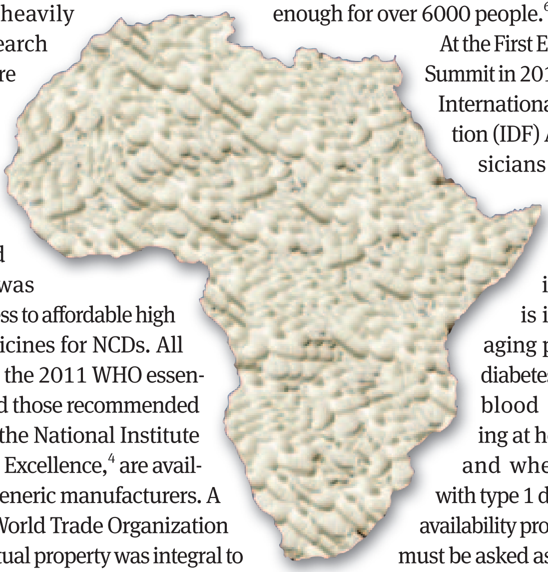
PERSONAL VIEW **John S Yudkin**

Industry is a barrier to diabetes care in poor countries

In many parts of the world, people with type 1 diabetes (whether or not the condition is diagnosed) still die for want of insulin, and those with type 2 diabetes go without treatments that prolong life at minimal cost—metformin, antihypertensives, and statins.[1] The UN High-level Meeting on Non-communicable Diseases (NCDs) in New York in 2011 emphasised the importance of accessibility to and affordability of effective treatment, but concerns have been expressed that including the food, tobacco, and pharmaceutical industries in deliberations could undermine the development of sound policy.[2] I argue that the approaches to management of NCDs that are so heavily advocated by the research based drug industry are not just irrelevant to diabetes care in poor countries: they are counterproductive.



One of the important needs addressed by the UN meeting was ensuring universal access to affordable high quality essential medicines for NCDs. All four diabetes drugs on the 2011 WHO essential medicines list,[3] and those recommended as first line agents by the National Institute for Health and Clinical Excellence,[4] are available at low cost from generic manufacturers. A decade ago, tackling World Trade Organization agreements on intellectual property was integral to improving the global availability and affordability of antiretroviral drugs, but drugs still under patent protection are unnecessary for good diabetes care. Nevertheless, in many countries the drug budgets are overspent, drugs run out, and patients are forced to buy their supplies at the premium prices charged by private pharmacies—if they can afford them. Am I justified in laying any of the blame for this situation at the door of the drug industry?

Research based pharmaceutical companies operate as commercial organisations, and their main responsibility is to their shareholders. The impact of the financial crisis on rich nations has combined with the rapidly rising prevalence of diabetes in poorer countries to make these so called emerging markets key targets for the industry. The consequence is intensive promotion of drugs that are not included on the WHO essential medicines list—analogue insulins (assessed in several systematic reviews as providing no convincing advantages over human insulin[5]), and newer hypoglycaemic agents for type 2 diabetes, which cost up to 40 times the price of metformin—but without any one of them having been shown to improve hard outcomes such as the risk of blindness. This distorts spending towards expensive brands, particularly in large hospitals and by private general practitioners. A common consequence is health centres, public pharmacies, and hospitals run out of stock part way through the month because of exhausted public sector budgets. In Kyrgyzstan in 2009, 56% of the ministry of health budget for oral hypoglycaemic agents was spent on repaglinide, enough for just 219 of around 140 000 people in the country with type 2 diabetes. If this same amount had been spent on metformin instead, it would have purchased enough for over 6000 people.[6]

At the First East African Diabetes Summit in 2011, organised by the International Diabetes Federation (IDF) Africa Region, physicians were informed at a drug company sponsored symposium that early initiation of insulin is important in managing people with type 2 diabetes. In a setting where blood glucose monitoring at home is rarely used, and where even patients with type 1 diabetes find insulin availability problematic, questions must be asked as to whose interests are being served. I have previously suggested the existence of an all pervasive so called glucocentric paradigm of diabetes care.[7] Clinical guidelines and continuing medical education are dominated by strategies to reduce the population's cumulative glycaemic exposure, through rigorous glycaemic treatment targets, employing polypharmacy with multiple new agents, and early introduction of insulin. Based largely on extrapolation from observational studies and surrogate endpoints, a glucocentric fervour of almost religious intensity has developed among diabetologists, the public health community, professional associations, and industry. Faced with growing evidence that the clinical benefits of intensive glycaemic control are questionable,[8] I suggest that the pharmaceutical industry might be the sole beneficiary.

