development of his ideas and theories. Friedman says that "the Freudian penis was psychoanalyzed but never politicized." The ideological penis, symbol of male violence and oppression, came later, in the era of the "battering ram" of the next chapter's title.

The final chapter introduces the concept of the "medicalized penis" and expresses scepticism about the "erection pill" and its unknown long term consequences. The penis has become a part of the entertainment and leisure industry (the joystick?), and the consequences of this latest gear shift are as yet unknown. Friedman believes that the medical specialty of urology has replaced the actual penis with the erection, and the pharmaceutical industry has provided the means of control. The consequence? "The penis used to have a mind of its own," Friedman says. "Not any more. The erection industry has reconfigured the organ, replacing the finicky original with a more reliable model. But the price tag for this new power tool is hidden. Eventually we'll learn if we can afford it."

Birte Twisselmann *BMJ*
btwisselmann@bmj.com

FILM

Dirty Pretty Things

Directed by Steven Frears

UK release date: 13 December
US release scheduled for April 2003

Rating: ★★★★

This gritty British film centres on a hotel night porter who finds a human heart blocking the toilet in one of the guest rooms. The story builds up a complex and desperate picture of asylum seekers in the United Kingdom.

Okwe (played by Chiwetel Ejiofor) is a Nigerian doctor working in London (as a taxi driver by day and a hotel porter by night). He doesn't like to sleep and grinds away in a daily quest for survival. He lives, secretly, with Saney (Audrey Tautou), a Turkish woman who has been granted asylum.

Screen writer Steven Knight's story is based around the "business of strangers" in hotels and the contrast between the privileged lifestyle of the guests and the alarming goings on behind doors marked "staff only." When Okwe finds the human heart, he eventually uncovers a market in illegal human organs.

The hotel proprietor is the creepy Juan, who makes his fortune out of the misery of desperate people. He trades a kidney for £10 000, keeping the money for himself, and giving the donor a passport. The lure of a new identity means that Juan has no shortage of people willing to undergo such drastic surgery within the hotel. And as with all surgery, sometimes it goes wrong—hence Okwe's discovery of the heart.

Knight wrote the film not to beat the drum about asylum seekers but to expose a world that is, for the most part, completely alien to the rest of us—the world of cleaners, minicab drivers, and factory shift workers. *Dirty Pretty Things* poignantly portrays a London that is normally invisible to most of us going about our daily lives—a world where people live outside the law, without decent housing, and are unable to use services such as the police and health care that the rest of us take for granted. This becomes acute when Okwe cannot report his discovery of the heart for fear of being deported. For similar reasons, the kidney donors left with systemic and life threatening sepsis as a result of shoddy surgery feel that they cannot go to hospital.

IMAGE.NET

The secret life of asylum seekers: Ejiofor and Tautou in *Dirty Pretty Things*

Despite the occasional surfacing scandal, the illegal trade in human organs is often dismissed as apocryphal. While a film can offer no proof, *Dirty Pretty Things* portrays such a divided society that the idea of sacrificing the poor and dispossessed to provide life for the rich, in the form of organs, seems entirely credible.

This film, which opened the London Film Festival, made me feel differently about the world around me. The tabloid media and governments in the West would do well to sit up and notice it.

Anna Ellis *editor, studentBMJ*
aellis@bmj.com

FILM

Those who are Jesus

Directed by Steven Eastwood

A Paradogs film
Available on video from Paradogs,
£19.99 plus postage and packing
www.paradogs.org.uk

Rating: ★★★★

In Jerusalem in AD 62, during the Feast of the Tabernacles, the Jewish authorities were alarmed by a Jesus, "son of Ananias," who "behaved like a prophet," going about preaching catastrophe. This Jesus was delivered up to the Roman governor Albinus, and scourged but eventually freed, having been judged insane (see Geza Vermes's *The Changing Faces of Jesus*, Viking, 2000, p 280). From this we might infer two things: that the more famous Jesus of Nazareth did something apart from prophesy to warrant execution; and that the ancient world distinguished revelation from insanity.

In modern psychiatry we learn that religious delusions are going out of fashion: disappearing from the secular West. Yet, from a clinical perspective, messiahs are like buses—you wait for ages then two or three appear, each with his or her own idiosyncratic interpretation of scripture, each essentially inward looking. In the clinic there are no parables or healing miracles, there is little love for one's neighbour. These qualities are similarly absent from this documentary film, examining the experiences of three people who claim to be Jesus.

Julien rather resembles the late painter Francis Bacon and believes that he has created entire universes and seen the face of God. Previously a successful businessman, he became "incoherent" when his marriage ended. He draws pictures of the universe.

Rachel paints with her left hand, guided by the spirit, but then volunteers the details of her masturbation. She speaks eloquently of "breakthroughs" followed by breakdowns.

Sadat, the "Jesus of Leytonstone," smiles confidently, believing he has the truth: assumed identity is all; apparently, there is no "message."

Messiahs are like buses—you wait for ages then two or three appear

Rachel seems the most "together" of the three; she is an artist and seems to be functioning in the world. Julien and Sadat seem more emotionally isolated, talking but not listening.

