



How Dostoyevsky contributed to our knowledge about epilepsy, p 1277

The new religion: screening at your parish church

PERSONAL VIEW **Charles Warlow**

Unusually for me, I went to church. On a Monday. Not to ask forgiveness or to sing a hymn, or to be instructed from the pulpit, but to be screened. After all, if Liverpool Anglican Cathedral can be a venue for corporate dinners, why not a mere church for health (disease) screening?

A vascular screening company had come to town after leafletting many of my neighbours with the message that “four out of five people who suffered a stroke had no apparent warning signs.” I imagine they meant transient ischaemic attacks. In fact four out of five people with a stroke have and are generally known to have one or more vascular risk factors, such as hypertension or atrial fibrillation (not signs maybe, but certainly prognostic signposts). But we mustn't let awkward facts get in the way of marketing, particularly not to the “worried wealthy” of Edinburgh.

So, without revealing my interest in stroke prevention for the past 30 years, I signed on, paid £152 (€170; \$230), and turned up at church, along with other older people who didn't look as healthy as me. (I thought I had better hide my cycle helmet.) First up was aortic aneurysm screening with ultrasonography by a woman who did not want to be engaged in conversation about what the implications of finding an aneurysm might be. Next it was ankle and arm blood pressure measurements for “troubles with my circulation” (the ankle brachial pressure index (ABPI) for peripheral arterial disease to those in the know), followed by a little non-vascular bonus: osteoporosis screening of my ankle.

Then there was four lead electrocardiography (ECG) to detect “trouble with the two upper chambers of my heart,” but nothing else was proposed, even after questioning by me. (Why not an ECG for ventricular ectopics, maybe, or complete heart block?) Then, finally, carotid ultrasonography to detect “plaque build up.” When I asked them what the implications of this might be, they told me that blood clots could form and cause a stroke. Pressed on the sort of treatment I might be given, they offered a vague notion of blood thinning drugs but nothing about surgery until I asked directly if that might be an



option, and indeed it was. “Might that be risky?” I enquired innocently. The answer was that any risks would depend on a full work-up by my GP, with whom I should discuss abnormalities from any of the tests.

All of this was conducted without any privacy (except for the aortic aneurysm screening) on couches very close together, by technicians, in a church. There seemed to be no doctor present, and the team showed no intention or will to engage in a discussion of the implications of false positive or false negative results, the prognostic implications of true abnormalities, or the risks and benefits of any treatments. Of course, there was a disclaimer that normal screening results don't necessarily mean that no stroke will occur.

This was just screening, nothing more and nothing less, done for profit—with the results to be dumped in my lap within 21 working days and for my GP to sort out the emotional and physical consequences of any abnormality, true or false, even though she didn't request the tests. So will I bother her with my systolic blood pressure of 140 mm Hg, as the screening company suggested I should? No. Or about the “fairly low to moderate amount of plaque build-up not affecting blood flow velocities” in my right carotid artery? Certainly not. But the less informed might be very worried by this finding. The unsuspecting—and no doubt highly irritated—GP would probably refer on to an NHS neurologist to sort all this out, at the taxpayer's expense. My aorta and ABPI were normal; what a relief. And unlike my

far slicker screening for the Biobank research project, there wasn't even a cup of tea and a biscuit.

Why is this nonsense tolerated or allowed? Where is the audit of these screening outfits? Where is the partnership with patients, the information sharing that we hear so much about from the Department of Health? Apart from aortic aneurysm screening of men over the age of 65 (which is being rolled out in England anyway), there is no evidence that screening for the other three targets is worthwhile. Opportunistic screening by feeling the pulse, and doing an ECG if it is irregular, identifies at least as many new cases of atrial fibrillation as systematic ECG screening of the sort I paid for; and most of the patients in whom it is detected are at such low risk that the risks and inconvenience of anticoagulation would not be worthwhile. Finding an abnormal ABPI in an asymptomatic person identifies only people at such low risk of vascular events that it is very uncertain whether treatment over and above obvious risk factor control such as quitting smoking would confer any benefit that was worth the risks. As for carotid stenosis screening, although surgical removal of an asymptomatic stenosis reduces the risk of stroke by about a half, the absolute risk without surgery is so low that about 20 operations have to be done to prevent one stroke; in other words, 19 out of 20 operations turn out to be unnecessary.