The assumption that reduced glycaemic exposure will produce benefit is the rationale behind its extrapolation to other strategies: the successive reductions in diagnostic thresholds for diabetes, the creation of the condition of so called pre-diabetes, which is deemed to require drug treatment,[9] and proposals for population-wide screening.[10] The only one of these approaches that has been properly tested is that of intensive glucose lowering in type 2 diabetic patients, and it has been found wanting: several recent meta-analyses have shown virtually no impact on hard endpoints, either macrovascular or microvascular,[11-13] particularly when expressed as numbers needed to treat.[13] In order to prevent one non-fatal myocardial infarction by intensified control, 143 people need treatment for 5 years, and 627 need to be treated for the (non-significant) reduction in end stage renal failure.[13] The numbers who will fail to benefit from glucose lowering are likely to be even larger in a lower risk population—such as one diagnosed by screening or at a lower diagnostic threshold. In the meantime, however, these people will be exposed both to the adverse effects of treatments and to the financial and emotional implications of being defined as diseased.

Newer hypoglycaemic agents . . . cost up to 40 times the price of metformin—but without any one of them having been shown to improve hard outcomes

In wealthy nations, although these strategies are unlikely to provide benefits, they generate major challenges to healthcare budgets.[14] But these same approaches, when promoted by industry, by guidelines, or by key opinion leaders as the norm for modern diabetes management in low and middle income countries, risk bankrupting healthcare systems. Support in developing cost effective NCD policies for these countries will not come from industry. And it is unlikely to be led by international non-government organisations like the IDF, when over 90% of its funding depends on industry.[15] I propose then that the WHO essential medicines programme needs expanding into a programme of cost effective essential NCD management guidelines. The activities of the pharmaceutical companies in these so called emerging markets must be re-examined in this light. The industry had a high profile in the lobbying ahead of the UN summit, but I suggest it now needs to curb its enthusiasm, certainly in the area of diabetes. Perhaps consumer pressure might help encourage companies to pay serious attention to issues of accessibility and affordability of essential medicines,[16] and so to prioritise social responsibility, as well as profits,[17] in these growth markets.

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References are in the version on bmj.com.

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BETWEEN THE LINES **Theodore Dalrymple**

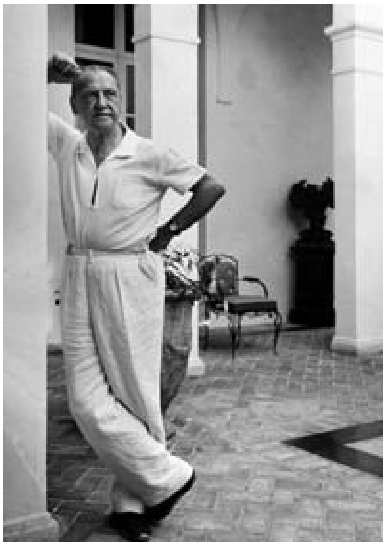
The total institution

In the days of the old Soviet Union, hospitals (at least when I visited them) had an air of inspissated pointlessness. This had its attractions: no one rushed around, indeed the corridors were mainly empty both of people and equipment. The patients, many of whom seemed scarcely to be ill, lay in bed in small, overheated wards, where fresh air never entered. They were more like residents of a boarding house than patients in a hospital. There appeared to be no pretence either of investigating their illness or of trying to cure it. They had nothing to do but talk philosophy all day, as in a Russian novel of the 19th century, and if the physical conditions in which the patients lived were primitive, I found myself almost envying them that greatest of luxuries: the time to reflect.

W Somerset Maugham was admitted to a luxurious tuberculosis sanatorium in Scotland in 1918 and described it in a short story called "Sanatorium," published in 1947. The oldest resident (one could hardly call him a patient any longer) is called McLeod, and has been there for 17 years. Naively, the protagonist, a young man named Ashenden, asks him what he does with himself all day long:

> *"Do? Having TB is a whole-time job, my boy. There's my temperature to take and then I weigh myself. I don't hurry over my dressing. I have breakfast, I read the papers and go for a walk. Then I have my rest. I lunch and play bridge. I have another rest and then I dine. I play a bit more bridge and I go to bed."*

McLeod's life is enlivened by an enmity with the second oldest resident, Campbell, who covets his room, the best in the sanatorium, and waits for him to die so that he can inherit it. When he does suddenly die—having defeated Campbell at bridge with a grand slam doubled and redoubled—the greatest ambition of Campbell's life having been fulfilled, the light goes out of his life and he soon follows McLeod to the grave: petty enmity was the only purpose of his existence.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Maugham: wrote of his luxury sanatorium

