"Cost-benefit modelling is a pseudoscience, fraught with crude assumptions"
Des Spence on the new anticoagulants, p 47

PERSONAL VIEW **Natasha M Wiggins**

Stop using military metaphors for disease

I come across this terminology often in oncology: patients "battle" and "courageously fight" against cancer; some "win" and some "give up the fight" and "lose." The biomilitary metaphor has subtly worked its way into our psyche over centuries. When the remarkable metaphysical poet (and suspected drama queen) John Donne thought he was dying he wrote *Devotions Upon Emergent Occasions*, in which he described his illness as a "cannon shot" and a "siege [that] blows up the heart." In 1864, Louis Pasteur used invasion imagery to introduce his fundamentally new germ theory of illness to the public. Then, in 1971, US president Nixon publically declared "war" on cancer, calling it a "relentless and insidious enemy." Newspapers have been affirming this battle ever since.

It is difficult to think of alternative metaphors. The concept of body as battlefield is instilled in us through school textbooks with images of cells "battling" for supremacy and survival. Consider the language of immunology: lymphocytes are "deployed" or "mobilised," and our "main line of defence" involves "killer" cells.

Since the days of Nixon's war, advances in medical science have made it clear that cancer is not one but many enemies. Indeed, the Pulitzer prize winning oncologist Siddhartha Mukherjee stated, "It is a puzzle, you cannot win a puzzle, you can only solve it." Are people with aggressive or advanced disease fighting less hard? This "fighting" involves loss of dignity, changing personality, and feeling awful. Is there any less courage in facing your fate? Has someone "given up the fight" if they make an informed choice to decline treatment based on the risks and benefits?

Cancer is personified, unlike most other diseases, as "the malignant bastard" or the "emperor of maladies." Perhaps this is connected to our perception of the body turning on itself or the links between cancer and lifestyle choices. Further personification enables cancer to become the enemy. But cancer is no longer the only disease described by metaphors of war.

When the University of Nottingham opened its new facility dedicated to studying and controlling "superbugs," the *Guardian* newspaper interviewed its director, Richard James, about why such a research centre was necessary. He said, "This is a sophisticated army with astonishing weapons. And each time we develop something new, [bacteria] develop a defence for it."[1] James's comment stating that he anticipated an "antibiotic apocalypse" provoked the chief of nursing to accuse him of scaremongering.

So why not just drop the metaphor altogether? The theoretician Neil Pickering says, "Models are based upon metaphors, but metaphors need not be based upon likenesses or other observable phenomena. In this respect they seem groundless."[2] He feels that "notions of metaphor make science too much like poetry." I beg to differ. It is hard to prepare for the loss of control—not just of your body, but of your whole life—that having cancer can cause. Many patients explicitly say that they feel better with a knowledge and understanding of what is happening to them. Metaphor can be vital to the explanation of such a disease process because it enables communication of complex theories to an audience with little scientific knowledge.

So how might we replace the battle concept? Perhaps the most romantic substitute I've heard was in a play about mouth cancer: "Death came and gave me a flower, he asked me to hold it in my mouth, he said he would be back for it in six months."[3] This quixotic image may not wash with someone struggling with the impracticalities of having mouth cancer, but it does enable the beginning of a discussion on alternative references that don't explicitly imply such pressure to be positive about the diagnosis, to be proactive, to fight.

The subconscious impact of our daily use of allegories can easily be underestimated. Although the biomilitary metaphor will sit well with some people, by applying it to every patient we may be setting some of them up to "lose." A patient recently wrote to the *Independent*, questioning its use of this symbolism in an article: "She did not lose the fight, any more than I won it because I'm still alive. This makes it sound as if we can do something about our cancers. Worse, it makes dying into a personal failure."[4] Medical science has progressed further than Pasteur could have dreamt, yet his allegory remains. It is time we found something new.

ROB WHITE

Perhaps the most romantic substitute I've heard was in a play about mouth cancer: "Death came and gave me a flower"

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BETWEEN THE LINES **Theodore Dalrymple**

Pathological collectors

In the wake of the Alder Hey affair, administrators in several hospitals known to me searched the desks of doctors for illicitly retained body parts or clandestine pathology collections. This shows, if such proof were necessary, that there is no event that a bureaucracy is incapable of misunderstanding or of using to extend its own powers.

Was the affair also the inspiration of the story *The Museum of Dr Moses* by Joyce Carol Oates? This prolific author is a master of American gothic, a true successor to Edgar Allan Poe. In this story, published in 2001—two years after the Alder Hey inquiry—the narrator tries to rescue her mother from the clutches of Dr Moses Hammacher, a general practitioner and county coroner in upstate New York, whom her mother has married even though he is much older than she.

Dr Moses, as he is known, lives in an old stone house in Eden County in which he has started a museum of the medical arts. Like many a sinister character in literature as in life, he is capable of charm and exerts a certain fascination. Evil united to refined good manners seems so much more evil, although it is an elementary error of logic therefore to decry or denigrate refined good manners.