Inevitably this whole screening circus is liable to whip up anxiety in vulnerable people without discussing or taking the slightest responsibility for the consequences of any abnormalities found. At least—unlike brain magnetic resonance imaging, which is another favourite for the screening privateers—the vascular imaging I had was less likely to throw up incidental findings that might cause anxiety, possibly leading in turn to quite unnecessary treatment. And who pays for the consequences of all this? The NHS, while the circus moves on to the next church with no doubt a rather larger congregation than for Sunday matins.

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REVIEW

All about Alzheimer's

US programme makers HBO take on Alzheimer's disease with masterful portraits of patients and their caregivers. But **Douglas Kamerow** asks if they are overpromising scientific progress

The Alzheimer's Project

HBO Documentary Films, available at www.hbo.com/alzheimers

Rating: ★★★☆

Following in the footsteps of their wildly successful 2007 series on addiction (*BMJ* 2007;334:697), HBO have now taken on Alzheimer's disease. With the goal of "bringing a new understanding" of the disease, HBO partnered with the US National Institutes of Health and several foundations to create a multimedia, cross platform blockbuster. Four documentary films are in continuous rotation on HBO's many channels and are viewable without charge on their website. Fifteen supplementary mini-documentaries on specific aspects of Alzheimer's disease are also being web streamed. DVDs of all of this are for sale, of course, as is a book based on the series. The project also includes a "robust" website, with lots of videos and links. And for social media fans who want to get in on the act, there is a Facebook wall where you can post your own tributes and thoughts for all to read and react to. It is an impressive package.

Three of the documentaries tell the respective stories of patients with Alzheimer's disease, their children, grandchildren, and caregivers. The first, *The Memory Loss Tapes*, profiles seven patients in various stages of dementia. It begins with a patient's word and name finding problems and progresses to a woman who is no longer able to drive. We then see, with his granddaughter, a 63 year old former computer

expert who now gets lost in the park, and a 75 year old woman who talks to herself in the mirror. One of the most affecting portraits is of an 81 year old man with no short term memory left. As his family takes him to a performance of his former singing group, he repeatedly asks where he is going and why. On arrival, he effortlessly sings the lead part of a complicated doo-wop song.

The most openly pedagogical film is the second in the series, with the stories of five grandchildren, aged 6 to 15, and how they are coping with their grandparent's dementia. Irritatingly narrated by the former television news broadcaster and current California first lady Maria Shriver, the film intersperses the vignettes with printed lessons and advice for children: "Sometimes it's the disease talking, not your grandparent," or "There are no silly questions about Alzheimer's." Shriver dwells on the fact that her father, former official of the Kennedy administration Sargent Shriver, has Alzheimer's disease, and so she too is a child of the disease. We are shown photos of her father in his prime but, unlike the rest of the subjects of the documentary, we see no video of what Alzheimer's disease has done to him.

The third and most affecting personal documentary is a profile of five caregivers as they lovingly accompany their spouse, partner, or parent down the depressing road to dementia and death. They are mainly devoted family members in difficult situations. The strain on patience, other relationships, and finances is vividly presented. I confess to shedding a tear during this segment (full disclosure: my mother has Alzheimer's disease).

The science part of the project is presented in a two hour, two part

documentary entitled *Momentum in Science*. State of the art graphics explain current theories about the pathophysiology of Alzheimer's disease; leading scientists trace recent improvements in our understanding of the disease, its causes, and possible treatments. A family with the rare genetically transmitted early onset Alzheimer's is profiled as they are tested annually to track the decline of five (out of six) affected siblings. New imaging technologies allow the doctors to show these unfortunate people the β amyloid plaques growing in their brains.