The strength of this film is that it allows these people to speak, at length; it does not impose a clinical, medical model (although, for the initiated, it is hard to ignore the temporal lobe phenomenology). When the psychiatrists and other experts appear their perspectives are merely alternative takes on the situation—they do not claim to be offering a definitive view. This is partly because they get caught up in the games that their interlocutors play: the sterile debate that follows on from "if I say I'm Jesus, you can't prove that I'm not," or the self consciously evasive line that goes "it depends what you mean by identity."

Ironically, documentaries of this kind reveal the vacuity of psychiatric "normality." "Normal" is eventually the sum of negations: the absence of extremes of experience, belief, or behaviour. Psychiatry is a little light on what remains after these exclusions. The ideal can often seem to be the quiet (or quiescent) consumer.

However, there may be a much simpler way of telling whether any of these people is Jesus: by the consequences, the fruits of their actions. But then, someone said that a long time ago.

Sean A Spence *reader in general adult psychiatry, University of Sheffield*
S.A.Spence@Sheffield.ac.uk

WEBSITE OF THE WEEK

Drinking, driving, and playing Tetris The factsheet of the Campaign Against Drinking and Driving (CADD) (www.cadd.org.uk/facts.htm) speaks a clear language: drinking and driving is a bad thing. And, as CADD correctly points out, you can't calculate from what you drink whether you will exceed the legal limits. Blood alcohol levels are determined by several biological variables such as sex, body weight, and speed of alcohol metabolism.

In Vienna, where I live, there is a small hamlet within the city, called Grinzing, which is well known for its particular wineries. Coin operated breath alcohol testing devices are of some importance there. In this week's *BMJ* (p 1403) we learn how alcohol breath testing works. Not surprisingly there is a flourishing industry selling portable measurement-of-your-blood-alcohol-take-it-wherever-you-go devices over the web. The point is, however, that one is not necessarily a safe driver even when having a blood alcohol level below the legal limits.

So what about testing performance? Why not try a game of space invaders (www.the-cybernet.co.uk/online_games/invader/invader.html) or Tetris (www.geocities.com/alexgog/indexe.html)? Doctors can self test their degree of fatigue by playing Tetris (*Lancet* 1995;346:516). The problem with many of these online games is the often inevitable pop-up advertisements, which can be annoying. Once, when trying to download the CONSORT statement (www.consort-statement.org)—the gold standard for reporting randomised controlled trials—I could not remember the URL and entered www.consort.org. Instead of serious methodological information a pornographic website appeared and every time I closed it a new one would pop up. I could exit the programme only by closing down Internet Explorer using the task manager. Fortunately the pornographic site has now been closed.

But I am losing the thread. I wanted to say that it is better not to drive at all when drinking. Unfortunately, I have no solution for fatigued doctors.

Marcus Müllner *BMJ*
marcus.muellner@univie.ac.at

Hit parade bmj.com

These articles scored the most hits on the *BMJ*'s website in the week of publication

OCTOBER

1 **ABC of antithrombotic therapy: An overview of antithrombotic therapy**
2002;325:762-5
7022 hits

2 **Clinical Review: Squamous cell carcinomas of the head and neck**
***Commentary: Head and neck carcinomas in the developing world**
2002;325:822-7
6531 hits

3 **Editorial: Care for chronic diseases**
2002;325:913-4
6523 hits

4 **Editorial: Population strategies to prevent obesity**
2002;325:728-9
6219 hits

5 **Papers: Work stress and risk of cardiovascular mortality: prospective cohort study of industrial employees**
2002;325:857
5986 hits

6 **Clinical Review: Management of overweight and obese adults**
2002;325:757-61
5069 hits

7 **ABC of antithrombotic therapy: Venous thromboembolism: pathophysiology, clinical features, and prevention**
2002;325:887-90
4632 hits

8 **ABC of antithrombotic therapy: Venous thromboembolism: treatment strategies**
2002;325:948-50
4550 hits

9 **Editorial: Systolic blood pressure**
2002;325:917-8
4230 hits

10 **ABC of antithrombotic therapy: Bleeding risks of antithrombotic therapy**
2002;325:828-31
4187 hits

PERSONAL VIEW

My mother's name was Jan

My parents recently celebrated their golden wedding. Friends and family, including my parents' 10 grandchildren, gathered for a memorable party to toast 50 years of love and partnership.

The following week mum and dad went to Paris for a romantic holiday and had three lovely days strolling hand in hand in the sunshine. Early on the fourth morning mum collapsed from a massive subarachnoid haemorrhage. I was at the hospital in Paris by early evening and stayed six days until, after a series of battles, we brought mum home, still in a deep coma, by air ambulance.

The language barrier was our first major problem, just as it must be for so many of our patients in the NHS. The key doctors spoke excellent English, so we had clear medical information, but the nurses did not. My GCSE level French was enough to communicate only a few basics. It was not nearly enough to develop a rapport with the nurses in whom we had to entrust mum's care. Like the stroke itself, the language barrier was no one's fault, but without communication, trust is hard to generate.