The sanatorium is a little world, or what Erving Goffman would have called "a total institution": self-sufficient and only in faint communication with the exterior. When one of the female residents is suspected of having a love affair with a male resident, the medical superintendant, Dr Lennox—who is "a good enough doctor, an excellent business man, and an enthusiastic fisherman"—paints the outer threshold of the woman's room and then examines the slippers of the male residents for paint. He discharges the culprit because he does not want his sanatorium to get a bad name: bad, that is, from the moral rather than the medical point of view.

Although Dr Lennox's ability to alter the progress of the disease is clearly rather limited, his pronouncements are treated as oracular. Ashenden lies in bed for six weeks until the moment the superintendent tells him that he can get up. When two of the residents fall in love and decide to marry, Dr Lennox tells the groom that if he goes ahead he will die in six months, but if he remains single he will survive two to three years. To everyone's astonishment, the groom goes ahead and marries, but no one doubts the accuracy of Dr Lennox's prognosis. It is almost as if the patients feel a duty to die when he tells them that they will. Those were the days.

It is almost as if the patients feel a duty to die when he tells them that they will. Those were the days

Theodore Dalrymple is a writer and retired doctor

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MEDICAL CLASSICS

Fearfully and Wonderfully Made

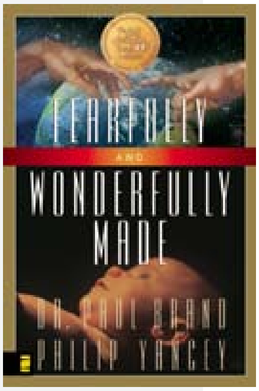
A book by Philip Yancey and Paul Brand; first published in 1980

For a time, the late surgeon Paul Brand was the world's only orthopaedic surgeon to work with people with leprosy. He was made commander of the order of the British Empire (CBE) in 1961. This book, *Fearfully and Wonderfully Made*, coauthored with Philip Yancey, draws on his experiences as a doctor in India (his country of birth), and Louisiana, where he married and settled.

From a single cell in Brand's laboratory in Louisiana, to bones and skin, to locomotion, this book brings physiology, anatomy, and histology to life. It gives an insight into the work of medical staff in the hospitals and clinics of these two very different regions and describes the struggles of many patients, including those affected by leprosy.

Brand pioneered the theory (which further studies have confirmed) that tissue loss in the feet of people with leprosy results from sensory deficit in the soles—that is, the people were unable to feel pain—rather than necrosis, as previously thought. This paved the way for several books coauthored by Brand and Yancey, including 1993's *The Gift of Pain* (*BMJ* 2011;343:d4251), which describes the prevalence (and utility) of pain in daily life.

Fearfully and Wonderfully Made includes the story of Sadagopan, who battled to save his feet after leprosy caused severe ulcers. Brand describes the invention of rocker boots, rigid bars under the soles of the shoes that relieve pressure on the heels and prevent the feet from bending, healing Sadagopan's broken skin and allowing him to return to work. Many of Brand's other innovations, such as reconstructive serial casting for the repair of damaged tendons, are not mentioned, but Brand stresses the importance of love and care, giving examples such as his missionary parents adopting a village child; his wife's treatment of children affected by keratomalacia; and Mother Teresa's work among the poorest people of Calcutta. Brand also alludes to the importance of touch and closeness in suffering. Simply being with a patient with terminal cancer is the most crucial thing he can offer—except to pray for a miracle.



The book also considers global injustice, describing a world where 18% of the population consume 80% of the wealth, and posing ethical dilemmas that Yancey and Brand leave the reader to ponder. The poetic descriptions of Brand's work, interspersed with quotations from scientists, doctors, and philosophers spanning the ages, make this a fascinating and unique book. To quote Sir Arthur Eddington, "We often think that when we have completed our study on 'one,' we know all about 'two,' because two is one and one. We forget that we have still to make a study of 'and.'"