I guess we shouldn't be taking hope away from patients and families affected by Alzheimer's disease, but I wonder if the upbeat, hopeful "scientific" parts of the programmes are going to lead to more frustration and disappointment

After a graphic dramatically promises "more stories . . . facts . . . breakthroughs . . . hope," the documentary states that 91 drugs are in development to treat Alzheimer's disease and profiles one of them. An antibody to amyloid that looks promising has been developed and tested in rats but ends up having unacceptable side effects in people. Despite that failure, the scientists portrayed are universally optimistic. The director of the National Institute on Aging tells us that there is "justified reason for hope." Another researcher tells us that it is "a magic time." A third says "we have a good chance of changing the course" of this disease. The message is clear: we're just a year or two away from a big breakthrough.

I hope that's true, but a balanced outlook might have been more realistic. Alzheimer's seems to be one of those diseases for which we're promised a cure in five years every five years or so. That brings up the question of the purpose of ambitious media projects like this. If the purpose is to inform the public what it is like to have a family member with Alzheimer's, it's an unqualified success. If it is to put some pretty complicated scientific concepts into language everyone can understand, it works as well. I guess we shouldn't be taking hope away from patients and families affected by Alzheimer's disease, but I wonder if the upbeat, hopeful "scientific" parts of the programmes are going to lead to more frustration and disappointment if a magic bullet isn't found soon.

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A scene from one of the films, *Grandpa, Do You Know Who I Am?*

REVIEW

A tale of blind faith

Nigel Hawkes reviews a television documentary highlighting how patients are paying heavily for unproved stem cell therapy in the private sector

Panorama: Stem Cells and Miracles

BBC One, 18 May at 8 30 pm
<http://news.bbc.co.uk/panorama/hi/>
 Rating: ★★☆☆

“Always too eager for the future, we / Pick up bad habits of expectancy,” wrote Philip Larkin in a poem that explores people’s preference for the promises of tomorrow over today’s humdrum reality. Nowhere is this truer than in health care, where the belief that a miracle treatment is just around the corner has the public by the throat. Scientists competing for grants, and journalists for headlines, keep this belief alive through every disappointment.

The victims are those who are seduced to travel the world in search of a cure, usually paying heavily for the privilege. *Panorama* followed Darren and Wilma Clarke and their daughter Dakota from Belfast to Qingdao, on the north-east coast of China, where she was to undergo stem cell treatment for a congenital condition. Like thousands of others who have made the same pilgrimage, the Clarks had raised tens of thousands of pounds to pay for the treatment at a clinic run by Beike Biotechnology.

Dakota Clarke, who is 3 years old, was born with septo-optic dysplasia, a condition in which the optic nerve fails to develop normally, leaving her effectively blind. Beike claims to have treated more than 5000 patients for various neurological conditions, including the one Dakota has, in 24 hospital based clinics across China, at a cost of about £20 000 (€23 000;

\$31 000) each. Some 70-80% of patients are satisfied with their treatment, it adds.

To these it can now add Mr and Mrs Clarke, who are convinced that their daughter’s sight has improved. “It’s amazing, it’s absolutely amazing,” said Darren. “If a specialist wants to argue the point, there’s my door. Come and knock on it, come and watch my child and tell me that the child’s not seeing anything.” Tests at a clinic in Belfast have failed to substantiate his optimism: the stem cells have had no identifiable effect on Dakota’s vision.

Larry Tychsen, professor of ophthalmology and visual sciences at Washington University in St Louis, told *Panorama* of similar tests he and colleagues had done of patients with septo-optic dysplasia before and after treatment at Beike. “None of us has seen evidence of visual improvement—of any quantitative visual improvement of any kind,” he said. Even temporary? “No, we have no evidence of the sight improving temporarily. But there is a very interesting dynamic, that old saying that children can feel their parents’ expectations in the next room.”

Along with tales of heroic breakthroughs, the undergrowth of medical literature has plenty of stories of doctors who were proved right despite the disbelief of their peers. Some are even true. So patients are not put off by the lack of clinical trials or the disdain of medical orthodoxy. They see mainstream opinion as jealous and conservative, reluctant to give credit to the pioneers who are pushing the frontiers—a judgment that

has been correct just often enough to give it credibility.