The museum contains exhibits that chill, such as an old amputation saw, skulls and skeletons, and bottles of pickled monsters that Dr Moses once delivered in childbirth. There is, of course, a forbidden room, which the protagonist enters at night, there to find shrunken heads and mummified hands that Dr Moses has brought back from his anthropological expeditions to remote parts of the world. How did he come by them? Is he a murderer? The protagonist faints and wakes up back in the guest bedroom from which she emerged to explore the forbidden room. I will not reveal the denouement.

There is, of course, a forbidden room, which the protagonist enters at night, there to find shrunken heads and mummified hands

The story reminded me of a forensic pathologist whom I once knew. His room was that of a learned man, piled high with journals, papers, and textbooks. But also on the shelves were mementos of his work, such as bottled abortions, the ropes with which people had been hanged (both judicially and suicidally), the trouser buttons of rapists, knives and bullets, bottles of poison used for murderous purposes, and so on. In those days, no one worried how or why he had come by them; he collected them as other people collected plaster frogs or model hippopotamuses. I think he delighted in the thrill of horror that his room excited in the unprepared. They, of course, enjoyed their own feeling of horror.

Oates: wrote of "pickled monsters"

Is it not strange that we enjoy fear even though we seek security? It is as though we need danger to reassure ourselves that our lives are not completely without import. In another of the stories in the collection in which *The Museum of Dr Moses* appears, a little boy, an only child, almost drowns in a suburban swimming pool. He has anoxia, is resuscitated by a doctor, and, like the famous case of Phineas Gage whose accident changed his character entirely, changes from sweet to sinister. He becomes feral, which is also the title of the story. Not only life, but character, hangs by a thread—and perhaps that is how we like it.

Theodore Dalrymple is a retired doctor

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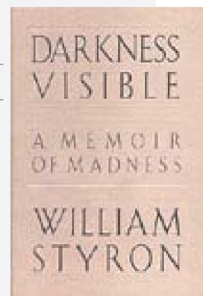
MEDICAL CLASSICS



Darkness Visible

A book by William Styron; first published 1990

Lyrical eloquence and lucid self examination are not features of depression. Thought processes, William Styron tells us in *Darkness Visible*, become muddied in the "grey drizzle of horror." Recounting the story of his mental illness, Styron recalls his "torpid indifference" to a dinner party arranged by his wife, at which friends "politely ignore" his "catatonic muteness." Depression is "indescribable," a "despair beyond despair" that destroys your ability to communicate. Only if it were otherwise could those experiencing the disease "depict for their friends and loved ones (even their physicians) some of the actual dimensions of their torment."

The best selling, Pulitzer prize winning novelist Styron offers a literary self portrait of the depression that "took full possession" of him in 1985. His account follows his initial avoidance of help—a "reluctance to accept the reality that my mind was dissolving," through the psychiatrist's chair and prescriptions of benzodiazepines, tetracyclics, and monoamine oxidase inhibitors, to his eventual admission to hospital, described as "an orderly and benign detention where one's only duty is to try and get well," and finally to restitution.

Styron's depression is marked by loss: a loss of appetite, lost sleep, absent dreams, "the libido also made an early exit," a loss of self esteem, and a fear of abandonment by others. "Loss in all its manifestations is the touchstone of depression—in the progress of the disease and, most likely in its origins," Styron suggests. He perceives the origin of his own disease in the death of his mother when he was 13. He was "unable to achieve the catharsis of grief" and his repressed sorrow, rage, and guilt became "the potential seeds of self destruction."

Acutely conscious of the literary heritage of self destruction, Styron reminds us that depression claimed the lives of Virginia Woolf, Sylvia Plath, and Ernest Hemingway. Styron discovers an unconscious theme in his own earlier novels. He observes how, in the minds of several suicidal characters, he had already "created the landscape of depression." In addition to his psychological insights and recognition of the association between life events and creativity, Styron finds meaning in physicalist theories of the mind: the "intermingled factors of abnormal chemistry, behaviour, and genetics." He argues emphatically that those "compelled to destroy themselves" are wholly victims of their disease, citing the author and holocaust survivor Primo Levi, who fatally threw himself down a staircase in 1987. They are no more deserving of moralistic reproof than the victims of terminal cancer.

The darkness here is not interminable. Styron does get better. The first person narrative implies from the outset that this is a survivor's tale, making the story bearable for the reader. Yet that only compels us to contemplate further how unbearable Styron's condition must have been when the darkness seemed without end. Styron is aware of this effect of his story and, without lessening its impact or sounding complacent, he emphasises that "by far the great majority of the people who go through even the severest depression survive it, and live ever afterward at least as happily as their unafflicted counterparts." Here, then, is an invitation to spend a few hours with someone who is not depressed, but who has known severe depression; to strive to comprehend without feeling pressured to intervene. The author's only request is that "those who are suffering a siege, perhaps for the first time, be told—be convinced, rather—that the illness will run its course and that they will pull through."