Less understandable, and much harder to bear, were the difficulties we had with the rules and culture of the neurosurgical unit, where mum spent most of her time. I was often confused and scared and, on one notable occasion, shouting mad at the way we were treated.

The visiting rules were remarkably old fashioned—only half an hour in the afternoon and an hour in the evening were allowed. The doors of the ward were always locked, including the one marked for visitors. When we did reach mum's room, no chair was provided. Arriving at one visiting hour we rang the bell three times, hearing it ring clearly on the ward. We were kept waiting 15 minutes. Wanting to speak to a nurse I was told that they were busy.

We involved the British embassy, which acted as an advocate by phone. Later, when the insurance company started playing games, the embassy was probably the key to getting mum repatriated sooner rather than, as the insurers wanted, later.

It may also have helped that I lost my temper on the ward. No one answered the ward doorbell on a second occasion, after I'd politely pointed out the problem through the consultant. Furious, I went on to the ward through the staff entrance. Shouting the odds in the middle of a neurosurgical ward is not something that I would usually do. But it certainly attracted the staff's attention, enough for me to explain haltingly that my mum's name was not, as they called her, Dorothy.

Although her given names were Dorothy Janet, my mother's name was Jan to all those who knew her. It was an understandable error, but it had become symbolically important, in a situation in which we felt unwelcome and uninvolved, that those in charge of mum didn't even know her name.

As soon as we arrived at the hospital back home the atmosphere of mum's care, and of the care of us, her family, changed beyond all recognition. The lack of a language barrier helped greatly, of course. But more important was our open welcome on to the intensive therapy (ITU) unit. The doors were, literally, kept open and there was a large room for relatives, where the whole family camped out.

> I was impressed as a doctor, simply relieved as a son

Soon after arriving, we had a conference with the ITU staff about what was best for mum. We turned off the ventilator, and the monitor, and allowed my mum to die 24 hours later.

The care we received as a family was wonderful. It was caring, but not sentimental, attentive, but not intrusive. The nurses had the skill and experience to know when to stay and chat and when to leave us alone. I was impressed as a doctor, simply relieved as a son.

We took it in turns to sit with mum, as a group or in ones and twos, to say our goodbyes. It was hard but absolutely what we, and particularly dad, needed. During the next day, increasingly dad was alone with mum. We, her children, waited in the family room to be there when she died.

Not long before she died, mum's nurse asked dad if he wanted to get into bed with her. It was exactly what he wanted, though it wouldn't have occurred to him, or us, to ask. Dad rushed to the relatives' room to grab his washbag, had a quick shave, and put on aftershave. We sat and cried as he raced off, a 79 year old like a teenager on a first date. They were left alone for a long, final cuddle. Mum died, with her family around her, soon after.

Just before we left dad said—and there could be no better tribute to the care we received—that he'd had a "lovely day." A last lovely day with his wife of 50 years, my mum, who's name was Jan.

Kevin Perrett *consultant in communicable disease control, South Yorkshire Health Protection Service*

This article is dedicated to the staff of the intensive therapy unit, Musgrove Park Hospital, Taunton

A longer version of this article is available on bmj.com

SOUNDINGS

Protect and survive

It was one of those dinner parties. At one end of the table, the men had bonded and were talking fast cars and weapons of mass destruction. At the other end, we women were politely discussing kitchen units and natural health remedies.

My opinion was being sought for a straw poll. Was I taking that new wheat-based alternative to hormone replacement therapy? I deferred, saying I didn't need any form of HRT yet. The lifestyle guru on my left corrected me: the latest research has apparently shown that the earlier everyone starts, the better. The notion that one's metabolic needs suddenly change at the climacteric is a myth scandalously perpetrated by male gynaecologists. I should start right now and take a glassful every morning, with natural yoghurt and linseed oil.

By way of apology for my wayward views, I confessed that I was a conventional doctor. A pause. Then three of them asked the same question all at once. Was I, or had I ever been, a member of any organisation that condoned the administration of the measles, mumps, and rubella (MMR) vaccines to a vulnerable infant via a common needle? I admitted that I was.

A beauty therapist proposed the hypothesis that doctors would inject anyone with anything in order to make money. Absolutely, I said, knocking back my wine and warming to my demonic role. For fifty pence, I'd pump my grandmother full of genetically modified steroids and infuse my children with bovine tuberculosis.

Nervous titters, then someone announced that it was no laughing matter. The health risks of vaccination were enormous, which was why not a single parent in her postnatal yoga class had allowed their child to have the pertussis jab, let alone the MMR. A private paediatrician in Harley Street could provide exactly the same protection at no risk through a combination of homoeopathy and Chinese herbs. The lifestyle guru nodded approvingly and lit a cigarette.

The men's conversation drifted from the other end of the table. The United Nations weapons inspectors' report was due out any day, which meant that a bioterrorist attack was probably imminent. The women fell silent. Someone wanted to know if I did any private work. I replied that we all had our price. In that case, they asked, could I get them each a smallpox jab?

Trisha Greenhalgh *professor of primary health care, University College London*