The chairman of Bieke is Sean Hu, who qualified as a doctor in China and has a doctorate in biochemistry and molecular biology from Gothenburg University in Sweden. He featured briefly in *Panorama*’s film but gave a longer interview recently in which he claimed that the first 40 patients treated for optic nerve

defects at his clinic had been tested by local doctors before and after treatment. “We were able to prove to ourselves that the treatment was working,” he said.

Such claims have failed to impress the International Society for Stem Cell Research, which last year published guidelines saying that unproved treatments should be offered only to patients in research trials that evaluate safety and effectiveness.

“We’re worried about patients, and we are worried about the field,” George Daley of the Harvard Stem Cell Institute told the financial news website Bloomberg. “The field is at risk from renegade, illegitimate practitioners. If there is a perception that the science isn’t being done carefully then we’re at risk of losing public support.”

Panorama recruited a patient with multiple sclerosis, Linda Oatley, to investigate the methods of another stem cell clinic, this time in the Dominican Republic. William Rader, the California based psychiatrist who runs the clinic, was secretly filmed by Ms Oatley. He assured her that his methods were safe and effective, denied there was any risk of cancer, and pressed her to have immediate treatment. “Let’s just do it,” Dr Rader said when she expressed doubts. “Let’s just get started.”

Dr Tychsen made the saddest remark of all. When he tests the vision of children treated by Bieke, their parents don’t even ask for the results. “They have invested a tremendous amount of time in this,” he said. “They typically have recruited the entire community to help support them. The expectations are high, and I’m not sure that they want to know that you think they have wasted their time and money.”

Dr Rader, confronted with the evidence that he had pressured Ms Oatley to have the treatment, lost his temper briefly but quickly saw the bright side. “In the long run it doesn’t hurt me as long as you spell my name correctly,” he said, “because parents don’t give a damn about this intellectual shit . . . These parents will still come to me. We will get patients out of this.” And, as good as *Panorama*’s investigation was, he may be right.

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William Rader: “In the long run it doesn’t hurt me as long as you spell my name correctly”

The memoir of an opium eater

A friend of mine who lived for a time in America started every conversation at a party by saying, “Hello, I’m A . . . I hate my parents, don’t you?”

He never knew his opening gambit to draw anything but assent, he said, suggesting that filial piety, like fortitude, is no longer considered a virtue these days.

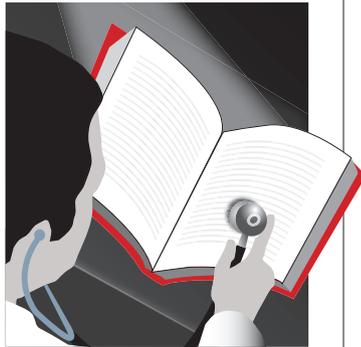
How different from Reverend George Crabbe’s charming and reverent memoir of his father, the Reverend George Crabbe, published in 1834, two years after Crabbe senior’s death.

Crabbe senior was apprenticed to a surgeon but preferred poetry as a vocation to medicine. Nevertheless he continued all the days of his life to minister medically to the sick poor, even after he took holy orders.

He had been plucked from obscurity by Edmund Burke, to whom he had sent some of his verses. It is astonishing that in those days eminent politicians could also act as literary critics: later in life, Crabbe sent some verses to the cabinet minister Charles James Fox for his suggestions and amendments (which he accepted).

After his apprenticeship Crabbe had hoped to walk the wards in London, but his funds were insufficient. His attempt at a medical career almost ended in disaster when his landlady discovered a dead baby in his room that he intended to dissect. As she had lost a baby of her own a few days before, she suspected Crabbe of being a resurrectionist—that is to say a body snatcher. It was only when he was able to satisfy her that the baby was not in fact hers that she agreed not to call the police. The memoir remains silent as to how Crabbe came by his baby for dissection.