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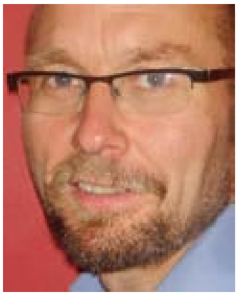
FROM THE FRONTLINE **Des Spence**

That joke isn't funny any more

I worked in Australia in the early 1990s, a time of economic downturn and uncertainty in the United Kingdom. Many doctors left with a view to possible emigration to Australia. The large expat contingent of Scots, Irish, Welsh, and English junior doctors roamed and chatted in the hospital corridors at 3 am, chasing the overtime. We shared much with the Aussie doctors: binge drinking, gratuitous swearing, rudeness, and sarcastic and generally offensive, abrasive humour. They derided us as whingeing poms, and they in turn were bragging Aussies. They referred to Australia as the clever country because of its wealth. But as I pointed out: "What's so clever? A country the size of Europe with the population of Swansea—they would have to be idiots not to be wealthy." I still laugh at the banter.



I demand my right to be humorously sent up and even offensively lampooned, especially by junior colleagues

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Medicine's harmless, unprofessional, dark, disrespectful, and confidential humour has long been the backstop of the profession. This humour is mainly vented at our seniors and the pompous, deferential hierarchy of the hospitals. Doctors tease each other; if you aren't thick skinned, then you soon learn to be. Medicine demands emotional robustness at all levels. This humour was necessary, and born of hardship and camaraderie; our social glue. If we couldn't laugh there was no way we could do the job. Humour is our top coping strategy. And humour is a forum for dissent, too: used to challenge convention and the establishment, as a way of saying the unsayable, and making the unpalatable palatable. Humour can be both poetic and heroic, and it is a social force for good.

Medical slang has all but gone, so is medical banter also dying? Humour, by its nature, is potentially offensive to someone. We should not accept gossip or personal, sexist, sexual, or racist comments, though surely the rest are fair game. But humorous comments can lead to complaints and official investigation and today any perceived offence given is indefensible and will be reprimanded. Giving as good as you get is no longer the medical culture—official complaint is today's weapon of manipulation. So doctors are increasingly humour avoidant, and the prevailing advice is: be very careful what you say. As an outspoken and ageing senior doctor, however, I demand my right to be humorously sent up and even offensively lampooned, especially by junior colleagues. Being careful never changed anything. The fear of potentially causing offence is stifling free speech, and we are living in an increasingly socially sterile and humourless workplace. This is no laughing matter.

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PAST CARING **Wendy Moore**

A doctor's lifelong campaign to revive the Olympic games

Anybody who looks into the single eye of Wenlock, the Olympic mascot, would be forgiven for not guessing, but the revival of the modern Olympics is due in large part to the efforts of a single minded English country doctor, William Penny Brookes.

Brookes was born in 1809 in Much Wenlock, in Shropshire, and trained in surgery in London, Paris, and Padua before returning home to take over his father's medical practice in 1831. Brookes was cast in the mould of the archetypal Victorian philanthropist and threw himself into civic duties with gusto. Almost singlehandedly he founded the local school, improved the roads, lit the streets, and brought the railway to the town.

His enduring contribution of international significance, however, was his lifelong campaign to revive the ancient Olympics. In 1841 Brookes set up the Wenlock Agricultural Reading Society, and nine years later this spawned the Wenlock Olympic Society, dedicated to staging an annual sporting event. With its dual aims of improving physical fitness and moral fibre, the society pledged to "promote the moral, physical and intellectual improvement" of the town's inhabitants, "especially of the working classes by the encouragement of outdoor recreation." Brookes later said he had been inspired to launch his initiative by reading about the premature deaths of weavers, through lack of outdoor exercise.

The first games opened in a field in October 1850 with full pageantry, and combined the noble virtues of ancient Greek athletics with the eccentric air of an English village fête. Events included running, hurdles, cricket, football, and cycling—on penny farthings—as well as a blindfolded wheelbarrow race and a race for so called old women to win a pound of tea. Presided over by a paternalistic Brookes, the games continued annually—and are still held today. But Brookes was not content with local plaudits.

COLIN CRISFORD

Events included cycling—on penny farthings—as well as a blindfolded wheelbarrow race and a race for so called old women to win a pound of tea

Through dogged campaigning Brookes introduced the Shropshire Olympic Games in 1861 and cofounded the National Olympic Association, which organised the first national Olympics held at Crystal Palace in London in 1866. In spare moments, Brookes lobbied the government to make physical recreation compulsory in schools and backed up his case with a controlled trial on Wenlock schoolboys to prove that gymnastics improved physique.

But Brookes's burning ambition was to see the Olympic games reinstated. He tirelessly lobbied the Greek government. Sadly, Brookes died in 1895, four months before the first modern Olympics opened in Athens in 1896.

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Sources: see bmj.com.

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