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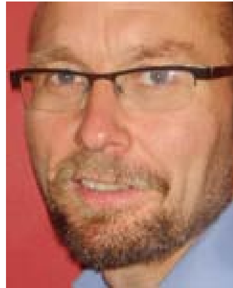
FROM THE FRONTLINE **Des Spence**

Beware the cost-benefit analysis

The drug industry champions chronic disease. This might be benevolence, but I suspect other motives. Consider the new anticoagulants for atrial fibrillation that do not require blood monitoring. The monthly cost for dabigatran is £75 (€96; $116) and for rivaroxaban is £58, but for 10 years' treatment this is £9000 and £6860. Consider that there are 10 million people over 65, of whom 5% have atrial fibrillation,[1] and we begin to see the scale of the potential income—£4bn in the United Kingdom alone over a decade. Ramp these numbers up globally, and you see that chronic disease makes blockbuster business. Remember we have a well established anticoagulant, warfarin, which costs an average £1 a month.

So why has the National Institute for Health and Clinical Excellence (NICE) recently endorsed these drugs? Because economic computer models suggest that the current cost of warfarin monitoring and the potential benefits of treatment with these new drugs will make them "cost effective" in terms of quality adjusted life years (QALYs) gained.[2 3] But this cost-benefit modelling is a pseudoscience, fraught with crude assumptions. The maker of rivaroxaban assumed the cost of warfarin monitoring was £580,[2] yet the lowest estimate is just £115.[3] There was a 10-fold range in the potential costs of additional QALYs in the modelling.[3] And these particular models are based largely on single studies of two years' duration, owned and sponsored by the drug companies.[4 5] There was no difference in all cause mortality, numbers needed to treat are in the hundreds, and benefits in safety are marginal at best.



Cost-benefit modelling is a pseudoscience, fraught with crude assumptions

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History also reminds us that supposedly safer drugs may not always be so. Remember Vioxx. With the high cost of the new anticoagulants is it really plausible that they will be cost effective? In the real world warfarin clinics will still run, staff will still be employed, and established costs cannot easily or quickly be stripped out of the NHS.

And for a recent example of a spectacularly wrong cost-benefit analysis, look no further than atypical antipsychotics. Early reports asserted that these drugs would reduce overall costs, with fewer hospital admissions and side effects.[6 7] A marketing storm followed, and now these drugs completely dominate the market. The cost of antipsychotic drugs in the UK tripled in a decade.[8] Yet later research shows these drugs to be no more effective,[9 10] associated with considerable side effects (especially weight gain),[11] and less cost effective.[12] Finances are taken away from other services and converted to pharma gold. There is new dawn in anticoagulation, but we should be careful because the sky looks red.

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THE BEST MEDICINE **Liam Farrell**

The dance of death

"So," I asked, "how did it happen?"

"Well," he said, "I was at a wedding and I got up to dance—that's when I felt the pain in my chest."

I was curious; for the third time in a matter of weeks a man in his 50s had had an infarct while at a wedding. The risk factors were obvious: overweight, unfit, suddenly hurled into intense physical activity, but could there be something more going on, something sinister?

"What song was the band playing at the time?" I asked. The experienced clinician knows that the devil is in the detail.

"'Dancing Queen,'" he said. "And what can you do? It was like an outside force taking over my body—my feet started tapping, my hips twitching, resistance is futile, I just had to join in."

"'Dull would he be of soul who could pass by,'" I agreed.

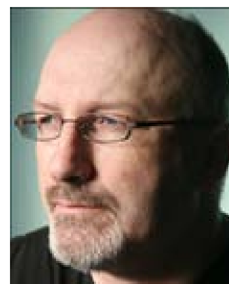
On a hunch, I pulled the files, made a few calls, and, sure enough, on each occasion "Dancing Queen" had been playing. The potency of cheap music, I reflected. Noël Coward was right.

Then, with a chill of horror, I realised that there was another wedding on that very day.

I dashed out of the surgery and drove headlong to the reception, stopping only to pick up a bottle of Pimm's, almost running down a woman with long blonde hair and a curiously appropriate spangly, sparkly jumpsuit.

"*Se vart du ska*, idiot," she said.

"*Du kysser din mamma med den munnen*?" I inquired ("You kiss your mother with that mouth?")—I'd picked up a smattering of Swedish during my years as a eurotrash porn star.



I dashed out, almost running down a woman with long blonde hair and a curiously appropriate jumpsuit

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I burst in through the door just as the song was reaching a climax with that immortal, almost Shakespearean lyric, "Feel the beat of the tambourine, OH *YEAH* . . ."

As the crowd punched the air in a pagan frenzy, a short fat man collapsed on the floor. I cradled his head in my arms, as he whispered his dying words: "Diggin' . . . the dancing queen . . ."

"Damn you," I cried, shaking my fist at the heavens (in time with the beat), "Damn you, Benny Andersson and Björn Ulvaeus, damn you."

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