BETWEEN THE LINES
Theodore Dalrymple



“From that time his health began to amend rapidly . . . and to a constant but slightly increasing dose of opium may be attributed his long and generally healthy life”

Perhaps the most famous, or notorious, passage in the memoir is the revelation that Crabbe was for much of his life an opium addict: “He became subject to vertigoes, which he thought indicative of a tendency to apoplexy; and was bled rather profusely, which only increased his symptoms.” Fortunately, help was at hand: “The late Dr Club was sent for, who, after a little examination, saw through the case with great judgment. ‘There is nothing the matter with your head,’ he observed, ‘nor any apoplectic tendency; let the digestive organs bear the whole blame; you must take opiates.’”

The results were excellent: “From that time his health began to amend rapidly . . . and to a constant but slightly increasing dose of opium may be attributed his long and generally healthy life.”

And that is the last we hear of opium in the memoir, despite the fact that Crabbe senior later suffered from trigeminal neuralgia. Like Wilberforce, the great campaigner against slavery, he made no song or dance over his opium; he experienced no romantic ecstasies and suffered no romantic agonies because of it. That all came later, with the next literary generation, of Coleridge and De Quincey.

Crabbe junior rather touchingly always refers to his father in the book as Mr Crabbe. I remember the days when old spouses used to call each other Mr and Mrs, with a respect that was equal to their affection. Their marriages were always happy ones.

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MEDICAL CLASSICS

The Brothers Karamazov

By Fyodor Dostoevsky First published 1880

Regarded as one of the best novels of the 19th century, *The Brothers Karamazov* is also a medicolegal treatise. Structured in four parts with an epilogue, *The Brothers Karamazov* tells the story of the murder of Fyodor Paulovich Karamazov at the hands of his bastard son and servant, Smerdyakov. His hated stepbrother Dymitri is instead found guilty, and Smerdyakov later commits suicide. But during the trial a proud and remorseless Smerdyakov, who has epilepsy, confesses to his other hated stepbrother, Ivan, how he made everyone, including three medical experts, believe that he was having a seizure in the night of the parricide, whereas he was in fact pretending to be sick by “shamming a falling fit.” Ivan then falls ill and is examined by a doctor who establishes that he has a brain disorder for which serious treatment is recommended, but the sceptical Ivan declines. To justify the hallucinations (criticised by some readers) depicted by his character on the novel, Dostoevsky sought the support of a doctor, Blagonravov, who verified the accuracy of the mental illness of Ivan Karamazov.

The protagonist of *The Brothers Karamazov* is the third son of Fyodor Paulovich. A Christ-like figure somewhat reminiscent of the most famous of Dostoevsky’s epileptic characters, Prince Myshkin (*The Idiot*, 1868), he bears the name of Dostoevsky’s beloved 3 year old son (Alexey, or Alyosha in the diminutive form), who died as a result of a prolonged epileptic attack in 1878. An epilepsy sufferer for nearly four decades by the time he wrote *The Brothers Karamazov*, Dostoevsky knew much about his condition—not least from his own experience—and explicitly portrayed characters with epilepsy in four previous novels, while the influence of epilepsy is palpable throughout the rest of his works.

In *The Brothers Karamazov* Dostoevsky also refers to the scientific investigations of one of the founders of experimental medicine, Claude Bernard, with regard to the mechanisms of epilepsy. Dostoevsky was a lifelong friend of another doctor, Ivanovsky, an early witness of his epileptic attacks. Dostoevsky often borrowed Dr Ivanovsky’s medical books and confided in him his fears about the cognitive impairment caused by epilepsy. Despite this impairment he produced accomplished works whose major preoccupations, all of which occur in this novel, were the struggle for faith in God; the nature of love and hate, salvation and suicide, and reality and fiction; and generational conflict.

Dostoevsky’s intelligent use of his disease in *The Brothers Karamazov* is a good example of turning a disadvantage into an advantage by transforming suffering into art and adversity into opportunity. His descriptions have contributed to our knowledge of epilepsy, having drawn the attention of famous neurologists.

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Shiny happy people?

FROM THE
FRONTLINE
Des Spence



Feeling miserable, I leant out of the window to see the heat haze and smell the pheromones. In the street below couples walked arm in arm, there was a distant crackle of a radio, and men flexed with their tops off chasing a tan—these were unenlightened days. Most of the world phoned in sick, and people pulled old sofas on to the street to drink beer. Medical students, however, always finished university last, and so I was on death row with two days to go before exam execution. My flatmate leant round the door: “Want to go for a drink?” I let irresponsibility possess me.

Many days in general practice are a swimming gala of awfulness but sunny days are a joy—patients just don’t turn up for their appointments. I rationalise that they obviously feel better, and anyway they will be back. And sure enough when it starts to rain they always return, miserable and red faced. The sun seems to make people happier and, despite my dire conditioned warning about cancer and sunbeds, patients say, “I just feel healthier with a tan.”

But things are different in the “informed” suburbs. Children are imprisoned indoors and look like mime artists, ghostly white with factor 50 sunblock. Schools operate a “no freckle policy” monitored by child protec-

tion services. Parents shuffle in long lines to “pigmented lesion clinics,” for biopsy and overdiagnosis, substituting the sun by shoving their faces into fluorescent light boxes and popping yet more antidepressants, if that were physically possible. All this despite melanoma remaining relatively rare and its association with sunlight neither clear nor linear. Indeed, death rates among under 65s have remained largely unchanged over the decades.

Surely even the palest Brits are equipped to deal with the British sun? I rationalise also that we must spend less time in the sun than in the past (even including two weeks sizzling in Spain): millions used to work outside, and generations were packed off to the tropics to do the empire’s bidding. Also doesn’t sunlight help a spectrum of skin conditions, such as acne, eczema, and psoriasis, and we need vitamin D. The occasional freckle on a child’s face is not a crime, and people should be free to enjoy the British summer again. Because the warmth of the sun on your back is the power behind music festivals, dancing, and formative (if disgraceful) behaviour. The sun is nature’s antidepressant—so let it shine.

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Exit the tie

OUTSIDE THE BOX
Trisha Greenhalgh



The other day I had a call from St Cuthbert’s prep school. “Come quickly, doctor, Soames has collapsed.”

I rushed round to find the spluttering boy on the floor of the dormitory. From his purple face and distended jugular veins, the diagnosis was clear: overtightened school tie syndrome.

Stopping only to capture the scene on my iPhone to illustrate an article I was planning to submit to *Cases* journal, I pulled out my scalpel, and with a single swift movement I released the constricting knot and performed an emergency tracheostomy (just in case).

As I tied the outer shell of my ballpoint pen securely in position, I confronted Soames’s housemates for a full history of the incident. “He was getting dressed, Miss,” explained Ponting, “It’s prize day, you see, and he wanted to look his best for the Admiral.”

“He’s a very punctilious dresser, Doctor,” added Smithers, the housemaster. “We do tend to encourage the younger boys to pull hard on the knot to get the tie as high up the neck as possible. Presentation of self is a core value of the school.”

“Good grief,” I retorted. “Haven’t you seen the latest health and safety guidance? Look, Mr Smithers, I’m giving you doctor’s orders. I want every boy in this school issued with a government model clip-on tie. I’ll be back this time next week to inspect them.”

Smithers crept away shamefully, muttering something about lowering of standards. But I had the protection of my practice population to think about.

I penned my case study—“Evidence supporting immediate abolition of the traditional school tie”—and sent it to *Cases*, requesting a fast track editorial process on the grounds of

an impending public health emergency.

The referees’ comments were returned to me within 48 hours. Splendid piece, they said, and Dr Smith likes the picture, but he’s asked you to calculate a number needed to harm. I pulled down my lecture notes on clinical epidemiology and set to work on the back of an envelope. Let’s think. The denominator would be every schoolboy (and a fair few schoolgirls) since records began—say a hundred million, give or take a score. The numerator was Soames.

Smith was unimpressed. He put my article in the slow track for publication, along with a report on life threatening frontal lobe injury from stray conker and probable sighting of Elvis on moon.

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